

Project Manual:

Tilson Restroom Renovation Tirey Hall 220 N 7th Street Terre Haute, Indiana 47809

Project Architect/Owner/Manager:



**Indiana State
University**

**Department of Facilities Management
951 Sycamore Street
Terre Haute, Indiana 47809
812-237-8100**

Bid Number B0027756

00 01 30
BID REQUEST

BID REQUEST NOTICE TO BIDDERS

Sealed proposals are requested for Tilson Restroom Renovations, Bid Number B0027756. Proposals will be received for the above contract at the Office of the Department of Purchasing, Indiana State University, Facilities Management and Purchasing Building, 951 Sycamore Street, Terre Haute, Indiana 47809, until 2:00pm Local Time, January 13, 2022. Respondents delivering Bids must wear some form of facial PPE while in the Facilities Management and Purchasing Building.

There will be no in person Public Bid Opening. The Bids will be opened at 2:15pm on the due date and read aloud via Skype conference call. For conference call access call 812-237-5920 and enter conference ID 494150.

Bidding Documents may be downloaded from the ISU Plan Room at <http://www.indstateplanroom.com/> on **December 21, 2021** for \$5.00 per person/download which covers all downloads for that particular Project. Bidders must register for a free account the first time they access the website. Bid Documents may be ordered for purchase on CD, for \$7.50 per CD, or on paper copy at applicable printing costs from Rapid Reproductions, Inc., 129 South 11th Street, Terre Haute, IN 47807 (812-238-1681 Toll Free 800-736-7084).

Proposals are to be made on the Bid Form published in the Bid Request. As a mandatory requirement the Proposal shall be accompanied by a certified check; cashier's check or a Bid Bond (AIA A310) for an amount not less than 5% of the total bid price for Base Bid(s) and all add Alternates.

Bidder(s) receiving awards shall be required to provide acceptable surety in the form of a Performance and Labor and Materials Payment Bond for the full amount of the award. Include the cost of all bonds and insurance in the bid amount.

Indiana State University is a Tax Exempt Institution and Indiana Sales Tax for products permanently incorporated in work shall not be included as part of the Bid or on any Application for Payment.

All Bidders must comply with All State and Federal Non-Discrimination laws.

Responsive bidders may not have an active dispute, claim, or litigation with Indiana State University.

Indiana State University reserves the right to accept or reject any Bid and to waive any irregularities in Bidding. Any proposal received after the time fixed herein shall be returned unopened.

No Bid may be withdrawn after the opening of Bids without the consent of Indiana State University for a period of One Hundred Twenty (120) days after the time of opening Bids.

There will not be an actual Pre-Bid conference meeting for the Project. A copy of a Pre-Bid Information sheet will be included with the Bidding Documents. Bidders shall review the information sheet and the contained information will become a part of the Bidding Documents.

Pre-Bid site visits have been scheduled at 10:00am on January 5, 2022 at Tirey Hall in the Tilson Lobby, 220 N 7th Street, Terre Haute, Indiana 47809. Bidders are reminded to wear facial PPE equipment and to practice social distancing while on the campus of Indiana State University. *Representatives of each of the Bidders are strongly urged to attend.*

Contract Award shall be to a Single Prime Bidder for all single Base Bid project work or the Contract Award may be to multiple Single Prime Bidders for multiple Bid Package project work. The prime Bidder(s) shall be an experienced and qualified Contractor(s) having successfully completed a minimum of three (3) projects of similar size and scope. The Bid form for this Project requires the Bidder to submit evidence of successful installation of similar projects (minimum of three projects), including customer information, scope, dates, Contract dollar amounts. With their Bid the Bidder shall submit their most current audited financial statement and vendor trade credit references as evidence of financial capability to perform the work.

All questions relating to this Project shall be addressed to:

Scott Tillman, ISU Campus Architect

Phone 812-237-8198 E-mail scott.tillman@indstate.edu

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BID REQUEST

INDIANA STATE UNIVERSITY BOARD OF TRUSTEES

By: Diann E. McKee
Senior Vice President for Finance and Administration and University Treasurer
Indiana State University

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FORMS FOR BIDDING

Submit pages 3-10 of this form, Section 00 10 20 Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion; Section 00 10 40 Diversity Participation Plan; Section 00 10 45 Bidders Certification of Authorized Employment; a certified check, cashier's check or a Bid Bond; your most current audited financial statement **with your Bid**. Failure to submit with your Bid may be cause to disqualify a Bid

BID SUBMITTED BY:

Your Company's Name: _____

Company Address: _____

Company Contact Name: _____

Phone number: _____ Email Address: _____

Signed: _____ Title _____ Date: _____

The Bidder's signature certifies the Bidder is in compliance with all aspects of the Bid Documents

ADDENDA

The following Addenda have been received. The modifications to the bidding documents noted therein have been considered and all costs thereto are included in the Bid Sum(s).

Addendum # _____	Dated _____
Addendum # _____	Dated _____
Addendum # _____	Dated _____
Addendum # _____	Dated _____

OFFER

Pursuant to and in compliance with Bid Request Form, and other Bidding Documents prepared by the ISU Facilities Management Department or their authorized Agent for the above mentioned project, the undersigned, having become thoroughly familiar with the terms and conditions of the proposed Contract Documents and with local conditions affecting the performance and costs of the Work at the place where the Work is to be completed, and having fully inspected the site in all particulars, hereby proposes and agrees to fully perform the Work within the time stated and in strict accordance with the intent of the proposed Contract Documents, including furnishing bonds, insurance, labor, materials, and to do all the Work required to construct and complete in accordance with the proposed Contract Documents as follows:

BASE BID: Renovation of east restroom to become an all gender restroom per Specifications and Drawings

_____ Dollars (\$ _____)
(State Amount in Words)

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ALTERNATE BID(S)

1. Alternate No. 1: : Renovation of west restroom to become an all gender restroom per Specifications and Drawings

_____ Dollars (\$_____)

(State Amount in Words)

Add ☐ Deduct ☐

Indiana State University is a Tax Exempt Institution and Indiana Sales Tax for products permanently incorporated in work shall not be included as part of the Bid. All other applicable Federal, State and Local taxes shall be included in the Bid sum.

ALLOWANCE(S)

1. A \$5,000.00 Allowance shall be included in the Base Bid for Unforeseen Conditions/General Construction Contingency. It is solely at the discretion of the Owner what charges may be applied to this Allowance.
2. A \$5,000.00 Allowance shall be included in Alternate # 1 for Unforeseen Conditions/General Construction Contingency. It is solely at the discretion of the Owner what charges may be applied to this Allowance.

UNIT PRICE(S)

No Unit Prices Requested

ACCEPTANCE

This offer shall be opened to acceptance and is irrevocable for the period as follows:

- Base Bid and All Alternates - One Hundred Twenty (120) calendar days from the Bid opening date.

If the Owner accepts the Bid within the time period stated above, Bidder will:

- Furnish the required bonds and insurance certificates within ten (10) calendar days of receipt of the Award Letter
- Commence work within seven (7) calendar days of receipt of the Award Letter or as Directed by the Owner.
- Execute the Contract for Construction Between Indiana State University and Contractor within seven (7) calendar days of receipt of the Contract.

The Bidder agrees to coordinate and expedite their work and that if the Award is given within fourteen (14) calendar days from the Bid opening date the work shall be substantially completed as listed herein. If the Award is not made within the stated fourteen (14) calendar days then the substantial completion date may be adjusted as allowed by the Contract Documents or as mutually agreed upon in writing by the Owner and Contractor.

NON-COLLUSION AFFIDAVIT

The Bidder, by its officers and agents or representatives present at the time of filing this bid, being duly sworn, say on their oaths that neither they nor any of them have in any way, directly or indirectly, entered into any arrangement or agreement with any other bidder, or with any public office of the State of Indiana, of any county or municipality or other public offices whereby such affiance or either of them, has paid or is to pay to such other bidder or public officer any sum of money, or has given or is to give to such other bidders or public officer anything of value whatever, or such affiance of affiance or either of them has not, directly or indirectly entered into any arrangement or agreement with any other bidder or bidders, which tends to or does lessen or destroy free competition in letting of the contract sought for by the attached bids; that no inducement of any form or character other than which appears upon the face of the bid will be suggested, offered, paid, or delivered to any person whomsoever to influence the acceptance of the said bid or awarding of the contract, nor has this bidder any agreement or understanding of any kind whatsoever, with any person whomsoever to pay, deliver to, or share with any other person in any way or manner, any of the proceeds of the contract sought by this bid.

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NON-DISCRIMINATION

The Bidder and its Subcontractors, if any, shall not discriminate against any employee or applicant for employment, to be employed in the performance of this Contract, with respect to their hire, tenure, terms, conditions or privileges of employment or any matter directly or indirectly related to employment because of their sex, race, natural origin, ancestry or religion or disability as prohibited under the Americans with Disabilities Act. Breach of this covenant may be regarded as a material breach of the Contract.

MBE/WBE/VBE BIDDING:

See Section 00 10 30 for requirements for MBE/WBE/VBE Compliance. Section 00 10 40 must be completed by all Bidder(s) and submitted with your Bid.

EXPERIENCE QUESTIONNAIRE

List similar projects completed by your organization:

1. Contract Amount _____
Description _____
Date Completed _____
Owner _____
(Name and phone #)

2. Contract Amount _____
Description _____
Date Completed _____
Owner _____
(Name and phone #)

Yes ☐ No ☐ Has your organization ever failed to complete any work awarded it?

If yes, where and why?

Yes ☐ No ☐ Does your Organization have any pending litigation or litigation completed within the past five (5) years initiated by your Organization or the Owner as a result of your work on another Project?

If yes, attach a complete listing, with your Quote, of all such litigation(s) and name(s) of Institutions and/or Parties involved with complete contact information. Failure to submit information may result in disqualification of your Quote.

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Yes ☐ No ☐ Has your Organization been cited for violation of State or Federal regulations within the past twelve months?

If yes, what was the violation and resolution?

List references from firms for which your organization has performed work. Provide firm name, contact person name and phone number.

INSTRUCTIONS TO BIDDERS

1. GENERAL

- A. Respondents shall carefully read the Bid Request with regard to preparation of proposals, which includes the forms required to be submitted.
- B. Bid Bond
 - 1) As a mandatory requirement the Bid shall be accompanied by a certified check; cashier's check or an acceptable Bid Bond (AIA A310) for an amount not less than 5% of the total Bid price for the Base Bid(s) and all add Alternates.
 - 2) The Bid bond shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. The Bid Bond shall be obtained from surety or insurance company that is duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. In addition to appearing on Circular 570 U.S. Dept. of the Treasury, such Surety or insurance company shall maintain an A.M. Best's Rating of not less than "A."
- C. All Bidders shall fully inform themselves of the conditions under which the work is to be performed, the site of the work, the obstacles that may be encountered, and other relevant matters concerning the work to be performed.
- D. The Contractor shall begin Work within seven (7) days after Award preparing submittals and procuring material. Actual Work shall begin on or about January 31, 2022 (if all material is obtained) with all Work substantially completed by April 29, 2022. Final closeout shall be within thirty (30) calendar days thereafter. A warranty walk-thru will be held eleven (11) months from the date of substantial completion.

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- E. No Bidder, after being awarded the contract, shall be allowed any extra compensation for reason of their failure to fully inform themselves, prior to their Bidding, of all requirements of the Contract Documents, the Drawings, and Specifications.
- F. If any Bidder for the proposed contract is in doubt as to the true meaning of any part of the Drawings, Specifications or their proposed Contract Documents, they may submit to the Owner written request for any interpretation thereof. The Bidder submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made only by an Addendum. Such Addendum, if any, issued before submission of the Quotes, shall be taken into account and included in the Proposal.
- G. Any Bidder may withdraw their Bid at any time prior to the scheduled time for the receipt of Bids.
- H. No Bidder may withdraw their Bid for a period of One Hundred Twenty (120) calendar days after date and time set for receipt of the Bids.
- I. The Owner reserves the right to accept or reject any bid and to waive any irregularities in bidding.

2. EXECUTION OF AGREEMENT

- A. For all Projects the forms of agreement which the successful Bidder, as Contractor, will enter into will be an ISU Award Letter, an ISU Purchase Order and for any Project in excess of \$50,000 a Contract for Construction. Prior to issuance of the Purchase Order the Contractor shall provide to the Director of Purchasing a Performance and Payment Bond (see Section 00 20 20 Supplementary General Conditions 1.02) and the policies of insurance or insurance certificates as required by the Contract Documents (see Section 00 20 20 Supplementary General Conditions 1.03) and listed in the Award Letter.
- B. Time Limits for Execution of Agreement.
 - 1. The successful Bidder shall supply the required paperwork their Financial Statement (if not supplied with their Bid), Certificate of Insurance and their Performance and Payment Bond) to the ISU Purchasing Department within ten (10) calendar days after receipt of the ISU Award Letter.
- C. In the case a Bidder whose Bid is accepted, fails to perform their Bid by providing the required paperwork within ten (10) calendar days after receipt of the Award Letter, then this failure may be cause for their certified check, draft or Bid Bond, and the proceeds thereof, to remain the absolute property of the Owner, as liquidated damages, it being impossible to estimate the amount of damages such failure would occasion.

3. INDEMNIFICATION

- A. Bidders, in consideration of the privilege of Bidding, shall specifically waive all rights both legal and equitable which they have or might be construed to have against Indiana State University because of any action taken in accepting or rejecting bids and proposals, for themselves, and /or for subcontractors, suppliers and/or manufacturers, who may file an action based on any such acceptance or rejection. Bidders shall be liable for any resultant reasonable attorney fees and expenses incurred by Indiana State University.

4. ALLOWABLE CONTRACTOR MARK-UPS FOR PROJECT CHANGES

- A. When a change in the Work is contemplated which may affect the Contract Sum or duration of the Work, the Architect/Engineer/Owner will issue a 'Proposal Request' detailing the Work involved in such proposed change. Upon receipt of such 'Proposal Request,' the Contractor shall promptly, but in no case longer than five (5) working days, issue a reply or 'Change Proposal,' stipulating the change in cost of Project and/or duration as a result of the proposed change.
- B. The extra work shall be performed for the cost of the labor payroll plus 15% of the labor payroll and the cost of the material plus 5% of the material cost. Said markup fees are intended to compensate for the cost of payroll taxes, insurance of all kinds, all taxes of the Contractor, including State Taxes, Federal Income Tax, Unemployment, and FICA Taxes, as well as all other

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overhead costs, expenses, and carrying charges whatsoever, including the profit to be derived from such additional Work. Labor payroll is defined as the actual hourly labor cost plus any fringes payable.

- C. In case such Work is performed by a Subcontractor or a lower tier Contractor with the Owner's consent, the Work shall be marked up as indicated in Item B by the Contractor actually performing the Work. Each succeeding Contractor may mark up their direct labor and material costs as indicated in Item B. Otherwise each succeeding Contractor, including the Prime Contractor, may add 5% for handling/coordination. Additional mark-ups of a Subcontractor's costs shall not be permitted.
- D. Costs for bond premiums are allowable provided documentation from the Bonding Company is included detailing the added bond cost premium, the current bond total and the new bond total."

5. ADDENDA

- A. All Addenda (if any) for the Project will be will be posted to the ISU Plan Room.
- B. Indicate receipt of Addenda on the Bid Request Form in the spaces provided for acknowledgement. Failure to indicate receipt may be cause to disqualify a Bid.

6. RESPONSIBILITY FOR DOCUMENTS.

- A. The prime Contractor and all their Subcontractors are responsible for all documents provided with this Bid Request.

7. E-VERIFY REQUIREMENTS

- A. In accordance with Indiana Code 22-5-1. 7 as amended, each Contractor in any tier of a public works project shall not knowingly employ unauthorized aliens. Every contractor shall enroll in and verify the work eligibility status of all employees hired after June 30, 2015 using the U.S. Citizenship and Immigration Services (USCIS) E-Verify program as defined in IC §22-5-1.7-3, unless the E-Verify program no longer exists.
- B. The Prime Contractor shall require their subcontractors who perform work under this Contract to certify to the Prime Contractor that the subcontractor does not knowingly employ or contract with an unauthorized alien and that the subcontractor has enrolled and is participating in the E-Verify program. The Prime Contractor agrees to maintain this certification throughout the duration of the term of a contract with a subcontractor. The successful Prime Contractor and its sub-contractors at all levels shall comply with all provisions of the statute or the Contract is subject to cancellation.
- C. Bidders shall submit a signed copy of Section 00 10 45 Bidders Certification of Authorized Employment with their Bid to certify compliance with this requirement.

8. SCOPE OF WORK BASE BID

- A. Select demolition of the east restroom as shown on the drawings.
- B. Painting of walls
- C. Installation of new ceramic flooring
- D. Installation of new suspended ceiling
- E. Installation of new solid surface cabinetry
- F. Installation of new plumbing fixtures
- G. Installation of new baby changing station
- H. Installation of ADA grab bars
- I. Installation of new Owner supplied lighting
- J. Replacement of existing wiring devices. Receptacle shall be GFCI.

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9. SCOPE OF WORK ALTERNATE Bids

- A. Select demolition of the east restroom as shown on the drawings.
- B. Painting of walls
- C. Installation of new ceramic flooring
- D. Installation of new suspended ceiling
- E. Installation of new solid surface cabinetry
- F. Installation of new plumbing fixtures
- G. Installation of new baby changing station
- H. Installation of ADA grab bars
- I. Installation of new Owner supplied lighting
- J. Replacement of existing wiring devices. Receptacle shall be GFCI.

10. SUBCONTRACTOR LIST

Bidder shall provide the names of all applicable Subcontractors

Description	Subcontractor
Painting work	_____
Ceiling work	_____
Flooring work	_____
Solid Surface cabinet	_____
Plumbing work	_____
Electrical work	_____

11. SUPPLIER MANUFACTURER LIST

Bidder shall provide the names of all applicable Suppliers and Manufacturers

Product Description	Supplier	Manufacturer
Ceiling and Grid	_____	_____
Flooring	_____	_____
Solid Surface material	_____	_____
Plumbing fixtures	_____	_____
Lighting	_____	_____
Baby Changing Station	_____	_____

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12. PRE-CONSTRUCTION MEETING

- A. A pre-construction meeting will be held as soon as possible after Award of the Project at which time the Contractor shall have a proposed schedule of work to complete the work within the allowable time given.

End of BR B0027756

attachments

00 10 20
CERTIFICATION REGARDING SUSPENSION, DEBARMENT, INELIGIBILITY AND
VOLUNTARY EXCLUSION

This certificate is required by the regulations implementing Executive Orders 12549 and 12689, Uniform Guidance 2 CFR 200.213 and 2 CFR 180 sections regarding Suspension and Debarment

Is your organization, or its principals, suspended, debarred, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction, by any Federal department or agency? ☐ Yes ☐ No

Are any of your subcontractors, or its principals, suspended, debarred, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction, by any Federal department or agency? ☐ Yes ☐ No

Your Company's Name

Signature

Print Your Name

Date

END OF SECTION 00 10 20

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CERTIFICATION REGARDING SUSPENSION, DEBARMENT, INELIGIBILITY AND
VOLUNTARY EXCLUSION

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MBE/WBE/VBE COMPLIANCE INSTRUCTIONS

PART 1 – CONSTRUCTION SERVICES – INSTRUCTION TO BIDDERS

1.01 MBE/WBE/VBE Participation Plan

- A. Indiana State University is committed to diversity and non-discrimination in all aspects of its operations. This initiative is to ensure that certified MBEs, WBEs, and VBEs are included in all invitations for quotes and bids, and that all prospective bidders are notified of Indiana State University's expectation for diversity, including but not limited to MBE/WBE/VBE participation in procurement contracts for professional services, materials, supplies and equipment, and in contracts for the construction, architectural services, renovation or repair of university facilities and equipment. This expectation extends to all tiers of contractor utilization. Each Prime contractor should actively solicit and include certified minority, women and veteran owned subcontractors in bid submissions if economically feasible.
- B. The Minority, Women's and Veteran's Business Enterprise Participation Plan (form included in specifications) shall be submitted with the bid. This Participation Plan will be considered during the proposal evaluation process.
- C. Indiana State University's annual MBE, WBE, and VBE participation goals parallel those set by the Indiana Department of Administration for its own business diversity efforts. The State MBE/WBE participation goals may be found at www.in.gov/idoa/mwbe/2743.htm and VBE participation goals may be found at www.in.gov/idoa/2862.htm

1.02 Definitions

- A. "Minority-owned Business Enterprise" (MBE) means an individual, partnership, corporation, limited liability company, or joint venture of any kind that is 51% owned and controlled by (1) or more persons who are (a) United States citizens; and (b) members of a racial minority group: African American, American Indians, Hispanics, Asian Americans, or other similar minority group as defined by 13 CFR 124.103 and have been certified by the State of Indiana.
- B. "Women-owned Business Enterprise" (WBE) means an individual, partnership, corporation, limited liability company, or joint venture of any kind that is 51% owned and controlled by (1) or more persons who are (a) United States citizens; and (b) whose gender is female and have been certified by the State of Indiana.
- C. "Veteran-owned Business Enterprise" (VBE) means an Indiana firm with its principal place of business location in Indiana and is currently certified by the Department of Veterans Affairs as a veteran-owned business and have been certified by the State of Indiana or who have been Federally certified.

1.03 Qualifications for Participation

- A. In order to count toward participation goals, the MBEs and WBEs must be certified by the State of Indiana.
- B. VBEs must be certified by the State of Indiana or have been Federally certified.

1.04 Failure to Participate

- A. Failure to submit the Minority, Women's and Veteran's Business Enterprise Participation Plan with the Bid may be cause to reject a Bid.
- B. The Owner retains the right to hold payment, and/or to reject future bids submitted by the successful Contractor in the event that Contractor misrepresents either MBE/WBE/VBE participation in this Project, or its efforts to obtain MBE/WBE/VBE participation in this project, or fails to report MBE/WBE/VBE spend on this project.
- C. The Owner, at its discretion, may waive in part or in whole the minority-owned business enterprise, women-owned business enterprise and/or veteran-owned business enterprise requirement if in the opinion of the Owner it would be impractical, or not in the best interest of the Owner.

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MBE/WBE/VBE COMPLIANCE INSTRUCTIONS

1.05 Mandatory Tier II Reporting Requirement for Projects equal to or greater than \$500,000.00

- A. The successful Contractor shall take all necessary and reasonable steps to ensure that MBE/WBE/VBEs have the maximum opportunity to compete for and perform work on this Contract.
- B. MBE/WBE/VBE utilization in the performance of this Contract must be reported with each Application for Payment using the ISU Business Diversity Spend Reporting Form for Construction/Renovation/Facilities Repair Projects (see included: Tier II Spend Report Form.xlsx.)
- C. Compliance with Owner's Mandatory Tier II Reporting Requirement is a condition for the approval of an Applications for Payment.

PART 2 – NOT USED

PART 3 – NOT USED

END OF SECTION 00 10 30

00 10 40
MBE/WBE/VBE PARTICIPATION PLAN

Project Name _____

Bid Number _____ Bid Date _____

This Form must be completed by all Bidders and submitted with the Bid. **Failure to submit may be cause to reject the Bid.**

Check if Bidder is an MBE, WBE or VBE

Bidders Firm _____ MBE WBE VBE

Address _____

City/State/Zip _____

Phone _____

E-mail _____

The following certified minority, women and/or veteran -owned firms will be participating in the project according to the following schedule. Indicate whether each firm is an MBE, WBE or VBE by selecting the MBE, WBE or VBE box below.

1. _____

<u>FIRM</u>	☐ MBE	☐ WBE	☐ VBE	<u>TRADE</u>	<u>AMOUNT</u>	<u>% OF TOTAL BID</u>
-------------	------------------------------	------------------------------	------------------------------	--------------	---------------	-----------------------

<u>CONTACT NAME</u>	<u>PHONE</u>	<u>E-MAIL</u>
---------------------	--------------	---------------

2. _____

<u>FIRM</u>	☐ MBE	☐ WBE	☐ VBE	<u>TRADE</u>	<u>AMOUNT</u>	<u>% OF TOTAL BID</u>
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<u>CONTACT NAME</u>	<u>PHONE</u>	<u>E-MAIL</u>
---------------------	--------------	---------------

3. _____

<u>FIRM</u>	☐ MBE	☐ WBE	☐ VBE	<u>TRADE</u>	<u>AMOUNT</u>	<u>% OF TOTAL BID</u>
-------------	------------------------------	------------------------------	------------------------------	--------------	---------------	-----------------------

<u>CONTACT NAME</u>	<u>PHONE</u>	<u>E-MAIL</u>
---------------------	--------------	---------------

4. _____

<u>FIRM</u>	☐ MBE	☐ WBE	☐ VBE	<u>TRADE</u>	<u>AMOUNT</u>	<u>% OF TOTAL BID</u>
-------------	------------------------------	------------------------------	------------------------------	--------------	---------------	-----------------------

<u>CONTACT NAME</u>	<u>PHONE</u>	<u>E-MAIL</u>
---------------------	--------------	---------------

If more space is need attach additional sheet

If no MBE, WBE or VBE contractors are listed above please indicate reason(s) why:

Unable to locate any MBEs, WBEs or VBEs.

Unable to secure competitive pricing from any MBEs, WBEs or VBEs.

Other reasons, please describe: _____

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MBE/WBE/VBE PARTICIPATION PLAN

Describe below your efforts to obtain minority, women and veteran's business enterprise participation for this project.

Be sure to attach a copy of all solicitation efforts, e.g., ads that were published or networking events, etc.

List below the MBE/WBE/VBE contractors you individually contacted to request a quote for this project. If all work is to be self-performed and your Firm is not MBE, WBE or VBE list N/A in top left line below.

MBE, WBE, VBE Firms Contacted

Check all that apply:

1.	FIRM CONTACTED	TRADE	MBE	WBE	VBE	Not Low	No reply
	CONTACT NAME	PHONE	E-MAIL				
2.	FIRM CONTACTED	TRADE	MBE	WBE	VBE	Not Low	No reply
	CONTACT NAME	PHONE	E-MAIL				
3.	FIRM CONTACTED	TRADE	MBE	WBE	VBE	Not Low	No reply
	CONTACT NAME	PHONE	E-MAIL				
4.	FIRM CONTACTED	TRADE	MBE	WBE	VBE	Not Low	No reply
	CONTACT NAME	PHONE	E-MAIL				

If more space is need attach additional sheet

By my signature, I certify that the above statements are true and accurate, all as of the date below. I also understand that any changes to this plan must be approved by Indiana State University and documented by Construction Change Directive.

Agent of Bidder _____

Date _____

END OF SECTION 00 10 40

BIDDER'S CERTIFICATION OF AUTHORIZED EMPLOYMENT

In accordance with Indiana Code 22-5-1. 7 as amended, each Contractor in any tier of a public works project shall not knowingly employ unauthorized aliens. Every contractor shall enroll in and verify the work eligibility status of all employees hired after June 30, 2015 using the U.S. Citizenship and Immigration Services (USCIS) E-Verify program as defined in IC §22-5-1.7-3, unless the E-Verify program no longer exists.

The Prime Contractor shall require their subcontractors who perform work under this Contract to certify to the Prime Contractor that the subcontractor does not knowingly employ or contract with an unauthorized alien and that the subcontractor has enrolled and is participating in the E-Verify program. The Prime Contractor agrees to maintain this certification throughout the duration of the term of a contract with a subcontractor. The successful Prime Contractor and its sub-contractors at all levels shall comply with all provisions of the statute or the Contract is subject to cancellation.

I hereby certify that I have read and understand the "Contractor's Certification of Authorized Employment" provision of the Contract Documents In Section 00 20 11 Amendments to General Conditions Article 13, subparagraph 13.1.7.3 and its subparagraphs and that the undersigned and proposed and actual sub-contractors at all tiers shall comply with the provisions of the Statute

On behalf of and as authorized by the Bidder, I affirm and depose that the Bidder and our Subcontractors shall not knowingly employ unauthorized aliens.

(Bidder - Please print full name of your proprietorship, partnership, or corporation)

(Name - Authorized Signing Officer)

(Title)

(Signature)

(Date)

END OF SECTION 00 10 45

00 10 45
BIDDER'S CERTIFICATION OF AUTHORIZED EMPLOYMENT

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DRAFT AIA[®] Document A201[™] - 2007

General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

<< >>
<< >>

THE OWNER:

(Name, legal status and address)

<< >>< >>
<< >>

THE ARCHITECT:

(Name, legal status and address)

<< >>< >>
<< >>

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ADDITIONS AND DELETIONS:

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

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

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 BASIC DEFINITIONS

§ 1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding requirements.

§ 1.1.2 THE CONTRACT

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

§ 1.1.3 THE WORK

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

§ 1.1.4 THE PROJECT

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

§ 1.1.5 THE DRAWINGS

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

§ 1.1.6 THE SPECIFICATIONS

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

§ 1.1.7 INSTRUMENTS OF SERVICE

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

§ 1.1.8 INITIAL DECISION MAKER

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2.

§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

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

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

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

§ 1.3 CAPITALIZATION

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

§ 1.4 INTERPRETATION

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

§ 1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

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

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

§ 1.6 TRANSMISSION OF DATA IN DIGITAL FORM

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents.

ARTICLE 2 OWNER

§ 2.1 GENERAL

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner’s approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term “Owner” means the Owner or the Owner’s authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of or enforce mechanic’s lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner’s interest therein.

§ 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 2.2.1 Prior to commencement of the Work, the Contractor may request in writing that the Owner provide reasonable evidence that the Owner has made financial arrangements to fulfill the Owner’s obligations under the Contract. Thereafter, the Contractor may only request such evidence if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) a change in the Work materially changes the Contract Sum; or (3) the Contractor identifies in writing a reasonable concern regarding the Owner’s ability to make payment when due. The Owner shall furnish such evidence as a condition precedent to commencement or continuation of the Work or

the portion of the Work affected by a material change. After the Owner furnishes the evidence, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

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

§ 2.2.3 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

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

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

§ 2.3 OWNER'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

ARTICLE 3 CONTRACTOR

§ 3.1 GENERAL

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

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

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

§ 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

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

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

§ 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner-required means, methods, techniques, sequences or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 LABOR AND MATERIALS

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other

facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

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

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

§ 3.5 WARRANTY

The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.6 TAXES

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 PERMITS, FEES, NOTICES AND COMPLIANCE WITH LAWS

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

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

§ 3.7.4 Concealed or Unknown Conditions. If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor in writing, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may proceed as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume

the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 ALLOWANCES

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

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 Allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 Whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

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

§ 3.9 SUPERINTENDENT

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

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

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

§ 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

§ 3.10.2 The Contractor shall prepare a submittal schedule, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, and shall submit the schedule(s) for the Architect's approval. The Architect's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

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

§ 3.11 DOCUMENTS AND SAMPLES AT THE SITE

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

§ 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

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

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

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

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

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.

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

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

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

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

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

required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

§ 3.13 USE OF SITE

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

§ 3.14 CUTTING AND PATCHING

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

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

§ 3.15 CLEANING UP

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project.

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

§ 3.16 ACCESS TO WORK

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

§ 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

§ 3.18 INDEMNIFICATION

§ 3.18.1 To the fullest extent permitted by law the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section 3.18.

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

ARTICLE 4 ARCHITECT

§ 4.1 GENERAL

§ 4.1.1 The Owner shall retain an architect lawfully licensed to practice architecture or an entity lawfully practicing architecture in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

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

§ 4.1.3 If the employment of the Architect is terminated, the Owner shall employ a successor architect as to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 4.2 ADMINISTRATION OF THE CONTRACT

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1.

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

§ 4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect about matters arising out of or relating to the Contract. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

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

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

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

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

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

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

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

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

ARTICLE 5 SUBCONTRACTORS

§ 5.1 DEFINITIONS

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

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

§ 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

§ 5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to any such proposed person or entity or (2) that the Architect requires additional time for review. Failure of the Owner or Architect to reply within the 14 day period shall constitute notice of no reasonable objection.

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

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

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 SUBCONTRACTUAL RELATIONS

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

be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

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

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

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

§ 5.4.3 Upon such assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.

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

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

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

§ 6.2 MUTUAL RESPONSIBILITY

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

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that

the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

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

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

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

§ 6.3 OWNER'S RIGHT TO CLEAN UP

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

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 GENERAL

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

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

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

§ 7.2 CHANGE ORDERS

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

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

§ 7.3 CONSTRUCTION CHANGE DIRECTIVES

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

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

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

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

.4 As provided in Section 7.3.7.

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

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

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

§ 7.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:

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

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

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

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

§ 7.4 MINOR CHANGES IN THE WORK

The Architect has authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order signed by the Architect and shall be binding on the Owner and Contractor.

ARTICLE 8 TIME

§ 8.1 DEFINITIONS

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

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

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

§ 8.1.4 The term “day” as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 PROGRESS AND COMPLETION

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

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 DELAYS AND EXTENSIONS OF TIME

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control; or by delay authorized by the Owner pending mediation and arbitration; or by other causes that the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 CONTRACT SUM

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

§ 9.2 SCHEDULE OF VALUES

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit to the Architect, before the first Application for Payment, a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 9.3 APPLICATIONS FOR PAYMENT

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

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

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

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

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

§ 9.4 CERTIFICATES FOR PAYMENT

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

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

§ 9.5 DECISIONS TO WITHHOLD CERTIFICATION

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

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;

- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a separate contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

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

§ 9.5.3 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or material or equipment suppliers to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Architect will reflect such payment on the next Certificate for Payment.

§ 9.6 PROGRESS PAYMENTS

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

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

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

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

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

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

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

§ 9.7 FAILURE OF PAYMENT

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' written notice to the Owner and Architect,

stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 SUBSTANTIAL COMPLETION

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

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

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

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

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

§ 9.9 PARTIAL OCCUPANCY OR USE

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Section 11.3.1.5 and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

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

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

§ 9.10 FINAL COMPLETION AND FINAL PAYMENT

§ 9.10.1 Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the

Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

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

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

- .1 liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents; or
- .3 terms of special warranties required by the Contract Documents.

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

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 SAFETY PRECAUTIONS AND PROGRAMS

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

§ 10.2 SAFETY OF PERSONS AND PROPERTY

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

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

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

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

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

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

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

§ 10.2.8 INJURY OR DAMAGE TO PERSON OR PROPERTY

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

§ 10.3 HAZARDOUS MATERIALS

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing.

§ 10.3.2 Upon receipt of the Contractor's written notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

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

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

§ 10.4 EMERGENCIES

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

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- .1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 Claims for damages insured by usual personal injury liability coverage;
- .5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- .6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- .7 Claims for bodily injury or property damage arising out of completed operations; and
- .8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.

§ 11.1.2 The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction

of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

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

§ 11.1.4 The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

§ 11.2 OWNER'S LIABILITY INSURANCE

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

§ 11.3 PROPERTY INSURANCE

§ 11.3.1 Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project.

§ 11.3.1.1 Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss.

§ 11.3.1.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance that will protect the interests of the Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor in writing, then the Owner shall bear all reasonable costs properly attributable thereto.

§ 11.3.1.3 If the property insurance requires deductibles, the Owner shall pay costs not covered because of such deductibles.

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

§ 11.3.1.5 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or

otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

§ 11.3.2 BOILER AND MACHINERY INSURANCE

The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.

§ 11.3.3 LOSS OF USE INSURANCE

The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.

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

§ 11.3.5 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Section 11.3.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

§ 11.3.6 Before an exposure to loss may occur, the Owner shall file with the Contractor a copy of each policy that includes insurance coverages required by this Section 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor.

§ 11.3.7 WAIVERS OF SUBROGATION

The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Section 11.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

§ 11.3.8 A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

§ 11.3.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the

Owner shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Agreement between the Owner and Contractor. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.

§ 11.3.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Agreement. If the Owner and Contractor have selected arbitration as the method of binding dispute resolution, the Owner as fiduciary shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with the directions of the arbitrators.

§ 11.4 PERFORMANCE BOND AND PAYMENT BOND

§ 11.4.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.

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

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 UNCOVERING OF WORK

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

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

§ 12.2 CORRECTION OF WORK

§ 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

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

§ 12.2.2 AFTER SUBSTANTIAL COMPLETION

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4.

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

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

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

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

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

§ 12.3 ACCEPTANCE OF NONCONFORMING WORK

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

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 GOVERNING LAW

The Contract shall be governed by the law of the place where the Project is located except that, if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 SUCCESSORS AND ASSIGNS

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

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

§ 13.3 WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at, or sent by registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice.

§ 13.4 RIGHTS AND REMEDIES

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

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

§ 13.5 TESTS AND INSPECTIONS

§ 13.5.1 Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

§ 13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense.

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

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

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

§ 13.6 INTEREST

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

§ 13.7 TIME LIMITS ON CLAIMS

The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the Agreement within the time period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 13.7.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 TERMINATION BY THE CONTRACTOR

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency that requires all Work to be stopped;

- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor promptly, upon the Contractor's request, reasonable evidence as required by Section 2.2.1.

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

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages.

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

§ 14.2 TERMINATION BY THE OWNER FOR CAUSE

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

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

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

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

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

§ 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

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

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

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

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

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 CLAIMS

§ 15.1.1 DEFINITION

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim.

§ 15.1.2 NOTICE OF CLAIMS

Claims by either the Owner or Contractor must be initiated by written notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3 CONTINUING CONTRACT PERFORMANCE

Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. The Architect will prepare Change Orders and issue Certificates for Payment in accordance with the decisions of the Initial Decision Maker.

§ 15.1.4 CLAIMS FOR ADDITIONAL COST

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

§ 15.1.5 CLAIMS FOR ADDITIONAL TIME

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

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

§ 15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES

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

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.6 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 INITIAL DECISION

§ 15.2.1 Claims, excluding those arising under Sections 10.3, 10.4, 11.3.9, and 11.3.10, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Initial Decision Maker with no decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

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

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

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

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

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

§ 15.2.6.1 Either party may, within 30 days from the date of an initial decision, demand in writing that the other party file for mediation within 60 days of the initial decision. If such a demand is made and the party receiving the demand fails to file for mediation within the time required, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

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

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

§ 15.3 MEDIATION

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.6 shall be subject to mediation as a condition precedent to binding dispute resolution.

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

§ 15.3.3 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 ARBITRATION

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

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

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

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

§ 15.4.4 CONSOLIDATION OR JOINDER

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

§ 15.4.4.2 Either party, at its sole discretion, may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an

additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

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



PART 1 – GENERAL

1.01 AMENDMENTS TO GENERAL CONDITIONS

- A. The General Conditions for this Project shall be the American Institute of Architects' Document A201-2007, "General Conditions of the Contract for Construction, Articles 1 through 15, inclusive, 38 pages, and hereafter referred to as the "General Conditions." Such document is specifically made a part of the Contract Documents.
- B. The following amendments shall modify, delete, and supplement the General Conditions. Where any Article, Paragraph, or Subparagraph in the General Conditions is supplemented by one of the following Paragraphs, the provisions of such Article, Paragraph, or Subparagraph shall remain in full force and effect and the supplemental provisions shall be considered as added thereto. Where any Article, Paragraph not so amended, deleted, voided, or superseded shall remain in full force and the order and numbering of subsequent articles, Paragraphs or Subparagraphs shall be changed to read as if in sequence.
- C. Refer to other Division 00 documents for additional supplemental requirements.

PART 2 – AMENDMENT ARTICLES

2.01 ARTICLE 1

- A. Subparagraph 1.1.1: Amend this Subparagraph by deleting the last sentence beginning with the words "Unless specifically enumerated" and substituting the following sentence: "The Contract Documents shall also include the Notice to Bidders, Instructions to Bidders, Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion, Bid Form, Subcontractors and Materials Listing, Contractor's Non-Collusion Affidavit, and all portions of Addenda relating to Bidding Requirements."
- B. Add the following Subparagraph 1.1.7
"1.1.7 ARCHITECT/ENGINEER"
"Where the word Architect is used in the AIA A201-2007 it shall be inferred to also include the Design Engineer(s), e.g. Architect/Engineer, Engineer (for Engineer only Administered Projects).
- C. Add the following Section 1.7

"1.7 LITIGATION

1.7.1 All litigation under this Contract must be initiated in Vigo County, Indiana and Contractor consents to the jurisdiction of the Vigo County courts.

1.7.2 Contractor hereby waives its right to a jury trial in any matters litigated in Vigo County.

1.7.3 In any litigation initiated by Contractor, Contractor shall reimburse all attorney's fees and expenses incurred by Owner up to a maximum of \$100,000 provided Contractor has presented its claims as required by this Contract and the Owner has made a good faith offer to resolve any dispute prior to litigation. The determination of a 'good faith offer' shall rest solely with the Architect who will render their opinion in writing to Contractor or Owner upon request prior to Contractor initiating litigation or thereafter as requested. The Architect's decision is binding on Owner and Contractor and admissible in court as determinative of this issue.

1.7.4 In any litigation initiated by Owner against Contractor, provided Contractor was given the opportunity to resolve all issues prior to litigation being initiated and failed to do so through a reasonable offer, as determined by the Architect, then Contractor shall be responsible to reimburse all attorney's fees and expenses incurred by Owner for all litigation as well as for all pre-litigation activities engaged in by the Owner for

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investigating, evaluating, or mediating any claims, issues, or matters related to Contractor.”

2.02 ARTICLE 2

- A. Subparagraph 2.1.2: Delete this Subparagraph in its entirety.
- B. Subparagraph 2.2.5: Amend this Subparagraph by adding “electronically” after the word Documents in the second line.

2.03 ARTICLE 3

- A. Paragraph 3.2: Amend this Paragraph by deleting Subparagraph 3.2.1 in its entirety and replacing with the following new subparagraph 3.2.1 and its subparagraphs:

“3.2.1 By executing the Contract, the Contractor represents to the Owner that:”

“3.2.1.1 The Contractor has a high level of experience and expertise in the business administration construction, management, workplace health and safety supervision and superintendence of projects of similar size and complexity and that it will perform the Work with the care, skill and diligence of such a contractor.”

“3.2.1.2 Contractor and, to the best of its knowledge, its subcontractors are financially solvent, able to pay all debts as they mature and have sufficient working capital to complete the Work and all obligations thereunder.”

“3.2.1.3 The Contractor is able to furnish the plant, tools, materials, supplies, equipment and labor required to complete the Work.”

“3.2.1.4 Contractor is authorized to do business in the State of Indiana.”

“3.2.1.5 Contractor’s execution of the Contract and its performance thereof are within its authorized powers.”

“3.2.1.6 Contractor has:”

“3.2.1.6.1 Studied the Contract Documents, understands their provisions and that that they are sufficiently detailed and complete to permit the Contractor to perform the Work in accordance with the Contract Documents, within the Contract Time and for the Contract Sum.”

“3.2.1.6.2. Inspected the Project site.”

“3.2.1.6.3 Investigated and satisfied itself as to:

“3.2.1.6.3.1 The site and locality where the Work is to be performed and the conditions and difficulties to be encountered, including access thereto.”

“3.2.1.6.3.2 The availability of utilities and access thereto.”

“3.2.1.6.3.3 Conditions affecting transportation, disposal, handling and storage of materials, supplies and equipment.”

“3.2.1.6.3.4 Any materials, supplies or equipment which are to be furnished by the Owner for the Contractor’s use.”

“3.2.1.6.3.5 The type and availability of tools, equipment and facilities to perform the Work.”

“3.2.1.6.3.6 The availability and adequacy of labor and trades, and, if applicable, union wage scales, benefits, working conditions, craft jurisdictions, area practices and collective bargaining agreements affecting the Work.”

“3.2.1.6.3.7 Prevailing weather and climatological conditions.”

“3.2.1.6.3.8 All laws applicable to the Work and to the Contractor.”

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“3.2.1.6.3.9 All other factors which may affect the Contractor’s performance of the Work.”

- B. Paragraph 3.4: Amend this Paragraph by adding Subparagraphs 3.4.4 through 3.4.7 as follows:

“3.4.4 The Contractor shall employ competently trained and experienced engineers and supervisors, who shall coordinate general, mechanical, and electrical Work and crafts with the required construction progress. The Contractor shall exercise complete control over their Subcontractor(s) in a manner which will unite their efforts toward completion of the project as contracted.”

“3.4.5 The Contractor shall continuously maintain adequate protection of all their Work and the Work of Subcontractors from damage and shall hold harmless the Owner and Architect/Engineer from injury or loss arising in connection with this contract, including legal defense costs. The Contractor shall make good any such damage, injury, or loss, except such as may be directly due to errors in the Contract Documents or those caused by agents or employees of the Owner.”

“3.4.6 The Contractor shall be responsible for and shall establish and verify exterior lines and the required elevations of all buildings and structures to be erected at the site.”

“3.4.7 The Contractor shall coordinate and expedite the Work of all lower tier Contractors.”

- C. Paragraph 3.5: Amend this Paragraph by adding Subparagraphs 3.5.1, 3.5.2, and 3.5.3 as follows:

“3.5.1 The Contractor shall warranty that all Work executed under the respective sections will be free from defects of materials and workmanship for the period of one (1) year from the Date of Substantial Completion of the Work or within such longer period of time as may be prescribed by law or by the terms of any applicable special warranty required by the Contract Documents. The Contractor further agrees that they will, at their own expense, repair and replace all such defective Work, and all other Work damaged that becomes defective during the term of the warranty. Where warranties are required, Contractor shall secure warranties in writing from Subcontractors, manufacturers and/or material suppliers addressed to and in favor of the Owner and deliver same to the Owner upon completion of Work. Delivery of warranties shall not relieve the Contractor from any obligations assumed under any other provisions of Contract.”

“3.5.2 Any damage to the building or its contents and/or Work of other Contractors caused by failure of any piece of equipment and/or faulty installation shall be repaired or replaced by the party or parties furnishing the original equipment/installation and paid for by the Contractor at fault.”

“3.5.3 An inspection of the installed Work and/or equipment will be made just before the end of the stipulated warranty period and any installations and/or equipment which, in the opinion of the Architect/Engineer and/or Owner, show undue wear, failure, incorrect operation, or otherwise do not conform to the letter and intent of the Contract Documents shall be repaired or replaced by the Contractor furnishing same at no additional charge.”

- D. Paragraph 3.6: Amend this Subparagraph by adding the words “Unless otherwise provided in the Contract Documents,” to the beginning of this Paragraph.

- E. Paragraph 3.9: Amend this Paragraph by adding Subparagraph 3.9.4 as follows:

“3.9.4 Subcontractors for any other Work shall have a competent superintendent at the site at all times when Work is being performed under their contracts.

- F. Paragraph 3.13: Amend this Paragraph by adding Subparagraph 3.13.1 as follows:

“3.13.1 The Contractor shall prepare an overlay sketch of the construction areas indicating spaces assigned for field office, storage sheds, containers, trailers and field

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shops, and for stockpiles and staging of materials for all trades. This sketch shall be submitted to the Owner and the Architect/Engineer for their information prior to moving any such equipment and materials onto the Project Site.”

- G. Paragraph 3.16: Amend this Paragraph 3.16 adding the following to the end:

“If Work is being executed at locations other than the Project site, the Contractor shall notify the Architect/Engineer where such Work is being executed, and at what time such Work will be ready for inspection, in order that the Architect/Engineer may inspect such Work Prior to its delivery to the Project Site.”

- H. Paragraph 3.18: Amend this Paragraph by adding Subparagraph 3.18.3 as follows:

“3.18.3 The Contractor shall indemnify the Owner and Architect/Engineer for any claim, demand or expense which may be made by reason of:

“.1 Any injury to person or property sustained by the Owner or by any person, firms, or corporations, if caused by the Contractor.”

“.2 Any injury to person or property sustained by any person, firms, or corporations caused by an act or omission of the Contractor or of any person, firm, or corporation directly or indirectly employed by him in connection with this Work, whether the said injury or damage occurs upon or adjacent to the Work.”

“.3 The Contractor, at his own cost, expense, and risk, shall defend any and all actions, suits, or other legal proceedings that may be rendered against the Owner and Architect/Engineer in any such action, suit, or proceedings.”

“.4 The Contractor shall indemnify the Owner and Architect/Engineer from any and all costs resulting from any claim or suits in connection with liens that may be brought or instituted against the Owner. Neither the final payment or any part of the retained percentage of the Contract shall become due until the Contractor has delivered to the Owner a complete release of all liens arising out of the Contract.”

2.04 ARTICLE 4

- A. Subparagraph 4.1.2: Delete this Subparagraph in its entirety.
- B. Subparagraph 4.2.7: Modify the first sentence of this Subparagraph by deleting the words “approve or take” and substituting the word “indicate.”
- C. Subparagraph 4.2.10: Amend this Subparagraph by adding the words “in writing” after the word “agree” in the first sentence.

2.05 ARTICLE 5

- A. Paragraph 5.3: Amend this Paragraph by adding the following sentence thereto:
- “Unless otherwise excepted, nothing contained in this Contract shall create any contractual relationship between any Subcontractor and the Owner.”

2.06 ARTICLE 6 (NO CHANGE)

2.07 ARTICLE 7

- A. Paragraph 7.1: Amend this Paragraph by adding the following new Subparagraph 7.1.4:

“7.1.4 When a change in the Work is contemplated which may affect the Contract Sum or duration of the Work, the Architect/Engineer will issue a ‘Proposal Request’ detailing the Work involved in such proposed change. Upon receipt of such ‘Proposal Request,’ the Contractor shall promptly, but in no case longer than five (5) working days, issue a reply or ‘Change Quotation,’ stipulating the change in cost of Project and/or duration as a result of the proposed change. This issuance of a Proposal Request does not, in any way, authorize commencement of the Work therein described. Should, after review and consultation with the Owner, the Architect/Engineer find the ‘Change Quotation’ by the

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Contractor to be acceptable, the Architect/Engineer will within thirty (30) calendar days issue a written 'Change Order' to the Contractor."

B. Add the following Subparagraph 7.1.5 as follows

"7.1.5 If Contractor proceeds with change order work before receiving a fully executed change order or change directive, then Contractor waives the right to object to the scope of work change, the amount of the change order, and the adjustment, if any, to the time of performance."

C. Amend Subparagraph 7.3.3 by adding the following Subparagraphs:

".5 Time and material."

".6 Extra Work performed under Item .5 above shall be upon the option of the Owner only in the event that the lump sum required under Item .1 is not acceptable."

".7 Extra Work shall be performed for the cost of the labor payroll plus 15% of the labor payroll and the cost of the material plus 5% of the material cost. Said markup fees are intended to compensate for the cost of payroll taxes, insurance of all kinds, all taxes of the Contractor, including State Taxes, Federal Income Tax, Unemployment, and FICA Taxes, as well as all other overhead costs, expenses, and carrying charges whatsoever, including the profit to be derived from such additional Work. Labor payroll is defined as the actual hourly labor cost plus any fringes payable as listed on the wage rate schedule(s) provided as required by the Bidding Documents."

".8 In case such Work is performed by a Subcontractor or a lower tier Contractor with the Owner's consent, the Work shall be marked up as indicated in 7.3.3.7 by the Contractor actually performing the Work. Each succeeding Contractor may mark up their direct labor and material costs as indicated in 7.3.3.7. Otherwise each succeeding Contractor, including the Prime Contractor, may add 5% for handling/coordination. Additional mark-ups of a Subcontractor's costs shall not be permitted."

".9 Costs for bond premiums are allowable provided documentation from the Bonding Company is included detailing the added bond cost premium, the current bond total and the new bond total."

D. Subparagraph 7.3.7: Amend the following:

".1 Delete the text and replace with:

"'.1 The cost of the labor payroll plus 15% of the labor payroll;'"

".2 Delete the semicolon at the end of the sentence and add "plus 5% of the total of the costs;"

".3 Delete the semicolon at the end of the sentence and add "plus 5% of the total of the costs;"

".4 Delete all text following the word bonds in the first line and replace with ",with documentation from the Bonding Company including details of the added bond cost premium, the current bond total and the new bond total;"

".5 Delete the text and replace with:

"'.5 Additional costs of supervision directly attributable to the change if the change results in supervision of change work at a time outside the normal work hours of the Project.'"

E. Paragraph 7.3: Add the following new Subparagraphs 7.3.11, 7.3.12, and 7.3.13:

"7.3.11 When extra Work is performed under Item 7.3.3.2 above, said unit prices shall represent the total cost to the Owner and shall not be subject to any additional charges whatsoever."

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“7.3.12 In order to facilitate checking of quotations for extras or credits, all proposals shall be accompanied by a complete breakdown of costs, including labor, material, and subcontracts. Labor and material shall be marked up in the manner prescribed herein. Where cost items consist of major subcontracts, such contracts shall be broken down in a similar fashion.”

“7.3.13 When changes are made that result in a credit to the Owner, the value of the credit will be established by the method indicated in Items 7.3.3.1 or 7.3.3.2”

2.08 ARTICLE 8 (NO CHANGE)

2.09 ARTICLE 9

- A. Subparagraph 9.3.1: Amend this Subparagraph by deleting the words “if required” in the third line.

- B. Paragraph 9.3: Amend this Paragraph by adding Subparagraph 9.3.4 as follows:

“9.3.4 The Owner will retain, until the Work is at least fifty percent (50%) complete, ten percent (10%) of the amount due the Contractor on account of approved progress payments. At the time the Work is at least fifty percent (50%) completed or thereafter, if the manner of completion of the Work and its progress are and remain satisfactory to the Owner and Architect/Engineer, and in the absence of other good and sufficient reasons, the Architect/Engineer will (upon presentation by the Contractor of Consent of Surety) recommend to the Owner that any remaining approved partial payments be paid in full. Regardless of the Owner’s decision relative to further retainage, all prior retainages that were withheld will be held until completion of the contract Work and all remedial Work, listed as conditions of substantial completion, and following final payment. If retainage is limited to ten percent (10%) of the first fifty percent (50%) of the contract amount, as described above, five percent (5%) will be withheld from payments for all subsequent change orders; therefore, the minimum retainage shall be five percent (5%) of the current contract amount.”

- C. Subparagraph 9.6.3: Delete this Subparagraph in its entirety.

- D. Subparagraph 9.6.5: Delete this Subparagraph in its entirety.

- E. Paragraph 9.7: Delete the text of this Paragraph and replace with the following new Subparagraphs 9.7.1 and 9.7.2

“9.7.1 The Architect shall issue to the Owner a Certificate for Payment within seven calendar days after receipt of the Contractor’s Application for Payment. Upon receipt of the Certificate for Payment (Application for Payment) from the Architect, the Owner will endeavor to make payment to the Contractor within fifteen calendar days. If payment is not made within a reasonable time, then the Contractor may, upon seven additional days’ written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor’s reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.”

“9.7.2 If an Application for Payment is being held for just cause, the Architect shall notify the Contractor in writing of the cause and what remedial action must be taken for the Application for Payment to be released for payment.

- F. Subparagraph 9.10.2: Amend this Subparagraph by deleting the word “and” in the eighth line and adding the following after the “Owner” in the eleventh line:

“and (6) the Architect/Engineer has received the required Record Drawings, brochures, manuals, operating instructions, warranties, affidavits, final application for payment, any other special data requirements and has performed a final inspection and confirmed that all items of completion are correct and acceptable at which time he will initiate a ‘Final Completion’ letter establishing the date of Final Completion.”

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2.10 ARTICLE 10

- A. Subparagraph 10.2.2: Amend this Subparagraph by adding the following to the end thereof:

“In the event of conflict between these Contract Documents and any Federal, State, or Local Authority laws, rules, regulations, or requirements, the most stringent requirement shall govern the Work.”
- B. Subparagraph 10.3.1: Amend this Subparagraph by deleting the phrase “and Architect” in the sixth line.
- C. Subparagraph 10.3.2: Amend this Subparagraph by deleting the phrase “and Architect” in the second sentence; deleting the phrase “and the Architect” from the third sentence; and by deleting the words “either” and “or Architect” from the fourth sentence; by replacing the phrase, “and the Architect have” with the word “has” in the fourth sentence.
- D. Paragraph 10.3 add the following Subparagraph 10.3.7

10.3.7 “The Contractor shall also comply with all the safety paragraphs listed in Section 00 30 00 of the Contract Documents. In the event of conflict between 10.3 and Section 00 30 00, Section 00 30 00 shall prevail.”

2.11 ARTICLE 11

- A. Article 11: Insert a new Subparagraph 11.1 and renumber each succeeding Paragraph accordingly:

11.1 See Specification Section 00 20 20 for additional requirements. In the event of conflict between Section 00 20 20 and this Paragraph 11, requirements of Section 00 20 20 shall prevail.
- B. Subparagraph 11.1.1 (renumbered 11.2.1): Amend this Subparagraph by adding the phrase, “and that are acceptable to the Owner,” following the word “located,” in the second line.
- C. Subparagraph 11.1.1 (renumbered 11.2.1): Amend this Subparagraph by adding the phrase, “, Indiana State University, the Indiana State University Board of Trustees and the Architect/Engineer,” following the word “Contractor,” in the second line.
- D. Subparagraph 11.1.1 (renumbered 11.2.1): Amend this Subparagraph by adding Sub-Subparagraphs .9 and .10 as follows:

“.9 Liability insurance shall include all major divisions of coverage and be on a comprehensive basis including:

 - Premises Operations (including X, C, and U coverage’s as applicable)
 - Independent Contractor’s Protective
 - Products and Completed Operations
 - Personal Injury Liability with Employment Exclusion deleted
 - Contractual, including specified provision for the Contractor’s obligations under Paragraph 3.18
 - Owned, non-owned and hired motor vehicles”

“.10 Broad Form Property Damage including Completed Operations: If the General Liability coverage’s are provided by a Commercial General Liability Policy on a claims made basis, the policy date or Retroactive Date shall predate the Contract; the termination date of the policy or applicable extended reporting period shall be no earlier than the termination date of coverage’s required to be maintained after final payment, certified in accordance with Subparagraph 9.10.2.”
- E. Subparagraph 11.1.2 (renumbered 11.2.2): Add the following renumbered Subparagraph 11.2.2.1

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“11.2.2.1 The insurance required by renumbered Subparagraph 11.2.1 shall be written for not less than the following limits, or greater if required by law:

See Section 00 20 20 for Insurance Requirement Levels

- F. Subparagraph 11.1.3 (renumbered 11.2.3): Amend this Subparagraph by changing the word “30” to “60” in the second sentence.

- G. Subparagraph 11.1.3 (renumbered 11.2.3): Amend this Subparagraph by deleting the last sentence beginning with the phrase, “Information concerning reduction....” And substituting the following:

“The form of the certificate shall be AIA Document G715, SUPPLEMENTAL ATTACHMENT for Acord Certificate of Insurance 25-S (7/90). Contractor shall furnish promptly to the Owner copies of any endorsements that are subsequently issued amending coverage or limits. Certificates of Insurance shall name the Owner (Indiana State University Board of Trustees) and Architect/Engineer as ‘Additional Insured’s.’”

- H. Paragraph 11.1 (renumbered 11.2): Amend this Paragraph by adding Subparagraph 11.2.5 as follows:

“11.2.5 The Contractor, in connection with the above mentioned Workmen’s Compensation and Occupational Disease Insurance, shall furnish to the Owner, prior to commencement of the Work, duly executed and validated forms as prescribed by the Indiana Industrial Board showing that such insurance is in full force and effect.”

- I. Sub-subparagraph 11.3.1.1 (renumbered 11.4.1.1): Amend this Subparagraph by adding the following Subparagraph 11.4.1.1.1:

“11.4.1.1.1: Such Insurance shall not insure against loss due to theft of Contractor’s, Subcontractor’s, Sub-Subcontractor’s tools, equipment, and other personal property. The responsibility to guard against such thefts shall lie with the respective Contractor, Subcontractor, or Sub-Subcontractor whose tools, equipment, and other personal property are susceptible to such thefts.”

- J. Subparagraph 11.3.1.3 (renumbered 11.4.1.3): Add the following phrase to the end of the sentence:

The deductible amount shall be \$25,000.00 unless otherwise advised by the Owner.

- K. Subparagraph 11.3.9 (renumbered 11.4.9): Delete this Subparagraph in its entirety.

2.12 ARTICLE 12

- A. Subparagraph 12.2.2.1: Amend this Subparagraph by adding the following sentence to the end:

“Where special warranties of longer duration are required, the Contractor shall secure warranties from Subcontractors, manufacturers and/or material suppliers as applicable, addressed to and in favor of the Owner, and deliver copies of same to the Owner upon completion of the Work. Delivery of said warranties shall not relieve Contractor of any obligation assumed under any other provisions of the Contract.”

2.13 ARTICLE 13

- A. Subparagraph 13.1: Delete the text in its entirety and replace with the following:

“13.1 Contractor and all Subcontractors are responsible to comply with Indiana Code as it pertains to public works projects. The following are notable requirements set forth in IC 5-16-13, in effect as of July 1, 2015, but are not inclusive of all requirements.”

- B. Subparagraph 13.1: Add the following numbered Subparagraph 13.1.1:

“13.1.1 Contractor agrees, and represents to Owner, that at least 15% of the Contract Price (at the time this Agreement is executed) is comprised of any combination of the

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AMENDMENTS TO GENERAL CONDITIONS

following: 1) Work performed by Contractor's employees; 2) Services supplied directly by Contractor's employees; or 3) Materials supplied directly by Contractor.

- C. Subparagraph 13.1: Add the following numbered Subparagraph 13.1.2:

"13.1.2 Contractor and all Subcontractors, regardless of tier, shall not pay cash to its employees for Work performed on this public works Project."

- D. Subparagraph 13.1: Add the following numbered Subparagraph 13.1.3:

"13.1.3 Contractor and all Subcontractors, regardless of tier, shall comply with federal Fair Labor Standards Act of 1938."

- E. Subparagraph 13.1: Add the following numbered Subparagraph 13.1.4:

"13.1.4 Contractor and all Subcontractors, regardless of tier, shall be in compliance with workers compensation requirements of Indiana Code 22-3-5-1 and Indiana Code 22-3-7-34 and commits worker's compensation fraud if such Contractor or Subcontractor falsely classifies an employee as an independent contractor, sole proprietor, owner, partner, officer, or member of a limited liability company."

- F. Subparagraph 13.1: Add the following numbered Subparagraph 13.1.5:

"13.1.5 Contractor and all Subcontractor, regardless of tier, shall be in compliance with unemployment compensation system requirements of Indiana Code 22-4-1 through 22-4-39-5."

- G. Subparagraph 13.1: Add the following numbered Subparagraph 13.1.6:

"13.1.6 Contractor and all Subcontractors, regardless of tier, shall be in compliance with requirements for drug testing of its employees set forth in Indiana Code 4-13-18-1 through 4-13-18-7 if estimated cost of public works Contract is at least \$150,000. With each application for payment the Contractor shall submit an affidavit, dated and signed by the Contractor, that neither they nor, to their knowledge, any of their subcontractors has violated the "Drug Testing Program provision of the Indiana Code."

- H. Subparagraph 13.1: Add the following numbered Subparagraph 13.1.7:

"13.1.7 Following provisions shall be in effect for Contracts awarded after March 31, 2018."

- I. Subparagraph 13.1.7: Add the following numbered Subparagraph 13.1.7.1:

"13.1.7.1 Contractor and Subcontractors, regardless of tier, shall preserve its payroll and related records for three (3) years after completion of the project work and such records shall be open to inspection by the Indiana Department of Workforce Development."

- J. Subparagraph 13.1.7: Add the following numbered Subparagraphs 13.1.7.2 and 13.1.7.2.1:

"13.1.7.2 Recommended Employment of Apprentices"

"13.1.7.2.1 Owner strongly recommends that Contractor employs apprentices from each building trades craft involved in the Project to the maximum extent feasible. In doing so, the Contractor shall consider whether such apprentices are indentured into a Joint Apprenticeship Training Program or other comparable bona fide apprenticeship training program, registered and certified with the U.S. Department of Labor, Bureau of Apprenticeship and Training and shall use as a guide the Apprenticeship Standards of the Labor-Management Contract for the appropriate jurisdictional area when determining the appropriate ratio of apprentices from each respective craft."

- K. Subparagraph 13.1.7: Add the following numbered Subparagraphs 13.1.7.3, 13.1.7.3.1 and 13.1.7.3.2:

"13.1.7.3 Contractor's Certification of Authorized Employment (E-Verify Requirements.)"

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“13.1.7.3.1 In accordance with Indiana Code 22-5-1. 7 as amended, each Contractor in any tier of a public works project shall not knowingly employ unauthorized aliens. Every contractor shall enroll in and verify the work eligibility status of all employees hired after June 30, 2015 using the U.S. Citizenship and Immigration Services (USCIS) E-Verify program as defined in IC §22-5-1.7-3, unless the E-Verify program no longer exists.

“13.1.7.3.2 The Prime Contractor shall require their subcontractors who perform work under this Contract to certify to the Prime Contractor that the subcontractor does not knowingly employ or contract with an unauthorized alien and that the subcontractor has enrolled and is participating in the E-Verify program. The Prime Contractor agrees to maintain this certification throughout the duration of the term of a contract with a subcontractor. The Prime Contractor and its sub-contractors at all levels must comply with all provisions of the statute or the Contract is subject to cancellation.”

- L. Subparagraph 13.1.7: Add the following numbered Subparagraphs 13.1.7.4 and 13.1.7.4.1

“13.1.7.4 Non-Collusion Affidavit”

“13.1.7.4.1 The Bidder, by its officers and agents or representatives present at the time of filing their bid, being duly sworn, say on their oaths that neither they nor any of them have in any way, directly or indirectly, entered into any arrangement or agreement with any other bidder, or with any public office of the State of Indiana, of any county or municipality or other public offices whereby such affiance or either of them, has paid or is to pay to such other bidder or public officer any sum of money, or has given or is to give to such other bidders or public officer anything of value whatever, or such affiance of affiance or either of them has not, directly or indirectly entered into any arrangement or agreement with any other bidder or bidders, which tends to or does lessen or destroy free competition in letting of the contract sought for by the attached bids; that no inducement of any form or character other than which appears upon the face of the bid will be suggested, offered, paid, or delivered to any person whomsoever to influence the acceptance of the said bid or awarding of the contract, nor has this bidder any agreement or understanding of any kind whatsoever, with any person whomsoever to pay, deliver to, or share with any other person in any way or manner, any of the proceeds of the contract sought by this bid.”

- M. Subparagraph 13.1.7: Add the following numbered Subparagraphs 13.1.7.5 and 13.1.7.5.1

“13.1.7.5 Non-Discrimination”

“13.1.7.5.1 The Bidder and its Subcontractors, if any, shall not discriminate against any employee or applicant for employment, to be employed in the performance of this Contract, with respect to their hire, tenure, terms, conditions or privileges of employment or any matter directly or indirectly related to employment because of their sex, race, natural origin, ancestry or religion or disability as prohibited under the Americans with Disabilities Act. Breach of this covenant may be regarded as a material breach of the Contract.”

- N. Subparagraph 13.1.7: Add the following numbered Subparagraphs 13.1.7.6 and 13.1.7.6.1

“13.1.7.6 Certification of United States Steel”

“13.1.7.6.1 The Bidder certifies that the Bidder and all Subcontractors will comply with the statutory obligations to use steel products made in the United States.

- O. Subparagraph 13.5.1: Add the following Subparagraph 13.5.1.1:

“13.5.1.1: Prior to commencing the Project the Contractor shall submit a list of all proposed testing companies for the Project to the Architect/Engineer and Owner for approval.”

- P. Subparagraph 13.5.2: Add the following Subparagraph 13.5.2.1

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“13.5.2.1: Prior to testing, unless the testing company has been previously approved, the Contractor shall submit to the Architect/Engineer and Owner the proposed testing company for approval.”

2.14 ARTICLE 14

- A. Subparagraph 14.1.1: Amend this Subparagraph by deleting Sub-Subparagraph .4.
- B. Subparagraph 14.2.1: Amend this Subparagraph by adding a new Sub-Subparagraph 14.2.1.5 as follows:

“.5 becomes financially incapable of completing the Work contemplated by the Contract Documents.”

- C. Add subparagraph 14.2.5 as follows

“14.2.5 Contractor shall be responsible to reimburse Owner all attorney’s fees and expenses incurred by Owner if Contractor is terminated for cause.”

2.15 ARTICLE 15

- A. Subparagraph 15.1.2: Delete the text of this Subparagraph and replace by adding the following Subparagraph 15.1.2.1, Subparagraph 15.1.2.2 and Subparagraph 15.1.2.3:

“Subparagraph 15.1.2.1 Claims must be initiated by written notice to the Architect within 21 calendar days after the occurrence of the event.”

“Subparagraph 15.1.2.2 Notice of a claim must include what the claim is for, when the event occurred causing the claim, the amount of additional time (Project extension) being requested and any financial implications of the claim with sufficient specificity to allow the Owner an opportunity to modify the Project scope to remain within the Owner’s approved budget.”

“Subparagraph 15.1.2.3 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.”

- B. Subparagraph 15.1.4 delete this Subparagraph in its entirety.
- C. Subparagraph 15.1.5 delete this and all its subparagraphs in their entirety.
- D. Subparagraph 15.3.2 Delete the text in its entirety and replace with the following:

“15.3.2. If, through acts of neglect on the part of the Contractor, any other Contractor or Subcontractor shall suffer loss or damage on the Work, the Contractor shall agree to settle with such other Contractor or Subcontractor by negotiation or binding dispute resolution, if such other Contractor or Subcontractor will so settle. If such other Contractor or Subcontractor shall assert any claim against the Owner on account of any damage alleged to have been so sustained, the Owner shall notify the Contractor, who shall indemnify and save harmless the Owner against any such claim, including legal defense costs.”

- E. Subparagraph 15.3.3 In the first sentence after the word “fee” add a period and delete the remainder of that sentence.
- F. Paragraph 15.4: Delete this Paragraph in its entirety. Additionally; delete all references and requirements for Arbitration throughout the entire AIA A201-2007 Document and replace with Litigation.

PART 3 – NOT USED

END OF SECTION 00 20 11

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SUPPLEMENTARY GENERAL CONDITIONS

Preface: ***These Supplementary General Conditions supplement and modify AIA Document A201 General Conditions of the Contract for Construction (2007 Edition), General Conditions between the Owner and Contractor.***

PART 1 - SUPPLEMENTARY GENERAL CONDITIONS

1.01 DEFINITIONS

- A. "Contract": The Contract or Agreement, the Notice to Bidders, the Instructions to Bidders, the Bid or Proposal, the General Conditions, The Special Conditions, the Specification and Drawings, also any Addenda or the Modifications incorporated in any of the above documents before the execution of the Contract or Agreement.
- B. "Owner": The Indiana State University Board of Trustees.
- C. "Architect/Engineer": the individual or firm hired by the Owner to prepare the Construction Documents and to Administer the Contract.
- D. "Contractor": The person, firm or corporation who, with the Owner, executes the Contract, or the duly recognized assignee thereof.
- E. "Subcontractor": A person, firm or corporation who, under contract with Contractor, furnished material only, labor and materials, or labor only, at the site of or for the project.
- F. "Director": The Director of Department of Facilities Management at Indiana State University, or his duly authorized representative.
- G. "Surety": Any person, firm or corporation which has executed, as surety, the Contractor's performance bond securing the performance of the within contracts.
- H. "Work": Includes both materials and labor.

1.02 BOND

- A. Before any contract made for this work becomes valid, the Contractor shall furnish the Owner a satisfactory performance and payment bonds, in such form as the Owner may prescribe and with such surety or sureties as it may approve each in an amount equal to 100% of the total contract price. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. These bonds shall guarantee all labor and material to be as required, the faithful payment of any claim or liens from any cause for which the Contractor or any Subcontractor is liable, including those for labor, materials, utility service, transportation costs and for supplies, equipment, machinery (or the rental thereof).
- B. Licensed Sureties and Insurers
 - 1. All bonds required by the Contract Documents (such as the Bid Specifications, Award Letter, Contract for Construction, etc.) to be purchased and maintained by the Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. In addition to appearing on Circular 570 U.S. Dept. of the Treasury, such Surety or insurance company shall maintain an A.M. Best's Rating of not less than "A".

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C. The surety bond shall contain the following paragraph:

1. "The said surety for value received hereby stipulates and agrees that no change, extension of time, alterations, or additions to the terms of the contract, or to the work to be performed hereunder, or the specifications accompanying them, shall in any way affect its obligations on this bond, alteration or addition to the terms of the contract, or to the work or the specifications."

1.03 INSURANCE

**NOTE: The dollar amounts shown in this paragraph are for jobs over \$50,000.
See footnotes and amounts for jobs less than \$50,000.**

- A. The Prime Contractor(s) shall provide all insurances listed here-in in these Specifications and shall require the Subcontractor(s) to provide the same. The Prime Contractor(s) shall not commence work under this Contract until they have obtained all insurance required by these specifications and until such insurance has been approved by the Owner, nor shall the Contractor allow any Subcontractor to commence work on his subcontract until all similar insurance required of the Subcontractor has been obtained. Policies expiring on a fixed date before final acceptance of the project must be renewed and evidence of such renewal submitted to the Owner before such date.
- B. The Prime Contractor(s) shall furnish the Owner with satisfactory evidence of the insurance required, with satisfactory compliance as determined solely by Owner.
- C. It is solely the responsibility of the Prime Contractor(s) to confirm that the Subcontractor(s) are in compliance with the insurance requirements of these Specifications, to maintain copies of the Subcontractors insurance on file and to be prepared to provide evidence of these insurances to the Owner upon demand.
- D. Insurance Required:
 1. Worker's Compensation and Employers Insurance:
 - a. The Prime Contractor(s) shall maintain during the life of this contract Worker's Compensation and Employers Liability Insurance for all Prime Contractor's employees employed at or involved in any manner with the project, and, in case any work is sublet, the Prime Contractor(s) shall require the Subcontractor(s), at their own expense, similarly to provide Worker's Compensation and Employers Liability Insurance for all of the Subcontractor's employees engaged in or involved in any manner with work under this contract. Such Workers' Compensation insurance will be in accordance with the statutory requirements of the State of Indiana, with and including Worker's Compensation for All Other States, if any. The Prime Contractor(s) shall and require Subcontractor(s) to provide insurance coverage equal to that provided under the Worker's Compensation Act, for the protection of the Contractor's employees not otherwise protected. Employer's liability coverage must be maintained in amounts not less than \$500,000/\$500,000/\$500,000. Limits may be provided through a single policy or a primary/excess policy basis.
 2. Commercial General Liability Insurance.¹
 - a. The Contractor shall and require Subcontractors, at their own expense respectively, to maintain during the life of this contract Commercial General Liability Insurance insuring the Prime Contractor and any subcontractor, and owner and any other party required to be insured, from claims for bodily injury, death, personal injury and property damage which may arise from or on account of operations under this Contract, whether such operations be by the Prime Contractor(s) or by any

¹ For Smaller Contracts, the following limits (including umbrella liability) are permitted:

Contracts \$25,000 to \$49,999.....	\$ 2,000,000
" \$10,000 to \$24,999.....	\$ 1,000,000
" \$ 9,999 and under.....	\$ 500,000

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SUPPLEMENTARY GENERAL CONDITIONS

Subcontractor or by anyone directly or indirectly employed by either of them and the amounts of such insurance shall be as follows:

- \$2,000,000 General Aggregate
- \$1,000,000 Combined Single Limit Bodily Injury, Property Damage
- \$1,000,000 Products/Completed Operations
- \$1,000,000 Personal Injury and Advertising Injury
- \$ 100,000 Fire Damage

The General Aggregate limit shall apply separately, in total, to this project only.

3. Business Auto Insurance²:

- a. The Prime Contractor(s) shall and shall require all Subcontractors to maintain at their own expense respectively, at all times during the life of this contract, business auto insurance covering all liability and claims arising from the ownership, use, maintenance, operation, loading or unloading of automobiles anywhere in the United States, in connection with the performance of the Contract, whether such automobiles are owned, hired, or non-owned by the Contractor or Subcontractors.
- b. Such auto insurance shall be written with a limit of not less than \$1,000,000 per occurrence as a combined single limit for Bodily Injury and Property Damage coverage.

4. Umbrella Liability Insurance²:

- a. The Prime Contractor(s) shall and shall require all Subcontractors to maintain at their own expense respectively, at all times during the life of this Contract, Umbrella Liability Insurance providing excess coverage over the above specified primary insurance in an amount not less than:
 - \$1,000,000 for contracts \$50,000 to \$99,999.99
 - \$2,000,000 for contracts \$100,000 to \$999,999.99
 - \$3,000,000 for contracts \$ 1,000,000 to \$2,999,999.99
 - \$5,000,000 for contracts over \$3,000,000

E. Additional Insurance Requirements:

1. The Prime Contractor(s) shall and shall require all Subcontractors to include Indiana State University, Indiana State University Board of Trustees and any Architect/Engineer Firm hired by Indiana State University for the Project, as an additional insured on their Commercial General Liability, Umbrella Liability Insurance and Business Auto Insurance policies with regard to this contract.
2. Certificate(s) of Insurance shall include an endorsement of a Waiver of Subrogation in favor of the Owner for Commercial General Liability Insurance, Umbrella Liability Insurance, Worker's Compensation and Employers Liability Insurance and Business Auto Insurance.
3. On Projects in excess of \$1,000,000.00 a copy of the applicable pages from the Contractor's policy shall be provided showing the endorsements listed in paragraphs 1 and 2 of this Item 1.03 E.
4. With regard to the above mentioned Commercial General Liability, Business Auto, and Umbrella Liability Insurance, if in the event of any major change or cancellation of such policy, the Prime Contractor(s) shall and shall require all Subcontractors to give a 30-day advance notice to the Owner.
5. The Prime Contractor(s) shall and shall require of all Subcontractors that the insurance companies must have an A.M. Best's rating of not less than an "A" for projects over \$150,000 and a rating of B+ or higher for projects under \$150,000 and that the insurance

² For Smaller Contracts, the following limits (including umbrella liability) are permitted

Contracts \$25,000 to \$49,999.....	\$2,000,000
\$10,000 to \$24,999.....	\$1,000,000
\$ 9,999 and under.....	\$ 500,000

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companies are duly licensed or authorized in the jurisdiction in which the Project is located to issue insurance policies for the limits and coverages so required.

F. Builders Risk Insurance:

1. The Owner agrees to provide property insurance including Builders Risk insurance for property under construction, and all materials and labor at or within 1,000 feet of the site intended for use in the "work" or project. Pursuant to this agreement, Owner hereby affirms the policy contains a waiver of subrogation in favor of the contractor or subcontractors should loss or damage of the type insured against result in loss to covered property; and Owner agrees to release from liability the contractor, to the extent such loss or damage is insured by said policy.
2. Coverage does not extend to personal property, tools, equipment, scaffolding, staging, or similar equipment of the contract or subcontractor(s), or any employees thereof.
3. Notwithstanding the foregoing however, Contractor is responsible for the property insurance deductible of \$25,000 applicable to each covered loss to the work or project. Contractor acknowledges and affirms it will, without delay, pay the deductible, or if the loss remains within the deductible, pay that part of the deductible that equals the loss amount.

G. Indemnification:

1. The Prime Contractor shall and shall require Subcontractors to indemnify the Owner and any other party required to be insured from all claims arising from the failure of the Prime Contractor(s) to require the Subcontractors to provide the insurance required by these Specifications.
2. Notwithstanding any other provision to the contrary, the Contractor(s) agree to indemnify the Owner only for losses due to personal injury, or property damage to the extent caused by Contractor's negligent acts or omissions, or the negligent acts or omissions of Contractor's employees, agents and subcontractors during the performance of this Contract, but not to the extent caused by others. The Contractor shall defend Owner on claims that do not present a conflict of legal theory or fact between Owner and Contractor. Each party shall defend itself on any claim that does present a conflict of legal theory or fact between the parties.
3. Under no circumstances shall either party be liable for any loss, damage or delay due to any cause beyond either party's reasonable control, including but not limited to acts of government, fire, explosion, theft, weather damage, flood, earthquake, riot, civil commotion, war, mischief or act of God.
4. In the event of a strike or work stoppage by Contractor's employees, the Contractor agrees to use its best efforts to fulfill its obligations pursuant to their contract utilizing management and supervisory personnel.
5. Under no circumstances shall either party be liable to the other for special, indirect, or consequential damages of any kind including, but not limited to, loss of profits, loss of good will, loss of business opportunity, additional financing costs or loss of use of any equipment or property, whether in contract, tort (including negligence), warranty or otherwise, notwithstanding any indemnity or other provision to the contrary.

1.04 SUBCONTRACTORS

- A. At the time of Bid the Prime Contractor(s) (Bidder(s)) shall provide the names of the proposed Subcontractors listed in Appendix A of the Bid Form. Prior to the Awarding of the Contract, the Contractor shall submit to the Owner, in writing, the names of all the proposed Subcontractors and major material vendors. All Subcontractors shall be licensed and bonded and shall be held to the same level of experience and qualifications as are required of the Prime Contractor (Bidder) in Section 001000 NOTICE TO BIDDERS last paragraph.
- B. The Prime Contractor shall be responsible for the acts and omissions of his Subcontractors and of persons either directly or indirectly employed by them as he is for the acts and omissions of persons directly employed by him.

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- C. Nothing contained in the Contract shall create any contractual relationship between any Sub-contractor and the Owner, and no Subcontractor will be recognized as a party to the Contract.
- D. The Prime Contractor shall use the Subcontractors, Suppliers, Materials and Equipment as listed in the Bid Form Appendix "A" submitted at the time of Bid. There shall be no changes permitted to this list except as listed in Section 00 10 10 Paragraph 3.14 APPENDIX A, Item B.1.

1.05 DRAWINGS

- A. The drawings referred to in these specifications show such plans and details as are regarded necessary by the Architect/Engineer and/or the Owner to properly illustrate the work required, to estimate the cost of the work, and to complete its construction.
- B. The Architect/Engineer and/or the Owner will from time to time furnish such additional detail and working drawings as may be deemed necessary to interpret and explain the Contract drawings and all such additional drawings shall be of equal force with those mentioned above and shall be considered as forming part of this Contract.
- C. The general character of the work shall be subject to minor modifications when detailed or full sized drawings for such work are prepared.
- D. All lettering on drawings is to be considered a part of the drawings.
- E. All drawings, specifications, etc., are the property of the Owner and shall be returned before the final award is issued, if so requested.

1.06 RELATIONSHIP AND PRIORITY OF DOCUMENTS

- A. The documents comprising the Contract are complementary and what is called for by one shall be as binding as if called for by all. The intention of the Contract is to include all labor, materials, and equipment necessary for the proper execution of the work.
- B. In the case of a discrepancy between the requirements of the Drawings and the Specifications or between Sections of the Specifications:
 - 1. The more stringent shall apply.
 - 2. In equal situations the Specifications or as directed by the Owner prevails.

1.07 PERMITS

- A. The Contractor shall give all requisite notices to public officials, secure and pay for all permits, legal fees or charges, have the work inspected by all proper public authorities, pay all charges connected with such inspections and deliver the proper inspection certificates and all receipts for charges to the Owner.
- B. The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and orders of any public authority bearing on the performance of the work. If the Contractor observes that any of the Contract Documents are at variance therewith in any respect, he shall promptly notify the Owner in writing, and any necessary change shall be accomplished by the appropriate modification. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations and without such notice to the Architect, he shall assume full responsibility therefore and shall bear all cost attributable thereto.

1.08 SAMPLES

- A. The Contractor shall submit in writing to the Owner for approval samples and shop or installation drawings of the materials he proposes to use, or such other related materials as owner otherwise requests.
- B. Each sample shall be labeled, bearing the name and quality of the material, the Contractor's name, the date and a description of the sample. A letter from the Contractor stating that the samples conform to the requirements of the drawings and specifications shall accompany all such samples. Transportation charges on all samples shall be prepaid.

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- C. Samples and drawings shall be submitted in due time so as to permit proper consideration without delaying the Contractor's operation. Material shall not be ordered until approval is received from the Owner, in writing. The use of any material will be permitted only so long as it remains equal to the approved sample.

1.09 CONTRACTOR'S SUPERVISION

- A. The Prime Contractor shall maintain on the Project site a competent Project Superintendent at all times any work is being performed; either by the Prime Contractor's workers or any Subcontractor's workers. **If the Project Superintendent is not on the Project site the Owner shall be notified immediately. If the Project Superintendent is not on the jobsite, without written prior approval or notification to be away from the jobsite, the Owner may be entitled to a \$1,000 credit for each day or part of the day the Project Superintendent is not onsite while actual work is being performed.**
- B. The Contractor's superintendent shall represent the Contractor during their absence and all directions given the superintendent shall be as binding as if given to the Contractor.

1.11 LAYING OUT AND UTILITY LOCATES

- A. The Contractor shall thoroughly examine the drawings and specifications before commencing work and report to the Owner if any discrepancy, errors, or defect appears, but he shall not be held responsible for their existence.
- B. The Contractor shall lay out his own work.
- C. Prior to any cutting, drilling, trenching, excavating or other earthwork the Contractor shall determine the exact location of all utility lines and appurtenances that could be encountered which are not shown on the drawings as follows.
 - 1. A minimum of forty eight (48) hours prior to commencing work the Contractor shall contact Indiana Locates for all public utility locates.
 - 2. A minimum of forty eight (48) hours prior to commencing work the Contractor shall contact the Project Coordinator for all ISU Utility locates.
- D. Failure to contact for the appropriate locates shall make Contractor solely responsible for all costs incurred to repair all damaged utility lines or appurtenances.
- E. The Contractor shall hand excavate within three (3) feet, or as required by the Utility Company, on either side of a marked utility unless exact depth of the marked utility is known and the planned work will in no way be in close proximity with the utility line or appurtenance.

1.12 MATERIAL AND LABOR

- A. Except as otherwise stipulated, the Contractor shall provide and pay for all materials, labor, tools and equipment necessary for the execution of the work.
- B. The Owner reserves the right to require the Contractor to discontinue the service of any workmen employed on the work whom he deems incompetent, negligent, or otherwise objectionable, and to suspend any portion of the work embraced in the Contract whenever, in his opinion, it would be inexpedient to start or continue such work.

1.13 DEFECTIVE WORK AND MATERIALS

- A. Any materials and workmanship found to be defective, improperly placed, not in strict conformity with the drawings and specifications, or defaced or injured through action of fire or elements, through usage by the Contractor or his employees or from any other cause, shall be removed immediately from the premises and satisfactory materials or work substituted therefore without delay. This shall include making good the work of other Contractors destroyed or damaged by such removal or replacement. The cost of the above replacements shall be borne by the Contractor responsible for the defective work or material.
- B. Should the Contractor in the execution of his work discover any imperfections or errors in the work of other Contractors that would interfere with the proper execution of his contract, he

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shall immediately report this fact to the Owner. Errors or imperfections in the work of other Contractors will in no case excuse installation of imperfect work by this Contractor.

- C. No previous inspection shall be held as an acceptance of defective work or materials or relieve the Contractor from the obligation to furnish sound materials or to perform satisfactory work in accordance with the contract requirements. The final payment shall not relieve the Contractor of the responsibility for faulty materials or workmanship and he shall remedy all such defects, settlements, or other work resulting there from, which shall appear within a period of one (1) year from date of final acceptance or within the period stipulated in certain separate guarantees or bonds required elsewhere in the specifications, whichever may be the longer.
- D. The Owner shall be the sole judge of the materials furnished and the character of work performed.

1.14 RESPONSIBILITY FOR DAMAGE

- A. The Contractor shall be responsible for all damages to life and property due to his action or failure to act when action would reasonably be expected. He shall be responsible for all parts of his work, both temporary and permanent, until the work under his contract is declared accepted by the Owner.
- B. The Contractor shall continuously maintain adequate protection of all his work from damage, and shall protect the Owner's property and all adjacent property from injury in connection with the Contract.
- C. The Contractor shall be held responsible for damage to work of other Contractors that is the result of his operation.
- D. Should the Contractor believe that the work shown by the drawings or specifications is not correct when executed to obtain safe and substantial results, or if any discrepancy appears, it is his duty to immediately notify the Owner in writing, stop work on same, and await written instruction.

1.15 INDIANA SALES TAX

- A. Indiana State University is a Tax Exempt Institution and Indiana Sales Tax for products permanently incorporated in work shall not be included as part of the Bid or on any Application for Payment.
- B. Contractor Responsibilities:
 - 1. Pay Indiana Sales Tax on all non-exempt purchases and provide the Owner with detailed documentation of all taxes of non-exempt items invoiced on their Application for Payment. Documentation shall be provided with their Application for Payment at the time of first billing of each taxable item.
 - 2. Upon completion of work, file with Owner notarized statement that all purchases were made under their exemption certificate where entitled to be exempt.
 - 3. Pay legally assessed penalties for improper use of the exemption certificate number.

1.16 CLEANING UP

- A. The Contractor shall at all times keep the premises free from accumulations of waste material or rubbish.
- B. When directed by the Owner, the Contractor shall clear out and remove any rubbish that may constitute an obstruction to the progress of the work.
- C. At completion of the contract, the Contractor shall remove from the premises all rubbish and surplus material, and shall repair any damage to his work no matter by who caused, and shall leave the premises clean and in perfect repair and order.

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SUPPLEMENTARY GENERAL CONDITIONS

1.17 NON-DISCRIMINATION CLAUSE

- A. "Pursuant to the requirements of Indiana Code 22-9-1-10 and 5-16-6-1, Contractor and his Subcontractors may not discriminate against any employee or applicant for employment to be employed in the performance of such contract, with respect to their hire, tenure, terms, conditions or privileges of employment or any matter directly or indirectly related to employment because of their sex, race, natural origin, ancestry or religion or disability as prohibited under the Americans With Disabilities Act. The contractor and subcontractor, if any, agrees to comply with all the provisions contained in the Equal Opportunity Clause quoted in Executive Orders No. 11246 and No. 11375. In addition, the contractor shall cause this Equal Opportunity Clause to be included in the subcontracts or purchase orders hereunder unless exempted by rules, regulations and orders of the Secretary of Labor issued pursuant to Section 204 of the Executive Orders No. 11246 and No. 11375 as amended. Breach of the covenant may be regarded as a material breach of contract."

1.18 PUBLIC RELATIONS

- A. Indiana State University is an Affirmative Action Institution. Any inappropriate actions toward any Indiana State University student, faculty or staff member by any Contractor's Employee shall result in the employee being told to leave the Campus of Indiana State University immediately. This employee shall not be allowed to return to work on the Project for the duration of the Project or longer. Repeated offences by a Contractor's employees may result in disqualification of the Contractor for this and future Indiana State University Projects.

1.19 "OR APPROVED EQUAL" CLAUSE

- A. Unless the Specifications indicates that substitutions are not allowed, whenever a material or article required is specified or shown on the plans by using the name of the proprietary product or of a particular manufacturer or vendor, any material or article which will perform adequately the duties imposed by the general design will be considered equal and satisfactory providing the material or article so proposed is of equal substance and function in the Architect/Engineer and Owner's opinion. It shall not be purchased or installed without written approval. Requests for substitution prior to Bidding shall be as per Section 001010 INSTRUCTIONS TO BIDDERS Item 1.08
- B. Complete descriptive information, specifications and samples or sample material must be submitted at the time the proposal is submitted. In addition, a list of projects with dates and contact persons must be submitted at the time the proposal is submitted showing where the proposed alternate material or article has been installed or used. Failure to submit information as requested will be cause for rejection of the Bid submitted.

1.20 VERIFYING MEASUREMENTS

- A. The Contractor shall verify all measurements on the site and be responsible for any mistakes he may make and their results. If the Contractor discovers any discrepancy, in figures on the drawings, he shall report same to the Architect/Engineer and Owner before proceeding with any work affected by the discrepancy and shall be held responsible for results should he fail to make such reports.

1.21 EXTRAS

- A. Without invalidating the Contract, the Owner may order extra work or make changes by altering, adding to, or deducting from the work, the Contract sum being adjusted accordingly, and the consent of the Surety being first obtained where necessary or desirable. All work of the kind Bid upon shall be paid for at the price stipulated in the proposal, and no claims for any extra work or materials shall be allowed unless the work is ordered in writing by the Owner, and the price is stated in such order.
- B. Requests for compensation, for previously approved Change Orders omitted from an Application for Payment, received sixty (60) calendar days after Owner receipt of the Final Application for Payment (Release of Retainage) shall not be honored.

00 20 20
SUPPLEMENTARY GENERAL CONDITIONS

1.22 GENERAL GUARANTY

- A. Neither the final certificate of payment nor any provision in the Contract documents nor partial or entire occupancy of the premises by the Owner shall constitute an acceptance of work not done in accordance with the Contract documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall remedy any defects in the work and pay for any damage to other work resulting there from, which shall appear within a period of one (1) year from the date of final acceptance of the work, unless a longer period is specified.

PART 2 – NOT USED

PART 3 – NOT USED

END OF SECTION 00 20 20

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SUPPLEMENTARY GENERAL CONDITIONS

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ISU SPECIAL REQUIREMENTS AND INFORMATION

PART 1 - SPECIAL REQUIREMENTS

1.01 BARRICADES

- A. ISU will provide barricades during the initial closure of a construction site. However, once the Contractor mobilizes, ISU will remove the barricades, and Contractor shall replace them with his own. If additional barricades are required during the construction phase, Contractors shall provide them at their expense.

1.02 BURIED UTILITIES

- A. All Direct Buried Utility Lines and Utility Duct Banks will be marked by use of the appropriate marker tape continuously installed a minimum of twelve (12) inches above said utility line or duct bank. Marker tape shall be a minimum of six (6) inches wide.

1.03 REMOVAL AND RE-INSTALLATION OF EQUIPMENT

- A. The Owner is not responsible for the removal or re-installation of any equipment necessitated by this work.
- B. All electrical disconnects and reconnects of equipment necessitated by this work shall be performed by a licensed bonded Electrical Contractor hired by the Contractor to perform this work. The Owner will assist in locating the power source but will not be responsible for the actual performance the electrical work.

1.04 PRIME CONTRACTOR RIGHT OF SALVAGE

- A. The Owner has the first right of salvage of any items not slated for re-use on every Project.
- B. Should the Owner waive their right for salvage for any item not slated for re-use or designated in for recycling; then these items become the property of the Prime Contractor.
- C. The Prime Contractor at their discretion may grant to others the right to salvage items not slated for re-use and this may be used to comply with the recycling requirements as long as records are kept.
- D. However; once an item has been placed in a dumpster or any other trash receptacle no one is allowed to enter a dumpster or search through a trash receptacle for the purpose of removing items for salvage while these trash containers are on the campus of Indiana State University.
- E. The Prime Contractor shall protect these trash containers by use of a six (6) foot high chain link fence enclosure around the trash container(s) to prevent any person from gaining access to the trash containers for actions prohibited by this item.

1.05 CERTIFICATE OF INDUSTRIAL BOARD

- A. The Contractor shall furnish a certificate of insurance from an insurance company acceptable to Indiana State University evidencing that the Contractor has complied with the Indiana Worker's Compensation Law.

1.06 CAMPUS TOBACCO POLICY

- A. Effective in 2011 the following became the ISU smoking policy:
 - 1. The sale of tobacco products is prohibited on university-owned, operated, or leased property.
 - 2. The use of smoking tobacco products is prohibited on university-owned, operated, or leased property.
 - 3. The use of smoking tobacco products is permitted in privately owned vehicles and in designated smoking areas on campus.
 - 4. Any exceptions for the use of smoking tobacco products on university-owned, operated, or leased property must be approved by the President or Provost.

ISU SPECIAL REQUIREMENTS AND INFORMATION

5. Enforcement of this policy will depend on the cooperation of all faculty, staff, and students not only to comply with the policy, but also to encourage others to comply, in order to promote a healthy environment in which to work, study and live.
6. Observation of violation of the policy should be reported to Public Safety at 812-237-5555. Follow up for violations of the policy should be referred to the appropriate administrative office for review and action for faculty through the office of Academic Affairs, for staff through Human Resources and to the Dean of Students for students.

B. Amendments to this policy for Contractors

1. Delete item 5 in its entirety and replace with the following:
 "Enforcement of this policy will depend on the cooperation of the Contractors and their employees to comply with the policy and encourage others to comply in order to promote a healthy environment in which to work".
2. Delete item 6 in its entirety and replace with the following:
 "Observation of violation of this policy should be reported to the Contractor's Project Superintendent and/or the Owner's Project Manager. Contractor's employees repeatedly violating this policy may be asked to leave the Campus of Indiana State University and not be allowed to continue work on the Project".
3. Add the following item 7:
 "For major construction or renovation Projects (as determined solely by the Owner) the Owner shall designate a Contractor's smoking area near or within the boundaries of the job-site; unless the Prime Contractor(s) chooses to declare the entire Project job-site as non-smoking. Under no circumstances shall smoking be permitted within a building under construction or renovation.

- C. Additionally on construction sites on university-owned, operated, or leased property the use of smokeless tobacco products is prohibited.

1.07 PARKING REGULATIONS

- A. Beginning January 2018, construction employees will be required to park with a Construction Permit in Lot N (11th and Chestnut), Lot K (1st and Chestnut) or Lot I (3rd and Tippecanoe) when regular classes are in session. Contractors will be allowed to request an appropriate number of permits depending upon the project size for "core campus" parking. These permits should be used for carpooling or transporting employees to/from the construction and the construction parking lots. Contractors will also be allowed to have 2 foreman construction permits per project which will allow the foreman direct access to the construction project.
- B. When regular classes are not in session (i.e. weekends, Fall Break, Winter Recess, and summer sessions [the Monday after commencement thru one week before move-in]) contractors and their employees will be allowed to park in any regular/open lot on campus with a construction permit unless the lot is reserved for an event.

1.08 ISU ENVIRONMENTAL CODE FOR CONTRACTORS

- A. Prior to starting any work, Contractor shall provide to the Owner a written document containing emergency procedures in case of:
 1. Liquid spills or leaks
 2. Release of gases or toxic vapors
 3. Excessive smoke
- B. This document shall contain but not be limited to:
 1. Emergency medical, fire, and police phone numbers including the ISU University Police.
 2. EPA phone numbers
 3. IDEM phone numbers
 4. Location of Material Safety Data Sheets.

ISU SPECIAL REQUIREMENTS AND INFORMATION

- C. Prior to using any chemical or hazardous material the contractor shall provide the Owner with a copy of Material Data Safety Sheets covering the chemical or hazardous material.
- D. Contractor shall not burn or bury waste material on campus, or discharge any hazardous, or undesirable materials to sewers, or release toxic materials to the air.
- E. Contractor shall provide adequate exhaust ventilation for work area when generation of air contaminants is likely, i.e., painting, handling flammable liquids, welding, cutting, applying adhesives, etc.
- F. Contractor shall have at the job site Material Safety Data Sheets (MSDS) covering all chemicals and hazardous materials to be used in the work area. MSDS are to be available to workers and ISU personnel during normal working hours. Contractor shall use proper procedures based on MSDS when handling hazardous chemicals and materials.
- G. Contractor shall provide vacuum breakers or backflow preventers at each location where he utilizes building water supply.
- H. Any Contractor employee who deliberately interferes with environmental monitoring shall be removed from the project immediately.
- I. Contractor shall prevent fumes from welding, cutting, etc. and dust generated by construction from entering areas outside the work area by erecting plastic film barriers, sealing openings and ducts, and installing exhaust fans as required.
- J. Air contaminants in the work area shall not exceed OSHA regulations.

1.09 ISU SAFETY CODE FOR CONTRACTORS**A. General:**

- 1. All work performed by contractors shall be done in accordance with all applicable Federal, State and Local laws, codes, and regulations and recommendations of Factory Mutual Engineering and Research (FM).
- 2. Any safety hazard or unsafe act recognized by the Owner shall be reported to the Contractor responsible for job coordination. The safety hazard shall be corrected in a timely manner dictated by the severity of the safety hazard or unsafe act.
- 3. Contractors shall remove all rubbish from the job site daily.
- 4. All construction materials shall be protected from wind damage. Materials shall be secured to prevent them from becoming airborne with subsequent injury to personnel or damage to property.

B. Communication:

- 1. Contractor's job supervisors, or designated safety persons, must carry at all times a cellular phone to facilitate communication between the job site and the ISU University Police and Facilities Management Department. The cellular phones must remain on the job site during regular working hours. Contractor(s) shall report to the designated representative of ISU, or to ISU Police, any safety problem, code infraction, personal injury, or damage to ISU property. Report shall be made immediately after such occurrence.

C. Fire Protection:

- 1. Contractors shall provide a type "ABC" fire extinguisher for each work crew.
- 2. Extinguishers are to be kept within easy reach of each work crew and never farther than 10 feet from some worker. Inspection tags on extinguishers shall indicate the date of last inspection.
- 3. Contractor's supervisor shall keep torch cutting operations to a minimum by instructing personnel to use power saws, pipe cutters, etc. It shall be the duty and responsibility of

ISU SPECIAL REQUIREMENTS AND INFORMATION

- the Contractor performing any cutting or welding to comply with the safety provisions of the National Fire Codes (NFC) pertaining to such work.
4. Contractor shall adhere to Factory Mutual Engineering and Research (FM) "Cutting and Welding" permit system. Permits are available through the Office of Environmental Safety's Fire Specialist Office at 812-237-4020.
 5. Prime Contractor shall provide a one hour fire watch at the end of each workday when any cutting or welding occurred to assure that no possibility of fire exists from any work performed that day.
- D. Safety Program: Prior to starting any work the Contractor shall submit to ISU a written safety program for the project including but not limited to:
1. Occupational Health & Environmental Controls
 - a. Personal Protective Equipment
 - b. Fire Protection & Prevention
 - c. Hand & Power Tools
 - d. Ladders & Scaffolds
 - e. Motor Vehicles and Mechanized Equipment
 - f. Accident Prevention
 - g. Safety Inspections
 - h. OSHA Inspections
 2. Instruct all of his personnel as to location of emergency telephone(s).
 3. Instruct all his personnel as to location of fire alarm (pull) stations.
 4. Instruct all of his personnel to follow FM "Cutting and Welding Permit Systems" and emphasize the need to advise ISU's representative 24 hours prior to doing any welding, cutting, brazing, etc.
 5. Instruct all his personnel to advise ISU representative prior to doing any welding, cutting, or brazing on or near a roof structure.
 6. Instruct all personnel as to location on the job site of a copy of OSHA 29 CFR, Part 1926.
 7. Instruct all of his personnel as to location of first aid supplies.
- E. Flammable Storage:
1. Flammable or combustible liquids (paints, thinners, asphalt, gasoline, and tar or similar materials) shall be stored and handled as per NFPA 30, 4-5.5, and OSHA Construction Standard 1926.152. Quantities of flammable paints, etc., inside building work areas shall not exceed the amount to be used in one day.
 2. Containers of Class I liquids that are stored outside of an inside liquid storage area shall not exceed a capacity of 1 gallon, except safety cans shall be permitted up to 2 gallon capacity. Not more than 10 gallons of class I and class II liquids combined shall be stored in a single fire area outside of an approved storage cabinet or an inside liquid storage area unless in safety cans. Not more than 25 gallons of class I and class II liquids combined shall be stored in a single fire area in safety cans outside of an inside fluid storage area or an approved storage cabinet. Not more than 60 gallons of class IIIA liquids shall be stored outside of an inside liquid storage area or outside an approved storage cabinet.
 3. Rags saturated with flammable liquids shall be placed in approved cans and removed from the work site at the end of the work shift.
- F. Site Control: Contractor shall be responsible for securing the job site at all times and have personnel on call 24 hours per day for emergencies. Contractors shall protect their equipment and materials and ISU property from theft. Contractors shall secure doors, and openings including roof openings.

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- G. Prior to a multiple day shutdown the Contractors shall:
 - 1. Remove all debris and leave the premises broom clean.
 - 2. Shut off all unnecessary electric power and water supplies.
 - 3. Remove all flammable liquids from the work site.
 - 4. Secure small tools in gang boxes.
 - 5. Leave drives open for emergencies.
- H. Temporary Electrical Service:
 - 1. Temporary electrical service shall be provided by a licensed, bonded electrical contractor.
 - 2. All extension cords shall be protected from abrasion and traffic. Multiple lengths of extension cord shall be connected with waterproof twistlock type connectors. Any electrical service over 115 volts shall be marked accordingly. All electrical power supplied from building service or portable generators shall have ground fault protection as part of the circuit.
 - 3. Portable generators or welders driven by internal combustion engines shall not be located inside the building. Positioning of this equipment outside the building shall be such that engine exhaust shall not enter the workplace or adjacent buildings.
- I. OSHA Reporting:
 - 1. Contractors shall complete an OSHA 106 form on all reportable occupational injuries and illnesses for each of their job locations on the ISU campus. This requires posting the information from the initial accident report on a master log (OSHA 200) form within six working days after the accident occurs. This form must be kept available for OSHA Compliance Safety and Health Office and ISU review.
 - 2. See OSHA Regulations 29 CFR Part 1904, "Recording and Reporting Occupational Injuries and Illnesses"

1.10 FIRE SUPPRESSION SYSTEM REGULATIONS

- A. Prior to closing any fire suppression system valve or in any way making a fire suppression system inoperable the Contractor shall contact the Fire Specialist's Office at 812-237-4020 to obtain a FM Global Red Tag so the impairment to the system may be reported.
- B. When the work is complete the Contractor shall immediately contact the Fire Safety Specialist to report the work is complete so the red tag may be removed and FM Global notified that the system has been returned to normal operation.

1.11 ELECTRICAL SAFETY REGULATIONS

- A. OSHA *Control of Hazardous Energy Lockout/Tagout Regulations* apply to all work performed on the Campus of Indiana State University. These Regulations are available for review on the OSHA Internet Website at <http://www.osha.gov/SLTC/controlhazardousenergy/index.html> . Any individual who removes another's lock or tag shall be ordered to leave Indiana State University and shall be disqualified from any future work at Indiana State University.
- B. High fault currents, in excess of 45kA, exist at certain points on electrical systems at Indiana State University. Employing Contractors shall make their employees working on campus electrical systems aware that this condition exists.
- C. No individual shall be permitted to install or service any energized circuit, equipment or apparatus where voltages greater than 100 volts to ground is present unless another individual is present.
- D. No individual shall be permitted to operate or service any main or feeder main overcurrent protection device, whether group mounted or individually mounted, unless another individual is present.

ISU SPECIAL REQUIREMENTS AND INFORMATION

- E. Deliberately shorting a branch circuit to ground to locate a branch feeder breaker is strictly prohibited.
- F. Any individual observed in violation of Regulations "C", "D" or "E" may be asked to immediately leave the workplace and/or their employer may be fined based on the following scale. Violations may apply to one or multiple employees.

- 1st violation Notice of Violation Warning Placed in Employing Firm's Work Record File
- 2nd violation \$100.00
- 3rd violation \$250.00
- All subsequent violations \$500.00 per incident

- G. **Repeated violations may be cause to disqualify the individual and/or employing firm from any other future work on the campus of Indiana State University.**

1.12 FIRE ALARM SYSTEM COORDINATION WITH PROJECT WORK

- A. An automatic fire detection system may in operation in areas of work. Prior to start of Work the Contractor shall verify with the Owner if devices are present in the Work area.
- B. Contractor shall coordinate with Owner for the shut down and reactivation of automatic fire detection devices in work areas based on the following procedures.
1. Prior to 2:30pm on the day before work is scheduled the Contractor shall contact either Pat Teeters at 812-237-8187 (Office) or 812-230-6141 (Cellular) to request fire alarm devices be disabled. If no answer, call Brad Welker at 812-237-8109 (alternate contacts). The Contractor shall provide exact work location, the time the devices are required to be disabled by and a means by which to contact the Contractor the next day, i.e. pager or cellular phone number. It is permissible to leave a "voice mail" of the required information.
 2. Prior to starting work the next day the Contractor shall contact Pat Teeters (preferred contact) or Brad Welker (alternate contact) to verify if the required devices are disabled. Please listen carefully to the voice mail announcement for information in the event of no answer.
 3. Prior to leaving the job-site at the end of workday or by 2:30pm the Contractor shall contact one of the aforementioned individuals to report clearance to reactivate the devices for the evening and what, if any, devices require disabling for the following workday.
- C. Failure to follow these procedures may result in fines being levied on the Contractor based on the following schedule.
- 1st failure to call and schedule in advance – Warning.
 - Any subsequent failure to call and schedule in advance – \$10.00 per occurrence
 - 1st failure to call resulting in activation of fire alarm system – Warning or \$100.00, dependent on situation as determined by the Owner.
 - Any subsequent failure to call resulting in activation of fire alarm system - \$100.00 per occurrence.

1.13 INSPECTION

- A. At the conclusion of the entire work encompassed in this contract, written notice requesting inspection shall be submitted to the Owner at least ten (10) days prior to the anticipated inspection date.

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ISU SPECIAL REQUIREMENTS AND INFORMATION

1.14 PAYMENT AND FINAL ACCEPTANCE

A. Anticipated Draw Schedule

1. For any Project in excess of \$500,000.00 the Contractor shall submit an anticipated monthly drawdown schedule.
2. This schedule shall be submitted within fourteen (14) calendar days after Award of Contract to:

The Office of the Senior Vice President for Finance and Administration
Rankin Hall Suite 210
Terre Haute, IN 47809

B. Applications for Payments shall be submitted on AIA Application for Payment form G702 with Continuation Sheet G703 (or on a form approved by the Owner). While no set date is required for Applications for Payment, the application shall be submitted on a regular monthly basis for labor and materials permanently installed in the work, for material stored on site and for properly insured materials stored off-site under the following conditions:

1. For purposes of making periodic estimates, the Contractor shall furnish an itemized breakdown of his contract amount, distributed according to different classes of work. In making application for payments, the Contractor shall show, each period, the percentages of completion of each class.
2. Contractor shall send five (5) copies for each Application for Payment.
3. The Owner will make partial payment to the Contractor on the basis of a duly certified, approved estimate of the work performed during the preceding calendar month by the Contractor within 15 days after receipt by the Owner.
4. Payment will be made on balance due on labor and materials installed permanently in the work to within 90% of estimated value, and not to exceed 90% of the value of materials delivered to the site which are not subject to damage by exposure to the elements.
5. Stored materials and equipment offsite: The Owner will make payment for materials and equipment store offsite under the following conditions.
 - a. The Contractor requests in writing to the Architect/Engineer/Owner for payment on offsite stored materials and equipment.
 - b. The Architect/Engineer/Owner is given access to the offsite storage facility for purposes of inspection and verification of the stored materials and equipment. Any material or equipment not properly stored or protected shall not be approved for payment.
 - c. The Contractor shall provide to the Architect/Engineer/Owner a current Certificate of Insurance on the remote storage facility. This insurance shall remain in force for the duration of the storage of the stored materials and equipment at the remote location.
6. The Owner, if conditions in its opinion warrant, has the right to withhold, in addition to retained percentages, such an amount or amounts from the payment to the Contractor as may be necessary to pay just unpaid claims for labor and services rendered and materials furnished in connection with the work.
7. The Owner will not approve for payment on any estimate, the value on any materials which, in his opinion, does not meet the contract requirements.
8. At the conclusion of installation and satisfactory inspection by the Owner, the work shall be acceptable for payment of an amount equal to ninety-five (95%) percent of the total contract amount.
9. Reduction or Limitation of Retainage:
 - a. At the sole written discretion of Indiana State University, if acceptable progress is made, at fifty percent (50%) completion of the Contract Sum the remaining Retainage may be reduced to 0%.

ISU SPECIAL REQUIREMENTS AND INFORMATION

- b. Any subsequent Change Orders after the reduction of Retainage shall have 5% Retainage withheld.
- 10. **Requests for compensation, for previously approved Change Orders omitted from an Application for Payment, received sixty (60) calendar days after Owner receipt of the Final Application for Payment (Release of Retainage) shall not be honored.**
- 11. Final payment will be due and payable the later of sixty-one (61) days from date of receipt of the Final Application for Payment or after the Contractor has completed all punch list items, certified that all Subcontractors and Suppliers have been paid, and all claims, including the Contractor's, have been resolved. Before issuance of the final payment, the Contractor shall furnish an affidavit (Final Waiver of Lien) as evidence that there are no claims on account of the Contract, outstanding liens of claims for materials furnished, or labor performed on the work. The final payment shall constitute the acceptance of the work by the Owner, except as to work thereafter found to be defective. The date of such payment shall be regarded as the date of final acceptance of the work.
- 12. Warranty: The Warranty Period shall be per AIA A201-2007 Article 3 Paragraph 3.5 as amended by Specification Section 00 20 11 Amendments to General Conditions.

C. ACH Payments

- 1. In an effort to expedite Contractor payments Indiana State University requests the Contractor set up an ACH account for Project Payments. Contact Catherine Procarione in the ISU Office of the Controller at 812-237-3525 to set up this account.
- 2. If the Contractor currently has an ACH Account with Indiana State University it is not necessary to set up an account for each Project. It is solely the responsibility of the Contractor to maintain accurate Banking information on file with the ISU Office of the Controller.

D. Special provisions regarding Retainage and Escrow:

- 1. The laws of the State of Indiana (IC 5-16-5.5-3 as amended) contain certain provisions regarding retainage, bonds and payment of Contractors and Subcontractors. The Contracts and Subcontracts entered into pursuant to these instructions to Bidders shall be governed by those provisions with respect to Contracts in excess of \$200,000 entered into between a Contractor and the Indiana State University Board of Trustees.
- 2. These provisions require, among other things, that the amounts retained by the Owner from the contractor pursuant to retainage provisions be placed in an escrow agreement to be executed by the Contractor. Pursuant to these provisions, the successful Bidder shall be required to execute an escrow agreement between the Contractor and the Owner.
- 3. This escrow agreement shall have no application to payment withheld by the Owner pursuant to provisions of the Construction Contract intended to protect the Owner from loss on account of defective work not remedied; claims filed on reasonable evidence; failure of the Contractor to make payments when due to subcontractors or for material or labor; reasonable doubt that the contract can be completed for the balance then unpaid; damage to another contract; failure or refusal of the Contractor to prosecute the work in strict compliance with the above process schedule; or similar provision.
- 4. In addition, each successful Bidder will be required to comply with all applicable provisions of the statute referred to above with respect to each of his Subcontractors (as the term 'Subcontractor' is defined in the statute referred to above).
- 5. The Contractor shall contact Kathy Abernathy in the Office of the Senior Vice President for Finance and Administration at (812)-237-3554 to set-up this escrow account.
- 6. Should a Contractor fail to execute an Escrow Agreement between the Contractor and the Owner (Indiana State University Board of Trustees) the Contractor waives all claims for any interest the Contractor would have accrued had an Escrow Agreement been executed.

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ISU SPECIAL REQUIREMENTS AND INFORMATION

1.15 CONTRACTOR'S BID

- A. Contractor shall submit Bid for Base Bid and any Alternate Bids as listed in Section 00 20 00.

1.16 INVOICING

- A. All invoices and/or Certificates of Payment must be addressed and sent to:

Indiana State University
Department of Facilities Management
951 Sycamore Street
Terre Haute, IN 47809
Attention: Scott Tillman

- B. It is permissible to submit applications for payment electronically via e-mail. E-mail copies of the Application for Payment to:

1. Pat Teeters patrick.teeters@indstate.edu
2. Scott Tillman scott.tillman@indstate.edu

Do not sent Applications for Payment to the ISU Accounts Payable Office

- B. A Partial Wavier of Lien shall be submitted with every Application for Payment until the final Application for Payment (Release of Retainage) when a Final Waiver of Lien shall be submitted.

1.17 SITE LOCATION(S)

- A. **Tirey Hall / Tilson Auditorium, 220 N 7th Street, Terre Haute, IN 47809**

1.18 PROJECT CONTACT

- A. All questions regarding this Project shall be addressed to:

Scott Tillman
ISU Department of Facilities Management
951 Sycamore Street
Terre Haute, IN 47809
Phone (812)-237-8198 Cell 812-878-4251
E-mail scott.tillman@indstate.edu

PART 2 – NOT USED

PART 3 – NOT USED

END OF SECTION 00 30 00

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ISU SPECIAL REQUIREMENTS AND INFORMATION

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TEMPORARY FACILITIES - RENOVATION PROJECTS

PART 1 – GENERAL

1.01 CONTRACTOR'S USE OF PREMISES AND FACILITIES

- A. Confine operations at site to areas permitted by:
 - 1. Construction Limits
 - 2. Contract Documents
 - 3. Written Owner Approval
- B. Do not load structure with weight that will endanger structure or existing adjacent structures including any subsurface construction.
- C. The Prime Contractor shall assume full responsibility for protection and safekeeping of product stored on premises.
- D. The Prime Contractor shall move any stored products which interfere with operations of Owner or other Contractor.
- E. The activities of the Prime Contractor, including his subcontractors, material suppliers, employees, and others engaged in the work, shall be strictly limited to the Owner's property. Under no circumstances shall parking, material storage, or other uses of adjacent private property be permitted. Locations of storage areas, field office, parking areas, and the like on the project site shall be only within the construction limits as indicated on the drawings or as approved by the Owner.
- F. Use of Installed Work: Construction personnel may use toilet facilities, sink, and other fixtures and equipment installed in work only as expressly permitted by Architect/Engineer or Owner. Any privileges granted may be revoked if abused.
- G. Construction personnel shall exercise care and shall provide whatever protective measures are required to assure that their particular portions of the work do not damage or alter portions of the work that have been previously installed, either partially or completely. All work so damaged or altered shall be repaired or replaced to the satisfaction of the Architect by the party whose work has been affected, and the expense thereof shall be borne by the party who caused the damage or alteration.
- H. Protection of Floors: In interior areas used for construction or field "shops", protect floors from physical damage, oil drippings, and other staining which might impair bonding of new floor coverings, utilizing such methods as heavy polyethylene covering, sawdust or sand boxes, rigid insulation or the like.

1.02 FIELD OFFICE

- A. The Prime Contractor and their Sub-Contractors shall be responsible for their own field office.
- B. The Prime Contractor shall provide telephone service, including cellular phone for the on-site foreman, for the duration of the project.
- C. Provide at all times fire extinguishers as required by applicable codes and regulations.
- D. Post in a conspicuous space near the telephone, pertinent emergency phone numbers and notices as may be required by governing authorities and fire protection department.

1.03 SITE PROTECTION

- A. Contractor shall adhere to Factory Mutual Engineering and Research (FM) "Cutting and Welding" permit system. Permits are available through the Office of Environmental Safety's Fire Specialist Office at 812-237-4020.
- B. Prime Contractor shall provide a one hour fire watch at the end of each workday when any cutting or welding occurred to assure that no possibility of fire exists from any work performed that day.

01 50 10
TEMPORARY FACILITIES - RENOVATION PROJECTS

1.04 TEMPORARY ELECTRIC SERVICE

- A. Responsibility: The Prime Contractor shall be allowed to utilize the Owner's electricity for all construction purposes. The Prime Contractor shall arrange for the distribution and continuance throughout the work and the removal at the completion of the work of temporary electrical service. All electrical installations shall be by a Licensed Bonded Electrical Contractor. All elements of such temporary electric service shall conform to the regulations of the National Electric Code, current edition, and OSHA. All temporary wiring shall include a green equipment grounding conductor, and the entire temporary electrical service shall have equipment grounding continuity; all outlets for the connection of portable equipment shall be of the GFCI type. The Contractor shall provide all necessary wiring. The Prime Contractor or their Sub Contractor shall provide extension cords, outlets, etc. required to extend temporary service from nearest outlets of adequate capacity for the power required to points of usage.
- B. Distribution Wiring: The temporary distribution wiring shall be adequate to provide whatever is required for the operation of 120 volts, single-phase portable tools and equipment not exceeding one horsepower; the distribution wiring shall provide a receptacle within 50 feet of all portions of the building area.
- C. Temporary Lighting: The Prime Contractor shall provide all wiring, light bulbs and fixtures necessary to furnish temporary lighting of one watt per sq. ft. of construction area, but provide a minimum of one light in each enclosed space. Keep such temporary lighting in operation during all working periods.
- D. Supervision: The Prime Contractor shall maintain strict supervision over the use of the temporary electrical service and shall be responsible for damages incurred by misuse.

1.05 TEMPORARY WATER SERVICE

- A. The Prime Contractor may use the Owner's existing water service for construction purposes. The Prime Contractor shall provide and maintain leak-free, all hoses, fitting, nozzles, and the like required to distribute water to points of usage. Maintain strict supervision over use and waste of water. Take care not to spill or run water in any part of the building. Repair, replace, or restore (whichever may be deemed necessary by the Architect/Engineer) at no additional cost to the Owner, all work, new or existing, including equipment, furnishings, machines, finished surfaces, and the like which may be damaged by water due to construction operations, and by the misuse of such temporary water service. At completion of the work remove all temporary water distribution items.

1.06 RESTROOM FACILITIES

- A. The Contractor shall be permitted to utilize the Owner's restroom facilities in lieu of providing temporary toilets. The Contractor shall exercise reasonable care so as not cause excess soiling or damage to the restroom facilities.
- B. Any Contractor abuse of the Owner's restrooms shall be just cause for the Owner to revoke the use of the restrooms for the duration of the Project.

1.07 TEMPORARY STORAGE

- A. The Prime Contractor and each of their Sub-Contractors shall be responsible for their own temporary storage.
- B. Provide secure areas as may be required for storage and protection of materials, tools and equipment.

1.08 SIGNS

- A. Identification Signs: No signs or advertisements shall be permitted on the project site or on temporary structures, except those which are required to conform to the safety requirements of the Contract Documents or those which are expressly permitted by the Architect/Engineer or specified herein.

01 50 10
TEMPORARY FACILITIES - RENOVATION PROJECTS

1.09 TEMPORARY BARRIERS

- A. The Prime Contractor shall be responsible for seeing that all shafts and openings through the floors or roofs are adequately barricaded, marked, and lighted. They shall provide barriers, markers, or other provisions, or all, at all conditions, such as items protruding from the work, which might cause injury to persons. The design, locations, and requirements of protective barricades shall be subject to approval of the Architect/Engineer, but the Contractor shall be responsible for their adequacy. When such conditions no longer exist, barriers and the like shall be removed.

1.10 SITE SECURITY

- A. All temporary construction which may be required to maintain security of buildings or construction areas shall be provided by the Prime Contractor. At the end of each day's work, close all windows opened by construction personnel, and close all access doors to work areas. Work damaged in this regard shall be repaired or replaced to the satisfaction of the Architect/Engineer/Owner. Security guard service shall not be provided as a part of any Contract for this project for field office, storage sheds and storage areas, or for protection of construction tools, equipment, and materials. Such security may, at the Contractor's option, be provided at no additional cost to the Owner.

1.11 TRASH REMOVAL

- A. The Prime Contractor shall remove from the Construction site, and legally dispose of, all rubbish resulting from the work under his contract. Rubbish shall be removed daily and not be allowed to accumulate, other than the trash placed in trash containers outside the building.

1.12 RESTORATION OF TEMPORARY FACILITIES

- A. The Prime Contractor shall be responsible for his restoration of his own temporary facilities.
- B. Storage area and project offices: At completion of the work, remove from the project site all evidence of temporary services, field office, temporary sheds, covers, pallets, excess materials, scrap materials, equipment tools, waste, debris, and other foreign materials. Restore to the Architect/Engineer's satisfaction such area to its condition which existed prior to starting construction work, utilizing whatever methods are appropriate. Repair and patch to match all drive and parking lot surfaces damaged by construction processes; subject to the Architect/Engineer's approval. Fill, grade and reseed all lawn areas and replace all trees, plants or shrubs damaged by the construction process.

1.13 TEMPORARY CONSTRUCTION AREA ENCLOSURES/BARRIERS

- A. The Prime Contractor shall provide all temporary enclosures/barriers required to secure the construction area from the rest of the building.
- B. The enclosure/barrier shall be constructed in a manner to prevent unauthorized personnel from entering the construction area during non-hours of construction.
- C. The enclosure/barrier shall be constructed in a manner to limit the migration of construction dust and debris into adjacent non-construction areas.
- D. A lockable entrance assembly shall be installed in the designated point(s) of entry. The Prime Contractor shall supply their own locking mechanism for this entrance assembly. Furnish the Owner's representative(s) with a key for this locking mechanism for the duration of the Project.

PART 2 – NOT USED

PART 3 – NOT USED

END OF SECTION 01 50 10

01 50 10
TEMPORARY FACILITIES - RENOVATION PROJECTS

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CONTRACT CLOSEOUT

PART 1 – GENERAL

1.01 SUBSTANTIAL COMPLETION SUBMISSIONS

A. Record Drawings and Record Specifications:

1. The Contractor shall provide the final Field Record Drawings and Specifications which have been maintained and updated during the duration of the Project to the Architect/Engineer for review. Submit documents in paper form of each Drawing and Specification Division of the Work.
2. Certifications: The Prime Contractor and Subcontractors shall certify, by endorsement on the Record Drawings and Specifications that each of the revised sheets represents a complete and accurate record of the Work as executed.

B. Operations and Maintenance Data

1. Assemble a manual in electronic PDF format on USB Flash Drive indexed by Division of work Sub indexed by Specification of work, presenting for the Owner's guidance full details for care and maintenance of visible surfaces and of equipment included in the Work for review by the A/E.
 - a. Include a copy of the reviewed Architect/Engineer submittal and/or shop drawing. The Submittal and/or shop drawing shall be annotated by the Contractor indicating that the comments have been included in the document.
 - b. Include manufacturer's literature relating to motors and other equipment, catalog cut, parts lists, wiring diagrams, instruction sheets, and other pertinent information which will be useful to the Owner in overall operation and maintenance.
 - c. Include a list of installers and service representatives with company names and addresses, names of individuals to contact, and telephone numbers.
 - d. Include manuals called for in other Sections of the Specifications, in this manual.
2. Certifications: The Contractor shall certify, by endorsement of the manual, that the manual is complete and accurate.
3. On Projects where the Owner is the Architect/Engineer, submit to the Owner for review.

C. Warranties

1. Forms:
 - a. Extended Warranties: Provide a copy of the manufacturer's extended warranty, fill it out completely, sign it, and have it countersigned by the installer and manufacturer if required by the Contract Documents.
 - b. Manufacturers' Warranties: Manufacturer's warranty modified, when required to comply with requirements of the Contract Documents.
2. Starting Date: The starting date for warranties is the Date of Substantial Completion of the Work.
3. Submittal: At the time of Substantial Completion submit all warranties, including special warranties, required by the Contract Documents to the Architect/Engineer review.

D. Statement of Application

1. Submit Owner prepared fully executed Certificate of Substantial Completion.

E. Service and Maintenance Contracts

1. At the time of Substantial Completion submit executed contracts for extended service or maintenance required by the Contract Documents to the Architect/Engineer for review by the A/E.

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CONTRACT CLOSEOUT

2. Extended maintenance proposals where called for in the specification shall be submitted with the proposals for each trade at the time their portion of the work is bid. Furnish copies of the maintenance proposal to the Owner and Architect/Engineer for review prior to award of the subcontract for each portion of work.

1.02 FINAL CLEANING

- A. Responsibility: The Prime Contractor is responsible for the final cleaning of the Project and for the coordination and direction of cleaning by all trades.
- B. Materials:
 1. Use only cleaning materials recommended by the manufacturers of the surfaces to be cleaned.
 2. Use cleaning materials only on surfaces recommended by the cleaning materials manufacturers.
- C. Execution:
 1. Employ experienced workers, or professional cleaners, for final cleaning.
 2. Clean all surfaces whether exposed to view or not.
 3. Remove trash, rubbish, waste materials, tools, and equipment from the site.
 4. Remove grease, dust, dirt, plaster, mortar, fingerprints, and other foreign materials from interior and exterior surfaces exposed to view, e.g., the surfaces of structural steel, miscellaneous metal, woodwork, plaster, masonry, concrete, mechanical and electrical equipment, piping, duct work, and conduit; polish surfaces so designated to shine finish.
 5. Clean the electrical closets, pipe and duct shafts, chases, furred spaces, and similar spaces which are generally unfinished. Leave these spaces free from rubbish, loose plaster, mortar droppings, waste construction materials, dirt, and dust.
 6. The Architect/Engineer is to review items which the Prime Contractor proposes removing labels before they are removed.
 7. Maintain cleaning until date of Substantial Completion or the date of partial occupancy of the building, whichever is earlier. Re-cleaning will not be required after the Work has been inspected and accepted, unless later operations of the Contractor make re-cleaning of certain portions necessary.

1.03 PREPARATION OF FINAL RECORD DRAWINGS AND RECORD SPECIFICATIONS

- A. The Prime Contractor shall employ the Project A/E to re-draft, in CAD format, the paper copy Record Drawings onto the Bid Drawings to create the final Record Drawings.
- B. The Prime Contractor shall employ the Project A/E to retype the paper Record Specifications to indicate all revisions to the Bid Specifications. Items changed shall be marked by a double strike through and revised language inserted in red letters.
- C. An Allowance to cover the costs of the re-drafting of Drawings and revisions to the Specification will be provided and shall be included in the Prime Contractors Bid. Final Allowance cost payments will be based on actual documented A/E costs for their work. The Allowance payment will be adjusted accordingly. This Allowance shall be listed as a separate line item on the Schedule of Values.

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CONTRACT CLOSEOUT

1.04 FINAL CLOSEOUT

- A. Final Closeout date shall be as listed in Section 00 10 10 1.01
- B. At Final Closeout the Contractor shall submit to the Owner, via the Architect/Engineer if applicable:
 - 1. One (1) hard copy of the reviewed and accepted O&M Manual in 3-ring binder(s)
 - 2. One (1) copy on a USB Flash Drive of the complete Project Documentation in PDF format, except as noted in item "o" below, including but not limited to:
 - a. Design Meeting Notes (the Contractor shall coordinate with the A/E to obtain)
 - b. Pre-Bid meeting documents
 - c. The Contractor's Project Bidding Documents including Addenda.
 - d. Award documentation
 - e. Required submissions as detailed in the Award Letter
 - f. Pre-Construction meeting documents and
 - g. Progress meeting notes and Construction observation notes.
 - h. All Change items, e.g. ASI, RFI, RFQ, CP, CO, etc., with documentation
 - i. Pay Applications
 - j. Reviewed and accepted O&M Manual,
 - k. Warranties,
 - l. Extended Service and Maintenance Contracts
 - m. Record Specifications
 - n. A scanned copy of the marked-up Record Drawings
 - o. Record Drawings in both PDF and CAD format
 - 3. The Prime Contractor shall retain the paper copies of the Record Drawings and Record Specifications for a minimum of seven (7) years in a safe location and produce these documents upon request by the Owner.

PART 2 – NOT USED

PART 3 – NOT USED

END OF SECTION 01 77 00

01 77 00
CONTRACT CLOSEOUT

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02 41 14
SELECTIVE DEMOLITION

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Removal of designated building equipment and fixtures.
- B. Removal of designated construction.
- C. Disposal or storage of removed materials.
- D. Identification of utilities.
- E. Refer to items as indicated.

1.02 SUBMITTALS FOR CLOSEOUT

- A. Project Record Documents: Accurately record actual locations of capped utilities and subsurface obstructions.

1.03 REGULATORY REQUIREMENTS

- A. Conform to applicable code for demolition work, safety of structure, dust control, products requiring electrical disconnection and re-connection.
- B. Obtain required permits from authorities.
- C. Do not close or obstruct egress width to any building or site exit.
- D. Do not disable or disrupt building fire or life safety systems without 3 days prior written notice to Owner.
- E. Conform to procedures applicable when hazardous or contaminated materials are discovered.

1.04 SCHEDULING

- A. Perform work between the hours of 7 a.m. and 4 p.m.

1.05 PROJECT CONDITIONS

- A. Conduct demolition to minimize interference with adjacent and occupied building areas.
- B. Cease operations immediately if structure appears to be in danger and notify Architect/Engineer. Do not resume operations until directed.
- C. Maintain protected egress and access to the Work.

PART 2 – NOT USED

PART 3 – EXECUTION

3.01 PREPARATION

- A. Provide, erect, and maintain temporary insulated partitions at required locations.
- B. Erect and maintain weatherproof closures for exterior openings.
- C. Erect and maintain temporary partitions to prevent spread of dust, odors, and noise to permit continued Owner occupancy.
- D. Protect existing materials which are not to be demolished.
- E. Prevent movement of structure; provide bracing and shoring.
- F. Notify affected utility companies before starting work and comply with their requirements.

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SELECTIVE DEMOLITION

- G. Mark location and termination of utilities.
- H. Provide appropriate temporary signage including signage for exit or building egress.

3.02 DEMOLITION

- A. Disconnect, remove, cap, and identify designated utilities within demolition areas.
- B. Demolish in an orderly and careful manner. Protect existing supporting structural members.
- C. Remove demolished materials from site except where specifically noted otherwise. Do not burn or bury materials on site.
- D. Remove materials as Work progresses. Upon completion of Work, leave areas in clean condition.
- E. Remove temporary Work.

3.03 PROTECTION OF SALVAGED ITEMS

- A. Remove, store and protect the materials and equipment scheduled to be re-used.

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END OF SECTION 02 41 14

05 41 00
METAL STUDS FOR INTERIOR WALLS

PART 1 – GENERAL

1.01 PRODUCT HANDLING

- A. Protection: Use all means necessary to protect metal studs 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

2.01 METAL STUDS

- A. Standards: All metal studs and accessories shall meet or exceed the minimum requirements of Federal Specifications QQS-698 and QQS-775d, class d, for the items and use intended.
- B. Materials:
 - 1. All metal studs and accessories, unless otherwise specifically approved by the Architects, shall be galvanized steel.
 - 2. Studs and runners shall be channel-type, roll-formed 20 gauge (standard) size.
 - 3. All furring channels shall be 25 gauge.
 - 4. Steel runners and hangers shall be sizes as indicated on the Drawings.
 - 5. Bridging requirements are to be designed by the supplier. Maximum spacing of bridging is to be 5'-0" o.c. All bridging is to be attached with gauge angles and screws. Minimum attachment to be 18 gauge short angle and (4) TEK screws.

2.02 OTHER MATERIALS

- A. All other materials, not specifically described but required for a complete and proper installation of metal studs, shall be new, first quality of their respective kinds, in strict accordance with the recommendations of the manufacturer of the metal studs used, and subject to approval of the Architect/Engineer.

PART 3 – EXECUTION

3.01 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 metal studs may be installed in strict accordance with the original design and the manufacturer's recommendations.

3.02 INSTALLATION

- A. Erect framing and panels plumb, level and square in strict accordance with the approved shop drawings.
- B. Handling and lifting of prefabricated panels shall be done in a manner which will not cause distortion in any manner.
- C. Track shall be securely anchored to the supporting structure as shown on erection drawings. Concrete anchors shall be installed after full compressive strength has been achieved.
- D. At track butt joints, abutting pieces of track shall be securely anchored to a common structural element, or they shall be butt-welded or spliced together.

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METAL STUDS FOR INTERIOR WALLS

- E. Studs shall be plumb, aligned and securely attached to the flange or webs of both upper and lower tracks.
- F. Jack studs or cripples shall be installed below window sills, above window and door heads, at free standing stair rails and elsewhere to furnish support, and shall be securely attached to supporting members.
- G. Wall stud bridging shall be attached in a manner to prevent stud rotation. Bridging rows shall be spaced according to the manufacturer's recommendations.
- H. Framed wall openings shall include headers and supporting studs as shown on the plans.
- I. Temporary bracing shall be provided until erection is complete.
- J. Provisions for structure vertical movement shall be provided at the top of each panel section and where indicated on the plans using a vertical slide clip or other means in accordance with the manufacturer's recommendations. Allow for a minimum of 1/2" structure deflection.
- K. Provide double studs at wall openings, door and window jambs and not more than 1 1/2" each side of openings and wall intersections.
- L. Coordinate erection of studs with requirements of door frame supports and attachments.

END OF SECTION 05 41 00

08 71 00
FINISH HARDWARE

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Basic finish hardware requirements.
- B. Related Sections:
 - 1. Section 06 20 00 - Finish Carpentry: Installation of finish hardware.
 - 2. Section 08 11 13 - Hollow Metal Doors and Frames.
 - 3. Section 08 14 16 - Wood Doors.
 - 4. Section 08 14 29 - Veneer Wood Doors
 - 5. Section 08 71 01 - Hardware Specification Guidelines
- C. Specific Omissions: Hardware for the following is specified or indicated elsewhere.
 - 1. Windows
 - 2. Cabinets of all kinds, including open wall shelving and locks.
 - 3. Signs, except as noted.
 - 4. Toilet accessories of all kinds including grab bars.
 - 5. Rough hardware.
 - 6. Folding partitions, except cylinders where detailed.
 - 7. Sliding aluminum doors.
 - 8. Angle sill threshold.
 - 9. Corner guards.

1.02 SUBMITTALS

- A. Submit in electronic format (PDF) the hardware schedule at earliest possible date prior to delivery of hardware. Organize schedule into "Hardware Sets" with an index of doors and heading, indicating complete designations of every item required for each door or opening. Include the following information:
 - 1. Type, style, function, size, quantity and finish of each hardware item.
 - 2. Name, part number and manufacturer of each item.
 - 3. Location of hardware set cross referenced to indications on drawings both on floor plans and in door schedule.
 - 4. Explanation of all abbreviations, symbols, and codes contained in schedule.
 - 5. Mounting locations for hardware.
 - 6. Door and frame sizes and materials.
 - 7. Submit manufacture's technical data and installation instructions for the electronic hardware.
 - 8. Provide samples of hardware for Owner review.
 - 9. Catalog cuts.
- B. Templates: Where required, furnish hardware templates to each fabricator of doors, frames and other work to be factory-prepared for the installation of hardware.

1.03 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Obtain each kind of hardware (latch and locksets, exit devices, hinges, and closers) from only one manufacturer, although several may be indicated as offering products complying with requirements.

08 71 00
FINISH HARDWARE

2. Hardware supplier shall be a direct factory contract supplier who has in his employment a certified architectural hardware consultant (AHC) who is available at all reasonable times during the course of the Work, and for project hardware consultation to the Owner, Architect, and Contractor.

- B. Schedule Designations: Except as otherwise indicated, the use of one manufacturer's numeric designation system in schedules does not imply that another manufacturer's products will not be acceptable, unless they are not equal in design, size, weight, finish function, or other quality of significance. See 1.02 A for substitutions.
- C. Exit Doors: Openable at all times from the inside without the use of a key or any special knowledge or effort.
- D. Fire-rated openings: Provide hardware for fire-rated openings in compliance with NFPA Standard No. 80. This requirement takes precedence over other requirements for such hardware. Provide only such hardware which has been tested and listed by UL for the type and size of door required, and complies with the requirements of the door and the door frame labels. Latching hardware, door closers, ball bearing hinges, and seals are required whether or not listed in the Hardware schedule.
 - 1. Where panic exit devices are required on fire-rated doors, provide supplementary marking on door UL label on exit device indicating "Fire Exit Hardware."

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Acceptance at the Site: Individually package each unit of finish hardware complete with proper fastening and appurtenances, clearly marked on the outside to indicate contents and specific locations in the Work.
- B. Deliver packaged hardware items at the times and to the locations (shop or field) for installation, as directed by the Contractor.

1.05 PROJECT CONDITIONS

- A. Coordination: Coordinate hardware with other work. Furnish hardware items of proper design for use on doors and frames of the thickness, profile, swing security and similar requirements indicated, as necessary for the proper installation and function, regardless of omissions or conflicts in the information on the Contract Documents.
- B. Upon request, check the Shop Drawings for doors and entrances to confirm that adequate provisions will be made for the proper installation of hardware.

1.06 PRE-INSTALLATION MEETING

- A. Schedule a hardware pre-installation meeting on site and discuss the installation of all types of hardware on the Project.
- B. Meeting attendees shall be notified seven (7) days in advance and shall include the Architect, Contractor Hardware Installers, all Manufacturers Representative, any other effected sub-contractor or supplier and the Owner's Locksmith.

1.07 WARRANTY

- A. Provide guarantee from hardware supplier as follows:
 - 1. Closers: Ten years; except electronic closers: Two years.
 - 2. Exit Devices & Locksets: Three years
 - 3. All other Hardware: Two years.

PART 2 – PRODUCT

2.01 MANUFACTURERS

- A. The approved Manufacturers are listed in every item of this Part 2 Specification Section. These Manufacturers are based on Owner's building standards for door hardware. The Owner maintains this hardware and is currently stocking replacement parts.
- B. All others must submit for approval a minimum of ten (10) calendar days prior to Bid Date.

2.02 HANGING DEVICES

A. Mortise Hinge

- 1. Heavy Weight Exterior
 - a. Stanley FBB199
 - b. McKinney TA3386
 - c. Hager BB1199
- 2. Standard Weight Exterior
 - a. Stanley FBB191
 - b. McKinney TA2314
 - c. Hager BB1191
- 3. Heavy Weight Interior
 - a. Stanley FBB168
 - b. McKinney TA3786
 - c. Hager BB1168
- 4. Standard Weight Interior
 - a. Stanley FBB179
 - b. McKinney TA2714
 - c. Hager BB1279

Notes:

- Provide DHI recommended size for height and width of door.
- Provide proper quantity of hinges for height of door.
- NRP (Non Removable Pin) at Reverse bevel locked Doors.
- Hinge tips to match existing for additions and alterations to existing buildings.
- Field verify size and finish of existing for door only replacement projects.

B. Continuous Hinge

- 1. Full Surface
 - a. Stanley 664HD
 - b. Select SL21HD
 - c. Hager 780-057HD
 - d. Pemko _ FS
- 2. Full Mortise- Hollow Metal Doors
 - a. Stanley 662HD
 - b. Select SL24HD
 - c. Hager 780-224HD
 - d. Pemko _ FM

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FINISH HARDWARE

3. Full Mortise- Wood Doors
 - a. Stanley 661HD
 - b. Select SL11HD
 - c. Hager 780-111HD
 - d. Pemko FM _ SLF / SLI

Notes:

- Continuous hinges are to be used at exterior openings and vestibule entrances only.
- Continuous hinges are NOT to be used at interior openings other than vestibules for exterior entrances
- Use continuous hinges on perimeter doors unless there is an historic requirement.
- Use continuous hinges on interior high cycle openings.
- Field verify requirements for Pivots and Floor Closers for additions and alterations to existing buildings.
- Avoid floor closers and pivots on new construction.

2.03 LOCKSETS

A. Mortise Lock

1. Best Series 45H (*No Substitutions*)
 - a. Design 15J Full Escutcheon
 - b. Design 15H Sectional Trim
2. Function Designation
 - a. Passage Best: N
 - b. Office Best: AT
 - c. Privacy Best: LT
 - d. Privacy – Staff Best: H-VIN
 - e. Storeroom Best: D

Note: Provide lock functions as required for project and space as appropriate

B. Electronic Mortise Lock

1. Best Series 45HW (*No Substitutions*)
 - a. Design 15J Full Escutcheon
 - b. Design 15H Sectional Trim
2. Function Designation
 - a. Fail Secure Best: DEU
 - b. Fail Safe Best: DEL

Note: Specify quick connect wire connections for low voltage terminations.

Best “C”

Corbin Russwin “Lynx”

C. Cylindrical Lock

1. Best Series 9K (*No Substitutions*)
 - a. Design 15D Flat Lever w/Return
 - b. Design 16D Straight Lever

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FINISH HARDWARE

2. Function Designation

- a. Passage Best: N
- b. Office Best: AB
- c. Privacy Best: L
- d. Privacy – Staff Best: H
- e. Storeroom Best: D

Note: Provide lock functions as required for project and space as appropriate

D. Electronic Cylindrical Lock

1. Best Series 9K (No Substitutions)

- a. Design 15D Full Escutcheon
- b. Design 16D Sectional Trim

2. Function Designation

- a. Fail Secure Best: DEU
- b. Fail Safe Best: DEL

Note: Specify quick connect wire connections for low voltage terminations.
Best "C"

E. Cylinders

- 1. Best Mortise Cylinders 1E Series (*No Substitutions*)
- 2. Rim Cylinders 12E Series (*No Substitutions*)

Note: Provide as necessary to operate locking hardware

F. Key System

1. Best (*No Substitutions*)

- a. Small Format Interchangeable Core
- b. 7-pin Best SFIC

Note: Cores must be supplied as part of the construction hardware

2.04 EXIT DEVICES

A. Exit Devices

1. Precision Apex Series 2000

- | | |
|---|--------|
| a. Rim Device | 2100 |
| b. Rim Device–Fire Rated | FL2100 |
| c. Surface Vert Rod Device | 2200 |
| d. Surface Vert Rod–Fire Rated | FL2200 |
| e. Mortise Device | 2300 |
| f. Mortise Device–Fire Rated | FL2300 |
| g. Rim Device–Narrow Stile | 2400 |
| h. Rim Device–Narrow Stile–Fire Rated | FL2400 |
| i. Con Vert Rod Device–Narrow Stile | 2600 |
| j. Con Vert Rod Device -Narrow Stile–Fire Rated | FL2600 |
| k. Con Vert Rod Device–Wood Door | 2700 |
| l. Con Vert Rod Device -Wood Door–Fire Rated | FL2700 |
| m. Con Vert Rod Device | 2800 |
| n. Con Vert Rod Device–Fire Rated | FL2800 |

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FINISH HARDWARE

2. **Von Duprin Series 35 / 98**

a. Rim Device	98
b. Rim Device–Fire Rated	98-F
c. Surface Vert Rod Device	9827
d. Surface Vert Rod-Fire Rated	9827-F
e. Mortise Device	9875
f. Mortise Device-Fire Rated	9875-F
g. Rim Device-Narrow Stile	35A
h. Rim Device–Narrow Stile-Fire Rated	35A-F
i. Con Vert Rod Device-Narrow Stile	3347A
j. Con Vert Rod Device -Narrow Stile-Fire Rated	3347A-F
k. Con Vert Rod Device-Wood Door	9847WDC
l. Con Vert Rod Device -Wood Door-Fire Rated	9847WDC-F
m. Con Vert Rod Device	9847
n. Con Vert Rod Device-Fire Rated	9847-F

3. **Panic Device Function Designation**

a. Exit Only	Precision: 01	Von Duprin: EO
b. Pull Only	Precision: 02	Von Duprin: DT
c. Key Retracts Latch Bolt	Precision: 03	Von Duprin: NL
d. Lever Locked / Unlocked	Precision: 08	Von Duprin: L
e. Lever Always Free	Precision: 15	Von Duprin: L-BE

Note: Precision Apex 2000 Series

- For use on new construction projects.
- “A” Lever design on interior applications.
- “A” Pull design on exterior applications.
- Field verify existing pull design on projects where there is an historic requirement.
- Hex Key Dogging on Non-Fire Rated applications.
- Single Doors – Rim style device preferred over mortise panics
- Pairs of Doors – (2) Rim style devices and a Mullion.
- Mullions to be Key Removable.
- Latch bolts on Electrified Exit Devices to use Motor retraction not solenoid retraction unless matching existing

B. Exit Device Accessories

1. Lockdown Panic Button
 - a. Trimco LDH100

Note: Must be used in conjunction with all non-fire rated exit devices

2.05 MECHANICAL CLOSING DEVICES

A. Surface Closer

1. Dorma 8900
2. LCN 4040XP
3. Stanley/Dormakaba Commercial Hdw QDC100

Note:

- Proper Arm as Required.
- Provide heavy duty EDA Parallel arms.
- Provide SNB at All closers.
- All door frames to be reinforced.

08 71 00
FINISH HARDWARE

B. Concealed Closers

1. Dorma RTS88 series
 - a. RTS25 model – Aluminum Storefront Openings
 - b. RTS27 model - Hollow Metal Openings
2. LCN 2000 series
 - a. 2010/2030 models

2.06 AUTOMATIC OPERATORS

A. Low Energy- Automatic Operator

1. Dorma ED900
2. LCN 4642

Note:

- Push Plate Actuation
- Provide where noted ADA required on drawings

2.06 STOPS & HOLDERS

A. Door Stops

1. Trimco
2. Rockwood
3. Hager
4. Ives
5. Design Hardware

Note:

- Allow for maximum swing of door.
- Can use both floor stops and wall stops
- Backing required at wall stop.

B. Overhead Stops

1. Dorma 700 / 900
2. Rixon 6-x / 9-x
3. Rockwood OH100 / OH900
4. Glynn Johnson 90 / 100

2.07 TRIM & ACCESSORIES

A. For the following items all Manufacturers are approved using their standard product for the item listed.

- | | |
|------------------|--|
| 1. Flat Goods | Hager, Ives, Rockwood, Design Hardware |
| 2. Threshold | National Guard, Pemko, Zero, Design Hardware |
| 3. Weather Seals | National Guard, Pemko, Zero, Design Hardware |
| 4. Door Sweeps | National Guard, Pemko, Zero, Design Hardware |
| 5. Smoke Seals | National Guard, Pemko, Zero, Design Hardware |

2.08 ELECTRONIC COMPONENTS

A. Power Transfer

1. Precision EPT-12C
2. Securitron EL-CEPT
3. Von Duprin EPT-10 CON

Note: Specify quick connect wire connections for low voltage terminations.

08 71 00
FINISH HARDWARE

- B. Door Position Switches
 - 1. Sargent 3280
 - 2. Security Door Controls DPS
 - 3. Securitron DPS
 - 4. RCI 9540

- C. Power Supplies
 - 1. Alarm Controls APS
 - 2. Security Door Controls 630
 - 3. Von Duprin PS
 - 4. Precision PS/RPS series
 - 5. RCI 10-series

2.09 ELECTRIC STRIKES

- A. Electric Strikes
 - 1. Dorma
 - 2. Best
 - 3. RCI
 - 4. Von Duprin

2.10 MISCELLANEOUS

- A. Pad Locks
 - 1. Best 21B series

Note: Weather Cover Required for Exterior Applications

2.11 MATERIALS

- A. Locksets: All locksets and latchsets shall be extra-heavy-duty cylindrical with Best 7-pin interchangeable core. Lockset and Cores to be of the same manufacturer to maintain complete lockset warranty. Locks to have solid shank with no opening for access to keyed lever keeper. Keyed lever to be protected by means of a break-away mechanism to prevent forced entry, when excessive torque is applied, a replaceable part will shear. Lock chassis must be through-bolted (outside of the lock chassis prep to prevent rotation of chassis after installation. Lock manufacturer shall provide a three-year warranty, in writing, to the Owner, along with three copies of the lock service manual. Strikes shall be 16 gauge curved brass, bronze or stainless steel with a 1" deep box construction, and have sufficient length to clear trim and protect clothing.
- B. Mortise type Locks and Latches shall be heavy-duty with hinged, anti-friction, 3/4 inch throw latchbolt with anti-friction piece made of self lubricating stainless steel. Functions and design as indicated on the hardware groups. Deadbolt functions shall be 1 inch projection made of hardened stainless steel. both deadbolt and latchbolt are to extend into the case a minimum of 3/8 inch when fully extended. Furnish locksets and latchsets with sufficient curved strike lip to protect door trim. Provide locksets with 7-pin interchangeable core cylinders. All mortise cylinders shall have a concealed internal set screw for securing the cylinder to the lockset. The internal set screw will be accessible only by removing the core from the cylinder body. Locksets and latchsets to have self-aligning, thru-bolted trim. Auxiliary deadlatch to be made of one piece stainless steel, permanently lubricated. Lever handles must be of forged or cast brass, bronze or stainless steel construction. Levers which contain a hollow cavity are not acceptable. Spindle to be such that if forced it will twist first, then break, thus preventing forced entry. Levers to be operated with a roller bearing spindle hub mechanism.
 - 1. Grade 1 Cylindrical Locks shall have minimum 9/16 throw. All deadbolts shall have 1-inch minimum throw.

08 71 00
FINISH HARDWARE

PART 3 – EXECUTION

3.01 BASIC REQUIREMENTS

- A. Furnish all items of hardware required to complete the work in accordance with specifications and plans.
- B. Carefully inspect Project for the extent of the finish hardware required to complete the Work. Where there is a conflict between these Specification and the existing hardware furnish finish hardware to specification.
- C. Door and frame prep
 - 1. Before hardware installation, verify that all doors and frames are properly prepared to receive the specified hardware. Hollow metal frames shall be prepared for ANSI strike plates per A115.1-2 (4-7/8" high); hinge preps will be mortised and reinforced with a minimum of 10 gauge reinforcement material; minimum of 14 gauge reinforcement material for closer and all surface mounted hardware. Hollow metal doors shall be properly prepared and reinforced with a minimum of 16 gauge material for either mortised or cylindrical locks as specified. All hollow metal doors receiving door closers or other surface mounted hardware to have 14 gauge reinforcement. The use of sex bolts is mandatory. Wood doors shall be factory prepared to receive the scheduled hardware.
- D. Hardware Finishes
 - 1. The finish for the hardware items will be project specific. Field verification is required for additions and alterations of existing buildings.
- E. Hardware installation
 - 1. The manufacturer's representative for the locking devices and closing devices must inspect and approve, in writing, the installation of their products. Hardware installed incorrectly must be reported to the architect prior to the architect's final punch list.
 - 2. Install each hardware item per manufacturer's instructions and recommendations. Do not install surface mounted items until finishes have been completed on the substrate. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
 - 3. Installation shall conform to local governing agency security ordinance.

3.02 KEYING REQUIREMENTS

- A. Provide construction cores and keys during the construction period. Construction control and operating keys and core shall not be part of the Owner's permanent keying system or furnished on the same keyway (or key section) as the Owner's permanent keying system. Permanent cores and keys (prepared according to the accepted keying schedule) will be furnished by the Best factory representative as part of the hardware package to the General or Prime Contractor for delivery to the Owner a minimum of two (2) weeks prior to occupancy.
- B. All cylinders shall be Best 7-pin, interchangeable core.
- C. Furnish two (2) key blanks per core provided in the proper keyway configuration as directed by the University Locksmith
- D. The Owner, or the Owner's agent, will install permanent cores and return the construction cores to the Best Access Systems Factory Representative. All Construction cores and control keys remain the property of Best Access Systems.

08 71 00
FINISH HARDWARE

3.03 HARDWARE LOCATION

- A. Hinges:
 - 1. Bottom Hinge: 10 inches from door bottom to bottom of hinge.
 - 2. Top Hinge: 5 inches from door top to top of hinge.
 - 3. Center Hinge: Center between top and bottom hinge.
 - 4. Extra Hinge: 6 inches from bottom of top hinge to top of extra hinge.
- B. Lock: 38 inches from finished floor to center of lever or knob.
- C. Push Bar: 44 inches from bottom of door to center of bar.
- D. Push Plate: 44 inches from bottom of door to center of plate.
- E. Pull Plate: 42 inches from bottom of door to center of pull.
- F. Exit Device: 39-13/16 inches from finished floor to center of pad.
- G. Deadlock Strike: 44 inches from floor, centered.

3.04 ADJUSTING

- A. Adjust and check each operating item of hardware and each door to ensure proper operation or function of every unit. Replace units which cannot be adjusted to operate freely and smoothly.
- B. Inspection: Hardware supplier shall inspect all hardware furnished within 10 days of contractor's request and include with his guarantee a statement that this has been accomplished. Inspector or Contractor shall sign off the hardware as being complete and correctly installed and adjusted. Further corrections of defective material shall be the responsibility of his representative.

3.05 ADJUSTMENTS AND CLEANING

- A. At final completion, and when HVAC is operational and balanced, installer shall make final adjustment to and verify proper operation of all door closers and other hardware. Lubricate moving parts with type lubrication recommended by the manufacturer.
- B. All hardware shall be left clean and in good condition. Hardware found to be disfigured, defective or inoperative shall be repaired or replaced.

END OF SECTION 08 71 00

09 21 16
GYPSUM WALLBOARD SYSTEMS

PART 1 – GENERAL

1.01 DESCRIPTION

- A. Work Included: Gypsum Wallboard is required on all interior walls and ceiling surfaces in this work as indicated on the Drawings.

1.02 PRODUCT HANDLING

- A. Delivery and Handling:
 - 1. Deliver materials to the project site with manufacturer's labels intact and legible.
 - 2. Handle materials with care to prevent damage.
 - 3. Deliver fire-rated materials bearing testing agency label and required fire classification numbers.
- B. Storage:
 - 1. Store materials inside under cover, stack flat, off floor.
 - 2. Stack wallboard so that long lengths are not over short lengths.
 - 3. Avoid over-loading floor system.
 - 4. Store adhesives in dry area. Provide protection against freezing at all times.
- C. Protection: Use all means necessary to protect the materials of this section before, during and after installation, and to protect the installed work of other trades.
- D. 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.

1.03 QUALITY ASSURANCE

- A. Use only qualified journeymen. In the acceptance or rejection of installed gypsum wallboard, no allowance will be made for lack of skill on the part of the drywall Subcontractor.
- B. Where fire-resistive gypsum wallboard assemblies are required, adhere to assemblies and guidelines as published by the Gypsum Association in the current edition of the Gypsum Association's Fire Resistance Design Manual.

1.04 REFERENCES/STANDARDS

- A. ASTM C36 -Gypsum Wallboard
- B. ASTM C79 -Gypsum Sheathing Board
- C. ASTM C442 -Gypsum Backing Board and Core Board
- D. ASTM C514 - Nails for the Application of Gypsum Wallboard
- E. ASTM C645 - Non-Load (Axial) Bearing Steel Studs, Runners (Track) and Rigid Furring Channels for Screw Application of Gypsum Board
- F. ASTM C754 - Installation of Framing Members to Receive Screw Attached Gypsum Wallboard, Backing Board or Water Resistant Backing Board
- G. ASTM C840 - Application and Finishing of Gypsum Board
- H. ASTM C1002 - Steel Drill Screws for the Application of Gypsum Board
- I. ASTM E119 - Fire Tests of Building Construction and Materials
- J. GA-201 - Gypsum Board for Walls and Ceilings
- K. GA-216 - Recommended Specifications for the Application and Finishing of Gypsum Board
- L. GA-600 - Fire Resistance Design Manual

09 21 16
GYPSUM WALLBOARD SYSTEMS

1.05 JOB CONDITIONS

A. Environmental Conditions:

1. Temperature: During cold weather, in areas receiving wallboard installation, maintain temperature storage between 55 degrees F. to 70 degrees F. (13 degrees C. to 21 degrees C.) for 24 hours before, during, and after gypsum wallboard and joint treatment application.
2. Ventilation:
 - a. Provide ventilation during and following adhesives and joint treatment application.
 - b. Protect installed materials from drafts during hot, dry weather.

B. Protection: Protect adjacent surfaces against damage and stains.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Gypsum Wallboard

1. Water resistant board shall be in thicknesses and locations as indicated on the drawings.
2. Regular board shall be in thickness as indicated on the drawings.

B. Concrete GFR wallboard

1. All surfaces to receive ceramic tile finish shall be covered with 7/16" concrete glass-fiber-reinforced wallboard.

C. Fasteners:

1. Gypsum wallboard screws
2. Screw length for wood or metal stud application:
 - a. Single layer 5/8" wallboard application: 1 5/8", Bugle head screw.

D. Grillage:

1. Running Channels: 1 1/2" cold rolled galvanized steel.
2. Cross furring channels: 3/4" cold rolled galvanized steel.
3. Hangers: Minimum of No. 12 gauge galvanized annealed wire.
4. Note: Gypsum wallboard lath suspension system 650 by Chicago Metallic Corporation is an acceptable equal.

E. Accessories:

1. Drywall Reveal Molding: Style WOM-625-75 by Fry Reglet Corporation.
2. Surface-Mounted Corner Guard: Type CGS-3 by Balco, Inc.
3. Color to be selected by Architect.

PART 3 – EXECUTION

3.01 INSPECTION

- A. Check framing for accurate spacing and alignment.
- B. Verify that spacing of installed framing does not exceed maximum allowable of thickness of wallboard to be used.
- C. Verify that door frames are set for thickness of wallboard to be used.

09 21 16
GYPSUM WALLBOARD SYSTEMS

- D. Do not proceed with installation of wallboard until deficiencies are corrected and surfaces to receive wallboard are acceptable.

3.02 APPLICATION

A. General:

1. Use wallboard of maximum lengths to minimize end joints.
2. Stagger end joints when they occur.
3. Locate end joints as far as possible from center of wall or ceiling.
4. Abut wallboards without forcing.
5. Neatly fit ends and edges of wallboard.
6. Support ends and edges of wallboard panels on framing or furring members.
7. Follow manufacturer's installation recommendations.
8. Stagger vertical joints on opposite side of partition to occur on different
9. Place all board so that all joints occur at center of studs or furring channels.
10. Make all joints tight and accurate, keeping adjacent boards in flush planes.
11. Cut and fit boards neatly and accurately around electrical boxes, light fixtures, grilles, registers, diffusers, and similar items so that evidence of cutting and fitting will be concealed by cover plates, flanges, or trim.
12. Seal cut edges where such cuts occur in water-resistant board according to the manufacturer's recommendations.
13. Where full height walls and walls containing acoustic or thermal insulation are indicated on the drawings, install sealant at the perimeter of such gypsum drywall surfaces and around all items protruding through such surfaces. Refer to Section 09260, Acoustical Treatment for Partitions/Ceilings, for specific information.
14. Provide control joints in continuous runs of wall exceeding 30'-0" (vertical or horizontal). Coordinate the location of all control joints with the Architect prior to installation.
15. Provide control joints at all locations where secured to structural steel to provide isolation from wallboard secured to partition framing.

B. Single Layer Application:

1. Vertical surfaces: Space screws a maximum 8" o.c. in field of panel and 8" o.c. along vertical abutting edges. Stagger screws on abutting edges or ends.
2. Horizontal surfaces: Space screws maximum 6" o.c. in field of panel and 6" o.c. along abutting end joints. Stagger screws on abutting edges or ends.

C. Joint System

1. Prefill:
 - a. Fill "V" grooves formed by abutting rounded edges of wallboard with prefill joint compound.
 - b. Fill "B" joint flush and remove excess compound beyond groove.
 - c. Leave clear depression to receive tape.
 - d. Permit prefill joint compound to harden prior to application of tape.

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GYPSUM WALLBOARD SYSTEMS

2. Taping and finishing joints:
 - a. Taping or embedding joints:
 - 1) Apply compound in thin uniform layer to all joints and edges to be reinforced.
 - 2) Apply reinforcing tape immediately.
 - 3) Center tape over joint, and seat tape into compound.
 - 4) Leave approximately 1/64" (0.05mm) to 1/32" (.1mm) compound under tape to provide bond.
 - 5) Apply skim coat immediately following tape embedment, but not to function as fill or second coat.
 - 6) Fold tape and embed in angles to provide true angle.
 - 7) Dry embedding coat prior to application of fill coat.
 - b. Filling:
 - 1) Apply joint compound over embedding coat.
 - 2) Fill taper flush with surface.
 - 3) Apply fill coat to cover tape.
 - 4) Feather out fill coat beyond tape and previous joint compound line.
 - 5) Do not apply fill coat on interior angles.
 - 6) Allow fill coat to dry prior to application of finish coat.
 - c. Finishing:
 - 1) Spread joint compound evenly over and beyond fill coat on all joints.
 - 2) Feather to smooth uniform finish.
 - 3) Apply finish coat to taped angles to cover tape and taping compound.
 - 4) Sand final application of compound to provide surface ready for decoration.
 3. Filling and finishing depressions:
 - a. Apply joint compound as first coat to fastener depressions.
 - b. Apply at least two additional coats of compound after first coat is dry.
 - c. Leave filled and finished depressions level with plane of surface.
 4. Finished beads and trim:
 - a. First fill coat:
 - 1) Apply joint compound to bead and trim.
 - 2) Feather out from ground to plane of the surface.
 - 3) Dry compound prior to application of second fill coat.
 - b. Second fill coat:
 - 1) Apply joint compound in same manner as first fill coat.
 - 2) Extend beyond first coat onto face of wallboard.
 - 3) Dry compound prior to application of finish coat.
 - c. Finish coat:
 - 1) Apply joint compound to bead and trim.
 - 2) Extend beyond second fill coat.
- D. Metal Trim:
1. The drawings do not propose to show all metal trim required; verify with the Architect the precise locations and types of trim to be used.

09 21 16
GYPSUM WALLBOARD SYSTEMS

2. Provide metal trim at all junctures of gypsum wallboard and dissimilar materials.
 3. Carefully inspect the drawings and verify location of all metal trim required.
 4. Install all trim in strict accordance with the manufacturer's recommendations, paying particular attention to make all trim installation plumb, level, and true-to-line with firm attachment to supporting members.
- E. Grillages: Spacing of furring channels and runner channels, and the spacing and spans of runners shall not exceed the limits given for each shape in the "Metal Lath Association Specifications".
1. Running channels shall be spaced not over 3 feet on center and spans shall not exceed 4 feet (2 feet at light fixtures).
 2. Suspend running channels directly from structure with 12 gauge hanger wire.
 3. Cross furring channels shall be spaced not over 13-1/2" on center.
 4. Hangers shall be spaced as specified above and within 6" of the ends of main runner runs and of boundary walls, girders, or similar interruptions of ceiling continuity. Main runner shall be properly positioned and leveled, and hangers shall be saddle tied along runner. Main runners shall not be let into nor come in contact with abutting masonry walls. Runner channels shall be located within 6" of the walls to channels shall be securely saddle tied with two strands of 16 gauge tie wire to main runners and shall not be let into or come in contact with abutting masonry walls. All openings shall be formed with carrying channels. All offsets and isolated areas shall be securely braced against sway.

3.03 ADJUST AND REPAIR

- A. "Nail Pop":
1. When face paper is punctured, drive new screw approximately 1-1/2" (38mm) from defective fastening and remove defective fastening.
 2. Fill damaged surface with compound.
- B. Ridging:
1. Do not repair ridging until condition has fully developed - approximately 6 months after installation or one heating season.
 2. Sand ridges to reinforcing tape without cutting through tape.
 3. Fill concave areas on both sides of ridge with topping compound.
 4. After fill is dry, blend in topping compound over repaired area.
- C. Cracks:
1. Fill cracks with compound and finish smooth and flush.

END OF SECTION 09 21 16

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PART 1 – GENERAL

1.01 GENERAL

- A. Ceramic tile floor and base finish using the thinset application method.

1.02 REFERENCES

- A. ANSI A108.1 - Installation of Ceramic Tile with Portland Cement Mortar.
- B. ANSI A108.3 - Quarry Tile and Paver Tile Installed With Portland Cement Mortar.
- C. ANSI A108.4 - Installation of Ceramic Tile with Organic Adhesives or Water Cleanable Tile Setting Epoxy Adhesive.
- D. ANSI A108.10 - Installation of Grout in Tilework.
- E. ANSI A118.4 - Latex-Portland Cement Mortar.
- F. ANSI A118.6 - Ceramic Tile Grouts.
- G. ANSI A136.1 - Organic Adhesives for Installation of Ceramic Tile.
- H. ANSI A137.1 - Standard Specifications for Ceramic Tile.
- I. TCA (Tile Council of America) - Handbook for Ceramic Tile Installation.

1.03 SUBMITTALS

- A. Submit under provisions of Section 01 32 00.
- B. Product Data: Provide instructions for using adhesives and grouts.
- C. Manufacturer's Certificate: Certify that Products meet or exceed specified requirements and ANSI A137.1.

1.04 MAINTENANCE DATA

- A. Submit under provisions of Section 01 77 00.
- B. Maintenance Data: Include recommended cleaning methods, cleaning materials, stain removal methods, and polishes and waxes.

1.05 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.
- B. Installer: Company specializing in performing the work of this section with minimum three years documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Delivery, store, protect and handle products to site under provisions of Section 01 60 00.
- B. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.

1.07 ENVIRONMENTAL REQUIREMENTS

- A. Do not install adhesives in an unventilated environment.
- B. Maintain 50 degrees F (10 degrees C) during installation of mortar materials.

1.08 EXTRA MATERIALS

- A. Furnish under provisions of Section 01 77 00.
- B. Provide 100 sq. ft. of each size, color, and surface finish of tile specified.

PART 2 - PRODUCTS

2.01 TILE MANUFACTURERS

- A. Quarry Tile 12" x 12"
 - 1. Mohawk Ceramic tile "Quarry Stone"

2.02 BASE MATERIALS

- A. Base: Match floor tile for moisture absorption, surface finish, and color.

2.03 MORTAR MATERIALS

- A. Manufacturers: Latex-Emulsion-Based Latex-Portland Cement Mortars.
 - 1. Mapei Corp.
 - 2. American Olean Tile, Co, Inc.
 - 3. W.R. Bonsal Co.
 - 4. Bostik Construction
 - 5. Laticrete International, Inc.
- B. Mortar Materials: ANSI A118.4 Latex Modified, Portland cement, sand, latex additive, and water.

2.04 GROUT MATERIALS

- A. Manufacturers: Acrylic Emulsions for Latex-Portland Cement Grouts.
 - 1. Mapei Corp.
 - 2. American Olean Tile Co., Inc.
 - 3. W.R. Bonsal Co.
 - 4. Bostik Construction Products Div.
 - 5. Laticrete International, Inc.
- B. Grout: ANSI A118.6, tile grout, color as selected.
- C. Grout: ANSI A118.8, modified epoxy emulsion mortar and grout, color as selected.
- D. Color Admixture: Color as selected, manufactured by SGS or by manufacturer of tile and mortar materials.

2.05 MORTAR MIX AND GROUT MIX

- A. Mix and proportion pre-mix setting bed and grout materials in accordance with manufacturer's instructions and TCA Handbook.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify substrate under provisions of Section 01 40 00.
- B. Verify that surfaces are ready to receive work.

3.02 PREPARATION

- A. Protect surrounding work from damage or disfiguration.
- B. Vacuum clean surfaces and damp clean.
- C. Seal substrate surface cracks with filler. Level existing substrate surfaces to acceptable flatness tolerances.

09 31 13
CERAMIC FLOOR TILE

- D. Apply sealer or conditioner to substrate surfaces in accordance with adhesive manufacturer's instructions.

3.03 INSTALLATION - THINSET METHOD

- A. Install adhesive, tile, and grout in accordance with manufacturer's instructions and to TCA Handbook.
- B. Lay tile to pattern indicated. Do not interrupt tile pattern through openings.
- C. Place edge strips at exposed tile edges, as required.
- D. Cut and fit tile tight to penetrations through tile. Form corners and bases neatly. Align floor, base and wall joints.
- E. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make joints watertight, without voids, cracks, excess mortar, or excess grout.
- F. Sound tile after setting. Replace hollow sounding units.
- G. Keep control joints free of adhesive or grout. Apply sealant to joints.
- H. Allow tile to set for a minimum of 48 hours prior to grouting.
- I. Grout tile joints.
- J. Apply sealant to junction of tile and dissimilar materials and junction of dissimilar planes.

3.04 CLEANING

- A. Clean work under provisions of 01 77 00.
- B. Clean tile and grout surfaces.

3.05 PROTECTION OF FINISHED WORK

- A. Protect finished work under provisions of Section 01 77 00.
- B. Do not permit traffic over finished floor surface for 4 days after installation.

3.06 SCHEDULE

- A. See Room Finish Schedule.

END OF SECTION 09 31 13

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SUSPENDED ACOUSTICAL CEILINGS

PART 1 -GENERAL

1.01 SECTION INCLUDES

- A. Suspended metal grid ceiling system and perimeter trim.
- B. Acoustical tile and panels.
- C. Non-fire rated assembly.
- D. Supplementary acoustical insulation over system units.

1.02 REFERENCES

- A. ASTM C635 - Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
- B. ASTM C636 - Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels.
- C. ASTM E580 - Practice for Application of Ceiling Suspended Systems for Acoustical Tile and Lay-in panels in areas requiring seismic restraint.
- D. ASTM E1264 - Classification of Acoustical Ceiling Products.
- E. Ceilings and Interior Systems Contractors Association (CISCA) - Acoustical Ceilings: Use and Practice.

1.03 SUBMITTALS

- A. Submit under provisions of Section 01 32 00.
- B. Shop Drawings: Indicate grid layout and related dimensioning, junctions with other work or ceiling finished, interrelation of mechanical and electrical items related to system and wall layouts.
- C. Product Data: Provide data on metal grid system components, acoustical units and accessories.
- D. Samples: Submit two samples full size illustrating material and finish of acoustical units.
- E. Samples: Submit two samples each, 12 inches (300 mm) long, of suspension system main runner, cross runner, edge trim, and hold down clips.
- F. Manufacturer's Installation Instructions: Indicate special procedures, perimeter conditions requiring special attention.

1.04 QUALIFICATIONS

- A. Grid Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.
- B. Acoustical Unit Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.

1.05 REGULATORY REQUIREMENTS

- A. Conform to applicable code for combustibility requirements for materials.

1.06 ENVIRONMENTAL REQUIREMENTS

- A. Maintain uniform temperature of minimum 60 degrees F (16 degrees C), and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

1.07 SEQUENCING

- A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
- B. Install acoustical units after interior wet work is dry.

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SUSPENDED ACOUSTICAL CEILINGS

1.08 EXTRA MATERIALS

- A. Furnish under provisions of Section 01 77 00.
- B. Provide 10 percent of total acoustical unit area of extra tile panels to Owner.

PART 2 – PRODUCTS

2.01 MANUFACTURERS - SUSPENSION SYSTEM

- A. Chicago Metallic Corp.
- B. Armstrong Contract Interiors.
- C. Donn by U.S.G. Interiors, Inc.

2.02 SUSPENSION SYSTEM MATERIALS

- A. Non-fire Rated Grid: ASTM C635, heavy duty; exposed T as indicated: components die cut and interlocking.
- B. Grid Materials: Commercial quality cold rolled steel with galvanized coating.
- C. Exposed Grid Surface Width: 15/16 inch (24 mm).
- D. Grid Finish: White and color as indicated.
- E. Accessories: Stabilizer bars clips splices edge moldings hold down clips and for suspended grid system.
- F. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, a ceiling system flatness requirement specified.

2.03 MANUFACTURERS - ACOUSTICAL UNITS

- A. U.S.G. Interiors, Inc. Product as schedule.
- B. Armstrong Contract Interiors Product as scheduled.
- C. Celotex Building Products Product as scheduled.

2.04 ACOUSTICAL UNIT MATERIALS

- A. Armstrong Type 737
 - 1. Recessed Angular Tegular
 - 2. Size: 24" x 24" x 5/8"
 - 3. Grid: 15/16" DX
 - 4. Color: White

2.05 ACCESSORIES

- A. Touch-up Paint: Type and color to match acoustical and grid units.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify site conditions.
- B. Verify that layout of hangers will not interfere with other work.

3.02 INSTALLATION - LAY IN GRID SUSPENSION SYSTEM

- A. Install suspension system in accordance with manufacturer's instructions and as supplemented in this section.
- B. Install system in accordance with ASTM E580.

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SUSPENDED ACOUSTICAL CEILINGS

- C. Install system capable of supporting imposed loads to a deflection of 1/240 maximum.
- D. Lay out system as indicated on reflected ceiling plans.
- E. Supply hangers or inserts for installation with instructions for their correct placement.
- F. Install after major above ceiling work is complete. Coordinate the location of hangers with other work.
- G. Provide hanger clips during steel deck erection. Provide additional hangers and inserts as required.
- H. Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- I. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
- J. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability. Support fixture loads by supplementary hangers located within 6 inches (150 mm) of each corner; and support components independently.
- K. Do not eccentrically load system, or produce rotation of runners.
- L. Install edge molding at intersection of ceiling and vertical surfaces, using longest practical lengths. Miter corners. Provide edge moldings at junctions with other interruptions.
- M. Form expansion joints as required. Maintain visual closure.

3.03 INSTALLATION - CONCEALED GRID SUSPENSION SYSTEM

- A. Install suspension system in accordance with manufacturer's instructions and as supplemented in this section.
- B. Install system in accordance with ASTM E580.
- C. Install system capable of supporting imposed loads to a deflection of 1/240 maximum.
- D. Lay out system to a balanced grid design as indicated on reflected ceiling plans and/or electrical lighting plans.
- E. Install after major above ceiling work is complete. Coordinate the location of hangers with other work.
- F. Supply hangers or inserts for installation with instructions for their correct placement.
- G. Provide hanger clips during steel deck erection. Provide additional hangers and inserts as required.
- H. Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- I. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
- J. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability. Support fixture loads by supplementary hangers located with 6 inches (150 mm) of each corner; and support components independently.
- K. Do not eccentrically load system, or produce rotation of runners.
- L. Install edge molding at intersection of ceiling and vertical surfaces, using longest practical lengths. Miter corners. Provide edge moldings at junctions with other interruptions.
- M. Form expansion joints as required. Maintain visual closure.

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SUSPENDED ACOUSTICAL CEILINGS

3.04 INSTALLATION - ACOUSTICAL UNITS

- A. Install acoustical units in accordance with manufacturer's instructions.
- B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
- C. Lay directional patterned units one way with pattern parallel to shortest room axis. Fit border trim neatly against abutting surfaces.
- D. Install units after above ceiling work is complete.
- E. Install acoustical units level, in uniform plane, and free from twist, warp and dents.
- F. Cut tile panels to fit irregular grid and perimeter edge trim. Field rabbett tile panel edge. Double cut and field paint exposed edges of tegular units.
- G. Where bullnose concrete block corners round obstructions occur, provide preformed closers to match edge molding.
- H. Lay acoustical insulation for a distance of 48 inches (1 200 mm) either side of acoustical partitions.
- I. Install hold-down clips to retain panels tight to grid system within 20 ft (6 m) of an exterior door.

3.05 ERECTION TOLERANCES

- A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet (3 mm in 3 m).
- B. Maximum Variation from Plumb Grid Members Caused by Eccentric Loads: 2 degrees.

END OF SECTION 09 51 13

GENERAL PAINTING AND FINISHING REQUIREMENTS

PART 1 – GENERAL

1.01 DESCRIPTION

A. Work Includes But Not Limited To-

1. Finishing elements of the building shown on attached Finish Schedule or specified below.
2. Back prime work to be installed against concrete or masonry or subjected to moisture.
3. Paint mechanical and electrical items located in classrooms as determined by Owner.

B. The type of material to be used and the number of coats to be applied are listed in the Part 2 of this Section or as noted on the Drawings.

C. Prepare and paint or finish surfaces as hereinafter described, including, but not limited to the following:

1. Concrete Unit Masonry
2. Gypsum plaster
3. Cement plaster
4. Wood doors, finish wood carpentry, and trim
5. Hollow metal doors, frames

D. Other exposed surfaces that are not specifically indicated to be factory finished or finished by others.

E. It is the intent of this Specification to require all existing painted wall surfaces, except those explicitly exempted herein, to be painted under this contract.

F. Related Documents-

1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Section in Division 01, General Requirements, of these Specifications.

1.02 SUBMITTALS

A. Product Data-

1. Written list of specific products proposed along with Manufacturer's certification that products meet specified requirements. Before any paint materials are delivered to the job site, submit to the Architect in accordance with the provisions of Section 01 32 00 of these specifications a complete list of all materials proposed to be furnished and installed under this portion of the work.
 - a. Data shall be specific as to Manufacturer's brand name and identifying numbers.
 - b. Samples: Accompanying the materials list, submit to the Architect two copies of the full range colors available in each of the proposed products.
 - c. Indicate square footage to be covered by each product, Manufacturer's recommended coverage rates, and amount of product required based on average coverage.
 - d. Indicate items to be finished as work of each painting Section.
 - e. Outline, preparation and application procedures to be followed including application methods, time between coats, and environment
 - f. Provide Manufacturer's cut sheets which indicate paint components. As a minimum, specification requirements for paint composition shall be given on cut sheets submitted.
2. Color selection data.
3. Maintenance instructions.

GENERAL PAINTING AND FINISHING REQUIREMENTS

B. Samples-

1. Provide paint card for each color and for each paint system. Card to show each component of system as well as total system.

1.03 QUALITY ASSURANCE

A. Pre-installation Meeting-

1. Schedule meeting after delivery of paint but prior to application of field samples or paint.

B. Field Samples-

1. Prior to application of any paint system meet on Project site with Owner's representative. Owner may select one surface for application of each paint system specified.
2. Apply paint systems to surfaces indicated following procedures outlined in Contract Documents and Product Data submission specified above.
3. After approval of samples, proceed with application of paint system throughout Project.

C. Applicator shall have experience in application of specified products for five years minimum and be acceptable to Owner and Manufacturer.

1.04 DELIVERY, STORAGE, & HANDLING

A. Deliver specified products in original containers with labels intact on each container. Deliver amount of material indicated on submittal for Project in single shipment. Notify Owner two working days prior to delivery.

B. Store materials in single place.

C. Keep storage area clean and rectify any damage to area at completion of work of this Section.

D. 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.

1.05 PROJECT/SITE CONDITIONS

A. Environmental Conditions-

1. Maintain temperature of paint storage area at 55 deg. F minimum.
2. Perform painting operations at temperature conditions recommended by Manufacturer for each operation.

1.06 SCHEDULING

A. Coordinate by room painting schedules with Owner.

B. Examine Contract Documents for painting requirements of other trades. Become familiar with their painting provisions and the painting of finish surfaces left unfinished by the requirements of other Sections.

C. Contractor may work in facilities during normal hours of 6 a.m. to 6 p.m., or with approval of Owner after 6 p.m.

1.07 MAINTENANCE

A. Extra Materials-

1. Provide one gallon of each finish coat material in Manufacturer's original container in each color used. Provide one gallon of each primer and of each undercoat in each color used.
2. The paint containers shall be clearly identified with the paint color number and name.

GENERAL PAINTING AND FINISHING REQUIREMENTS

PART TWO – PRODUCTS

2.01 MATERIALS

A. Manufacturer

1. All paint materials selected for coating systems for each type of surface shall be the product of a single manufacturer.
2. Primers shall be by the same manufacturer as the paint used for the final coats and shall be of the type recommended by that manufacturer for the particular application.
3. Thinners, when used, shall be only those thinners recommended for that purpose by the manufacturer of the material to be thinned.

B. Standards:

1. Sherwin-Williams
2. M.A.B.
3. Porter Paint
4. Devoe Paint

C. Linseed oil, shellac, turpentine, and other painting materials shall be pure, of highest quality, and bear identifying labels on containers.

D. Tinting color shall be best grade of type recommended by Manufacturer of paint or stain used on Project.

E. Paint compositions shall not only meet specified requirements but also contain sufficient miscellaneous components to promote proper drying and performance during and after application.

2.02 GUIDE TO APPROVED PRODUCTS

A. General: The following list of manufacturers and products is approved by the Architect for use on the project. Such a list shall serve as a guide to the quality of the types of materials to be used and shall not be construed as a basis for limiting competition.

B. Materials list:

1. Metal Primer:
 - a. Sherwin-Williams - Kemk Kromik Metal Primer
 - b. Or equal
2. Metal Finish coat:
 - a. Sherwin-Williams - Pro-Mar Alkyd
 - b. Or equal
3. Latex Wall and Ceiling Primer:
 - a. Sherwin-Williams - Pro-Mar Latex Wall Primer
 - b. Or equal
4. Semi-Gloss Finish:
 - a. Sherwin-Williams - Style Perfect Latex Semi-Gloss Enamel
 - b. Or equal
5. Flat Finish:
 - a. Sherwin-Williams - Pro-Mar 400 Latex Wall
 - b. Or equal
6. Wood Varnish:
 - a. Sherwin-Williams - S-W Oil Base Gloss Varnish
 - b. Sherwin-Williams - S-W Oil Base Satin Finish
 - c. Or equal

GENERAL PAINTING AND FINISHING REQUIREMENTS

7. Wood Stain Interior:
 - a. Sherwin-Williams - S-W Interior Wood Stain
 - b. Or equal
8. Paste Filler:
 - a. Sherwin-Williams - S-W Paste Wood Filler
 - b. Or equal
9. Galvanized Metal Primer:
 - a. Sherwin-Williams - S-W Galvanized Iron Primer
 - b. Or equal
10. Galvanized Metal Finish Coat:
 - a. Sherwin-Williams - Pro-Mar Alkyd Semi-Gloss Enamel
 - b. Or equal

C. Finish color as Scheduled or selected by Owner

PART THREE – EXECUTION

3.01 INSPECTION

- A. 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.
- B. Verify that paint finishes may be applied in strict accordance with all pertinent codes and regulations and the requirements of these specifications is complete to the point where this installation may properly commence.
- C. Prior to installation of work of this Section, inspect spaces to verify that spaces are ready for commencing painting.
- D. In the event of discrepancy, immediately notify the Architect. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.
- E. If inspection reveals deficiencies in work areas such that painting cannot be successfully completed, for not proceed with work of this Section in area of deficiency until resolved.
- F. Starting painting work will be construed as acceptance of surfaces and conditions within any particular area.

3.02 PREPARATION OF SURFACES, GENERAL

- A. Protection: Prior to all surface preparation and painting operations, completely mask, remove, or otherwise adequately protect all hardware, accessories, machined surfaces, nameplates, U.L. labels lighting fixtures, and similar items in contact with painted surfaces but not scheduled to receive paint.
- B. Smoothing: Unless specifically noted to be left rough, smooth all finished wood surfaces exposed to view, using the proper sandpaper.
- C. Dryness: Unless specifically approved by the Architect, do not proceed with the painting of wood surfaces until the moisture content of the wood is 12% or less.
- D. Surfaces to be painted shall be clean and free of loose dirt. Clean and dust surfaces before painting or finishing.
- E. Do no exterior painting while surface is damp, unless recommended by Manufacturer, nor during rainy or frosty weather. Interior surfaces shall be dry before painting.
- F. Apply barrier coats over incompatible primers.

GENERAL PAINTING AND FINISHING REQUIREMENTS

- G. Remove hardware, electrical device covers, lighting fixtures, and similar in place work or provide surface applied protection prior to surface preparation and painting. After completion of painting, reinstall any removed work.
- H. Fill holes and cracks in surfaces to receive paint or stain.

3.03 PREPARATION OF METAL SURFACES**A. Galvanized Metal:**

1. Clean all surfaces thoroughly with solvent until they are completely free from dirt, oil, and grease.
2. Thoroughly treat the cleaned surface with phosphoric acid etch.
3. Remove all excess etching solution and allow to dry completely before application of paint.

B. Other Metals:

1. Thoroughly clean all surfaces until they are completely free from rust, dirt, oil, and grease.
2. Allow to dry thoroughly before application of paint.

3.04 PREPARATION OF GYPSUM DRYWALL

- A. Remove dirt, dust, and other foreign matter. Smooth all apparent deposits of spackling compound, taking care not to damage the paper cover of the gypsum drywall.

3.05 PREPARATION OF WOOD SURFACES

- A. Cleaning: Clean all wood surfaces until they are free from dirt, oil, and all other foreign substance.

B. Knots:

1. On small, dry, seasoned knots, thoroughly scrape and clean the surface and apply one coat of good quality knot-sealer before application of the priming coat.
2. On large, open, unseasoned knots, scrape off all pitch and thoroughly clean the area, followed by an application of one coat of good quality knot-sealer.
3. Remove and treat all pitch surface as required for large knots.

- C. Dryness: Unless specifically approved by the Architect, do not proceed with the painting of wood surfaces until the moisture content of the wood is 12% or less.

3.06 PREPARATION OF MASONRY SURFACES

- A. Cleaning: Cleaning all masonry surfaces until they are free from dirt, oil, and all other foreign substances.

- B. Spot prime existing masonry as required for complete coating.

3.07 PAINT APPLICATION**A. General:**

1. Paint all surfaces except glass, copper, bronze, chromium plate, nickel, stainless steel, anodized aluminum, or monel metal except as explicitly specified.
2. and similar items not finished and not called out for as unfinished.
3. Paint all grilles and other pre-finished items where the factory finish is not in accordance with the "Painting Schedule".
4. Carefully follow Specifications and color schedule, painting complete all surfaces to be painted.
5. Spread materials smoothly and evenly.

GENERAL PAINTING AND FINISHING REQUIREMENTS

6. Putty nail holes in wood after application of first finish coat using natural colored type to match wood finish. Bring putty flush with adjoining surfaces.
 7. Finished work shall be uniform, of approved color, smooth, and free from runs, sags, defective brushing, rolling, clogging, and excessive flooding.
 8. Read color schedule for rooms before priming walls. Tint priming coat and undercoat to approximate shade of final coat, but with enough difference so it is possible to check application of specified number of coats.
 9. Touch up suction spots after application of first coat.
 10. Use fine sandpaper between coats as necessary to produce even, smooth surfaces.
 11. Paint shall be thoroughly dry and surfaces clean before applying succeeding coats.
 12. Make edges of paint adjoining other materials or colors clean, sharp, and without overlapping.
 13. All painting of mechanical piping shall be by the Mechanical Prime Contractor.
- B. Drying:
1. Allow sufficient drying time between coats.
 2. Modify the periods as recommended by the material manufacturer to suit adverse weather conditions.
 3. Oil-base and oleo-resinous solvent-type paints shall be considered dry for recoating when the paint feels firm, does not deform or feel sticky under moderate pressure of the thumb, and the application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.
- C. Environmental Conditions:
1. Comply with the Manufacturers recommendations as to environmental conditions under which the coating systems may be applied.
 2. Do not apply paint in areas where dust is being generated.
- D. Moisture Content:
1. Use a moisture meter approved by the Architect to test surfaces.
 2. Do not apply the initial coating until moisture meter reading is within limits recommended by the paint materials manufacturer.
- E. Defects: Sand and dust between coats to remove all defects visible to the unaided eye from a distance of five feet.
- F. Color of undercoats: Slightly vary the color of succeeding coats.
- 3.08 INSPECTION
- A. General: Do not apply additional coat until completed coat has been inspected and approved by the Architect.
- B. Number of coats: Only inspected and approved coats of paint will be considered in determining the number of coats applied.
- 3.09 ADJUSTMENT
- A. At completion of Project, touch up work to match specified finish. Repaint are damaged during construction with specified finish at no additional cost to Owner.
- 3.09 CLEANING UP
- A. General:
1. During progress of the work, do not allow the accumulation of empty containers or other excess items except in areas specifically set aside for that purpose.

GENERAL PAINTING AND FINISHING REQUIREMENTS

2. Remove all oily rags and waste from building each night. Take every precaution to avoid danger of fire.
 3. Prevent accidental spilling of paint materials and, in event of such spill, immediately remove all spilled material and the waste or other equipment used to clean up the spill, and wash the surfaces to their original undamaged condition, all at no additional cost to the Owner.
- B. Prior to final inspection: Upon completion of this portion of the work, visually inspect all surfaces and remove all paint and traces of paint from surfaces not scheduled to be painted.
- C. Upon completion of work of this Section, remove paint spots from floors, walls, glass, or other surfaces and leave work clean, orderly, and in acceptable condition. Remove debris caused by work of this Section from premises.

END OF SECTION 099010

GENERAL PAINTING AND FINISHING REQUIREMENTS

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TOILET ACCESSORIES

PART 1 – GENERAL

1.01 DESCRIPTION

- A. Furnish and install accessories where shown on the Drawings and specified herein. Work of this Section includes prefabricated framed mirrors up to and including units measuring 4'-0" wide x 6'-0" high. Fully review Drawings to confirm items located in restrooms and other areas.

1.02 SUBMITTALS

- A. Submit product literature to the Architect for approval in accordance with Section 01 32 00 of these specifications.

1.03 PRODUCT HANDLING

- A. Packaging:
 - 1. Furnish all accessories and concealed mounting devices with each unit clearly marked or numbered in accordance with the schedule.
 - 2. Pack each item complete with all necessary pieces of fasteners.
 - 3. Properly wrap and cushion each item to prevent scratches during delivery and storage.
- B. Delivery, Storage and Handling:
 - 1. Deliver all accessories to the installers in a timely manner to ensure orderly progress of the total work.
 - 2. Deliver items in manufacturer's original unopened protective packaging.
 - 3. Store materials in original protective packaging to prevent physical damage, or wetting.
 - 4. Handle so as to prevent damage to finished surfaces.
 - 5. Maintain protective covers on all units until installation is complete. Remove covers at final clean-up of installation.
- C. Coordination:
 - 1. Provide all information as requested by other trades so that they may provide cutouts and blocking that occur in their work for the installation of the accessories.

PART 2 – PRODUCTS

2.01 ACCESSORIES

- A. Accessory items listed hereinafter are intended to be manufacturer's current standard catalog items of institutional design and construction and are scheduled on the drawings as enumerated herein:
 - 1. Prefabricated, Framed Mirrors
 - a. Manufacturer: Bobrick Washroom Equipment, Inc. or approved equal.
 - b. Model: B-290 (See drawings for mirror size)
 - c. Material: No. 1 quality 1/4" polished plate glass mirror with stainless steel channel frame. Concealed hangers for frame.
 - d. Finish: Bright polished (frame)
 - 2. Grab Bars
 - a. Manufacturer: Bobrick Washroom Equipment, Inc. or approved equal.
 - b. Model: B-5806 x 42"
 - c. Material: Type 304, 18 gauge, Stainless Steel
 - d. Finish: Satin
 - d. Every stall sized for accessibility by the disabled shall be provided with grab bars in

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TOILET ACCESSORIES

compliance with A.D.A. Title III Design Guidelines.

3. Sanitary Napkin-Tampon Disposal: Provide Disposal Unit for every Women's stall
 - a. Manufacturer: Rubbermaid (no substitutions ISU Standard)
 - b. Model: 6140
 - c. Material: plastic
 - d. Color: white
 - e. Supplier – abc
4. Waste Receptacle (verify use on this Project):
 - a. Manufacturer: Impact Products (no substitution ISU Standard).
 - b. Model: 7703 (41 quart)
 - c. Material: plastic
 - d. Color: grey
 - e. Supplier – abc
5. Toilet Paper Holders
 - a. Twin Roll Jumbo (2-9" Jumbo):
 1. Manufacturer: Prime Source (no substitution ISU Standard).
 2. Model: #34017742100
 3. Color: Translucent Black
 4. Supplier – abc
 - b. Single Roll Jumbo (1-9" Jumbo)
 1. Manufacturer: Spring Grove (no substitution ISU Standard).
 2. Model: #330SPG442789
 3. Color: Translucent Black
 4. Supplier – abc
6. Paper Towel Dispenser
 - a. Manufacturer: Scott (no other substitution ISU Standard).
 - b. Model: #46253-00
 - c. Color: Smoke Plastic
 - d. Supplier – Staples
7. Foam Soap Dispenser
 - a. Manufacturer: GoJo (no substitution ISU Standard)
 - b. Model: 957836 (Staples #) Foam hand soap
 - c. Color: ADX12 Chrome/Black Plastic
 - d. Supplier – Staples

PART 3 – EXECUTION

3.01 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 accessories may be installed in accordance with the original design, all pertinent codes and regulations, and the referenced standards.

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TOILET ACCESSORIES

3. Verify spacing of plumbing fixtures and toilet partitions that affect installation of accessories.
- B. Discrepancies:
 1. In the event of discrepancy, immediately notify the Architect/Owner.
 2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.
- 3.02 INSTALLATION
 - A. Anchor all accessories rigidly and securely in place so that accessories are level, plumb, and true-to-line. Fit tightly to surfaces to which they are attached. Use mounting techniques in accordance with the appropriate manufacturer's instruction. Conceal anchorage wherever possible.
 - B. Install manufacturers recommended anchor system for all grab bars.
 - C. Conceal evidence of drilling, cutting and fitting on adjacent finishes.
 - D. Fit flanges of accessories snug to wall surfaces. Provide for caulking in gaps between 90 degree return flanges and finish wall surface after accessories are installed.
- 3.03 COMPLETION OF WORK
 - A. Repair or remove and replace all defective or damaged materials and equipment to the satisfaction of the Architect and at no additional cost to the Owner.
 - B. Adjust accessories for proper operation.
 - C. Clean and polish exposed surfaces prior to final inspection.
 - D. Deliver accessories schedule, keys and parts manual as part of project close-out documents. For Owner's permanent records, provide two sets of the following items of manufacturer's literature:
 1. Technical data sheets of each item used for the project.
 2. Service and parts manuals.
 3. Name of local representative to be contacted in the event of need of field service consultation.

END OF SECTION 10 28 13

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TOILET ACCESSORIES

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SOLID SURFACE FABRICATIONS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including general and supplementary conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes the following horizontal and trim solid surface product types:

1. Countertops with sinks
2. Laboratory countertops
3. Lavatory tops with undermount bowls
4. Lavatory tops with integral bowls
5. Reception areas/nurses stations
6. Vanity tops
7. Tabletops
8. Bar tops
9. Seats
10. Cold cafeteria surfaces
11. Hot cafeteria surfaces
12. Windowsills
13. Thermoforming
14. Cove backsplashes
15. Color inlays

- B. Related Sections include the following:

1. Division 05 Section "Metal Fabrications" for Blocking.
2. Division 06 Section "Rough Carpentry" for Blocking.
3. Division 09 Section "Wall Cladding."
4. Division 10 Section "Toilet Partitions."
5. Division 21 Section "Plumbing Fixtures."
6. Division 26 Section "Wiring Devices."

- C. Alternates:

1. Refer to Division 01 Section "Summary of Work" for description of work in this Section affected by alternates if any.

1.03 DEFINITION

- A. Solid surface is defined as nonporous, homogeneous material maintaining the same composition throughout the part with a composition of acrylic polymer, aluminum trihydrate filler and pigment.

1.04 SUBMITTALS

- A. Product data:

1. For each type of product indicated.
2. Product data for the following:
 - a. Chemical-resistant tops

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SOLID SURFACE FABRICATIONS

- B. Shop drawings:
 - 1. Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices and other components.
 - a. Show full-size details, edge details, thermoforming requirements, attachments, etc.
 - b. Show locations and sizes of furring, blocking, including concealed blocking and reinforcement specified in other Sections.
 - c. Show locations and sizes of cutouts and holes for plumbing fixtures, faucets, soap dispensers, waste receptacle and other items installed in solid surface.
- C. Samples:
 - 1. For each type of product indicated.
 - a. Submit minimum 6-inch by 6-inch sample in specified gloss.
 - b. Cut sample and seam together for representation of inconspicuous seam.
 - c. Indicate full range of color and pattern variation.
 - 2. Approved samples will be retained as a standard for work.
- D. Product data:
 - 1. Indicate product description, fabrication information and compliance with specified performance requirements.
- E. LEED submittals:
 - 1. Credit EQ 4.1:
 - a. Manufacturer's product data for installation adhesives, including printed statement of VOC content and material safety data sheets.
 - 2. Credits MR 5.1:
 - a. Product data indicating that materials are regionally manufactured and within 500 miles of the project site.
- F. Product certificates:
 - 1. For each type of product, signed by product manufacturer.
- G. Fabricator/installer qualifications:
 - 1. Provide copy of certification number.
- H. Manufacturer certificates:
 - 1. Signed by manufacturers certifying that they comply with requirements.
- I. NSF/ANSI standards:
 - 1. Refer to www.nsf.org for the latest compliance to NSF/ANSI Standard 51 for food zone — all food types.
- J. Maintenance data:
 - 1. Submit manufacturer's care and maintenance data, including repair and cleaning instructions.
 - a. Maintenance kit for finishes shall be submitted.
 - 2. Include in project closeout documents.

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SOLID SURFACE FABRICATIONS

1.05 QUALITY ASSURANCE

A. Qualifications:

1. Shop that employs skilled workers who custom fabricate products similar to those required for this project and whose products have a record of successful in-service performance.

B. Fabricator/installer qualifications:

1. Work of this section shall be by a certified fabricator/installer, certified in writing by the manufacturer.

C. Applicable standards:

1. Standards of the following, as referenced herein:
 - a. American National Standards Institute (ANSI)
 - b. American Society for Testing and Materials (ASTM)
 - c. National Electrical Manufacturers Association (NEMA)
 - d. NSF International
2. Fire test response characteristics:
 - a. Provide with the following Class A (Class I) surface burning characteristics as determined by testing identical products per UL 723 (ASTM E84) or another testing and inspecting agency acceptable to authorities having jurisdiction:
 - 1) Flame Spread Index: 25 or less.
 - 2) Smoke Developed Index: 450 or less.

D. Coordination drawings:

1. Shall be prepared indicating:
 - a. Plumbing work.
 - b. Electrical work.
 - c. Miscellaneous steel for the general work.
 - d. Indicate location of all walls (rated and non-rated), blocking locations and recessed wall items, etc.
2. Content:
 - a. Project-specific information, drawn accurately to scale.
 - b. Do not base coordination drawings on reproductions of the contract documents or standard printed data.
 - c. Indicate dimensions shown on the contract drawings and make specific note of dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements.
 - d. Provide alternate sketches to designer for resolution of such conflicts.
 - 1) Minor dimension changes and difficult installations will not be considered changes to the contract.

E. Drawings shall:

1. Be produced in 1/2-inch scale for all fabricated items.

F. Drawings must be complete and submitted to the architect within 60 days after award of contract for record only.

1. No review or approval will be forthcoming.

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SOLID SURFACE FABRICATIONS

2. Coordination drawings are required for the benefit of contractor's fabricators/installers as an aid to coordination of their work so as to eliminate or reduce conflicts that may arise during the installation of their work.
- G. Pre-installation conference:
 1. Conduct conference at project site to comply with requirements in Division 1.
- 1.06 DELIVERY, STORAGE AND HANDLING
 - A. Deliver no components to project site until areas are ready for installation.
 - B. Store components indoors prior to installation.
 - C. Handle materials to prevent damage to finished surfaces.
 1. Provide protective coverings to prevent physical damage or staining following installation for duration of project.
- 1.07 WARRANTY
 - A. Provide manufacturer's warranty against defects in materials.
 1. Warranty shall provide material and labor to repair or replace defective materials.
 2. Damage caused by physical or chemical abuse or damage from excessive heat will not be warranted.
 - B. Optional Installed Warranty:
 1. To qualify for the optional Installed Warranty, fabrication and installation must be performed by a DuPont Certified Fabrication/Installation source who will provide a brand plate for the application.
 2. This warranty covers all fabrication and installation performed by the certified/approved source subject to the specific wording contained in the Installed Warranty Card.
 - C. Manufacturer's warranty period:
 1. Ten years from date of substantial completion.
- 1.08 MAINTENANCE
 - A. Provide maintenance requirements as specified by the manufacturer.

PART 2 – PRODUCTS

- 2.01 MANUFACTURERS
 - A. Manufacturers:
 1. Subject to compliance with requirements, provide products by one of the following:
 - a. Corian® surfaces from the DuPont company (basis of design).
 - b. All others must submit prior to Bidding for approval
- 2.02 MATERIALS
 - A. Solid polymer components
 1. Cast, nonporous, filled polymer, not coated, laminated or of composite construction with through body colors meeting ANSI Z124.3 or ANSI Z124.6, having minimum physical and performance properties specified.
 2. Superficial damage to a depth of 0.010 inch (.25 mm) shall be repairable by sanding and/or polishing.

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SOLID SURFACE FABRICATIONS

B. Thickness:

1. 1/4 inch
2. 1/2 inch
3. 3/4 inch

C. Edge treatment:

1. 1/4-inch round edge

D. Performance characteristics:

Property	Typical Result	Test
Tensile Strength	6,000 psi	ASTM D 638
Tensile Modulus	1.5 x 10 ⁶ psi	ASTM D 638
Tensile Elongation	0.4% min.	ASTM D 638
Flexural Strength	10,000 psi	ASTM D 790
Flexural Modulus	1.2 x 10 ⁶ psi	ASTM D 790
Hardness	>85 Rockwell "M" Scale 56 Barcol Impressor	ASTM D 785 ASTM D 2583
Thermal Expansion	1.80 x 10 ⁻⁵ in./in./°F	ASTM D 696
Gloss (60° Gardner)	5–75 (matte—highly polished)	ANSI Z124
Light Resistance	(Xenon Arc) No effect	NEMA LD 3-2000 Method 3.3
Wear and Cleanability	Passes	ANSI Z124.3 & Z124.6
Stain Resistance: Sheets	Passes	ANSI Z124.3 & Z124.6
Fungus and Bacteria Resistance	Does not support microbial growth	ASTM G21&G22
Boiling Water Resistance	No visible change	NEMA LD 3-2000 Method 3.5
High Temperature Resistance	No change	NEMA LD 3-2000 Method 3.6
Izod Impact	0.28 ft.-lbs./in. of notch (Notched Specimen)	ASTM D 256 (Method A)
Ball Impact Resistance: Sheets	No fracture—1/2 lb. ball: 1/4" slab—36" drop 1/2" slab—144" drop	NEMA LD 3-2000 Method 3.8
Weatherability	ΔE* ₉₄ <5 in 1,000 hrs.	ASTM G 155
Toxicity	99 (solid colors) 66 (patterned colors)	Pittsburgh Protocol Test ("LC50" Test)
Flammability Flame Spread Index Smoke Developed Index	All colors (Class I and Class A) <25 <25	ASTM E 84, NFPA 255 & UL723

Shapes meet or exceed the ANSI Z124.3 and ANSI Z124.6 standards for plastic sinks and lavatories. NEMA results based on the NEMA LD 3-2000

2.03 ACCESSORIES

A. Joint adhesive:

1. Manufacturer's standard one- or two-part adhesive kit to create inconspicuous, nonporous joints.

B. Sealant:

1. Manufacturer's standard mildew-resistant, FDA-compliant, NSF 51-compliant (food zone — any type), UL-listed silicone sealant in colors matching components.

2.04 FACTORY FABRICATION

A. Shop assembly

1. Fabricate components to greatest extent practical to sizes and shapes indicated, in accordance with approved shop drawings and manufacturer's printed instructions and technical bulletins.
2. Form joints between components using manufacturer's standard joint adhesive without conspicuous joints.
 - a. Reinforce with strip of solid polymer material, 2" wide.
3. Provide factory cutouts for plumbing fittings and bath accessories as indicated on the drawings.
4. Rout and finish component edges with clean, sharp returns.
 - a. Rout cutouts, radii and contours to template.
 - b. Smooth edges.
 - c. Repair or reject defective and inaccurate work.

B. Thermoforming:

1. Comply with manufacturer's data.
2. Heat entire component.
 - a. Material shall be uniform, between 275 and 325 degrees Fahrenheit during forming.
3. Form pieces to shape prior to seaming and joining.
4. Cut pieces to finished dimensions.
5. Sand edges and remove nicks and scratches.

2.05 FINISHES

A. Color (selected from Manufacturer's standard color chart):

1. Oceanic

B. Finish:

1. Provide surfaces with a uniform finish.
 - a. Matte; gloss range of 5–20.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Examine substrates and conditions, with fabricator present for compliance with requirements for installation tolerances and other conditions affecting performance of work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Install components plumb, level and rigid, scribed to adjacent finishes, in accordance with approved shop drawings and product data.
 1. Provide product in the largest pieces available.
 2. Form field joints using manufacturer's recommended adhesive, with joints inconspicuous in finished work. Exposed joints/seams shall not be allowed.
 3. Reinforce field joints with solid surface strips extending a minimum of 1 inch on either side of the seam with the strip being the same thickness as the top.

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SOLID SURFACE FABRICATIONS

4. Cut and finish component edges with clean, sharp returns.
 5. Rout radii and contours to template.
 6. Anchor securely to base cabinets or other supports.
 7. Align adjacent countertops and form seams to comply with manufacturer's written recommendations using adhesive in color to match countertop.
 8. Carefully dress joints smooth, remove surface scratches and clean entire surface.
 9. Install countertops with no more than 1/8-inch (3 mm) sag, bow or other variation from a straight line.
- B. Coved backsplashes and applied sidesplashes:
1. Install applied sidesplashes using manufacturer's standard color-matched silicone sealant.
 2. Adhere applied sidesplashes to countertops using manufacturer's standard color-matched silicone sealant.
 3. Adhere to countertops using manufacturer's standard color-matched Joint Adhesive.
- 3.03 REPAIR
- A. Repair or replace damaged work which cannot be repaired to architect's satisfaction.
- 3.04 CLEANING AND PROTECTION
- A. Keep components clean during installation.
- B. Remove adhesives, sealants and other stains.

END OF SECTION 12 36 53

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22 05 00
COMMON WORK RESULTS FOR PLUMBING

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes, but is not limited to, following basic provisions, materials, and methods common to various plumbing work, to complement other Division 22 Sections and govern respective Division 22 work, where applicable, the same as if repeated in respective Sections:
 - 1. Quality Assurance requirements.
 - 2. Equipment Selection requirements.
 - 3. Delivery, Storage, and Handling requirements.
 - 4. Sequencing and Scheduling requirements.
 - 5. Method of listing and referencing Acceptable Manufacturers.
 - 6. No shrink grout for equipment installations.
 - 7. Rough-In and Installation requirements common to equipment and systems.
 - 8. Field-fabrication of metal and wood equipment supports.
 - 9. Cutting and patching requirements.
 - 10. Fire stopping coordination requirements (Complement to Division 07) and/or NFPA.
- B. Other basic mechanical materials and methods which complement this Section and govern respective Division 22 work are specified in respective complementary Sections immediately following this Section and in Sections designated "General". Refer to Project Manual "Table of Contents" for respective Section numbers and titles.
- C. Particular products and systems are specified in respective Sections. Refer to Project Manual "Table of Contents" for respective Section numbers and titles.

1.02 DEFINITIONS

- A. Concealed Exterior Installations: Concealed from view and protected from weather conditions and physical contact by building occupants, but subject to outdoor ambient temperatures. Examples include installations within unheated shelters.
- B. Concealed Interior Installations: Concealed from view and protected from physical contact by building occupants. Examples include above ceilings and in duct shafts.
- C. Exposed Exterior Installations: Exposed to view outdoors and subject to outdoor ambient temperatures and weather conditions. Examples include rooftop locations, outdoors on grade, attached to exterior building walls etc.
- D. Exposed Interior Installations: Exposed to view indoors. Examples include finished occupied spaces and mechanical equipment rooms.
- E. Finished Spaces: Spaces other than mechanical and electrical equipment rooms, furred spaces, pipe and duct shafts, unheated spaces immediately below the roof, spaces above ceilings, unexcavated spaces, crawl spaces, and tunnels.
- F. Installer: Respective tradesperson or subcontractor responsible for respective work.
- G. Supplier: Respective manufacturer or his authorized distributor or representative.

1.03 SUBMITTALS, GENERAL

- A. Submit prescribed submittal items for materials and products to be installed on this Project, when requested and as called for in respective Section or on Drawings and when space or sequencing coordination is required.

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COMMON WORK RESULTS FOR PLUMBING

1.04 QUALITY ASSURANCE, GENERAL

- A. Quality assurance requirements for mechanical work are included in "Quality Assurance, Basic Provisions" and complimented for particular work in respective product and system Sections.
- B. Prior to ordering and rough-in, coordinate mounting, fit, trim, etc., of respective furnished items with design and construction of adjoining equipment and construction. Take special care to coordinate design of trim, flanges, attachments, etc., with related construction.

1.05 EQUIPMENT SELECTION AND SUITABILITY

- A. Following provisions complement requirements of respective Sections in Division 1 which govern material and equipment selection.
- B. Product Substitutions: Governed by "Substitutions" in "Instructions to Bidders". Burden of proof of equality of products is on the Contractor.
- C. Drawings indicate capacities, sizes, and dimensional requirements of system components. Equipment, specialties, and accessories are based on specific types, manufacturers, and models indicated. Components having equal performance characteristics that deviate from indicated size and dimensions may be considered provided deviations do not change the design concept or intended performance as judged by A/E/D.
- D. Mention of a specific product, by name or model number, in Contract Documents does not negate requirements for that particular product to meet physical and performance criteria set forth in the Contract Documents.
 - 1. References to specific products are to establish general design and a level of quality.
 - 2. Furnished products shall possess all required features and be coordinated with conditions affecting the work.
 - 3. Actual rough-in and connection requirements and locations for referenced items may not be the same as the typical arrangements represented on Drawings. Equipment rough-in and connections are subject to manufacturer's standards for items furnished. Piping, conduit, wiring, etc., shall be coordinated with furnished products and installed accordingly, without added cost to Owner.
- D. Equipment of greater or larger power, dimensions, capacities, and ratings may be furnished provided such proposed equipment is approved in writing and connecting mechanical and electrical facilities (services, circuit breakers, conduit, motors, bases, equipment spaces, etc.) are increased. No additional costs will be approved for these increases, if larger equipment is approved. If equipment minimum energy ratings or efficiencies are specified, furnished equipment must meet specified design requirements and commissioning requirements.

1.06 DELIVERY, STORAGE, AND HANDLING, GENERAL

- A. Deliver products to site and properly store and protect under applicable provisions of Division One, requirements herein, and requirements in respective product and system Sections.
 - 1. Properly identify products on outside of container with names, model numbers, types, grades, compliance labels, and other information needed for identification. Include project name, drawing reference designation, room number, etc. to aid distribution at job site.
- B. Schedule deliveries, coordinated with construction progress, so that materials will be available when needed. When possible, schedule deliveries of large equipment items for a time when respective items can be moved directly into installation location from delivery vehicle, thereby avoiding storage on site.
- C. Handle products, components, and accessories carefully to prevent damage. Comply with respective manufacturer's rigging and installation instructions for unloading and moving products. Do not install damaged items; replace with new.

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COMMON WORK RESULTS FOR PLUMBING

- D. Store products in original container, protective wrap, etc. and protect from weather and construction work traffic. Where possible, store indoors; when necessary to store outdoors, store above grade and enclose with weatherproof wrapping.

1.07 SEQUENCING AND SCHEDULING, GENERAL

- A. Coordinate installation of mechanical equipment, materials, and systems with other building components and construction progress.
- B. Arrange for chases, slots, and openings in building structure during progress of construction, to allow for mechanical installations.
- C. Coordinate respective installation provisions, as applicable:
 - 1. Sleeves and inserts in poured-in-place concrete, etc.
 - 2. Layout of supports and roof penetrations for roof mounted work.
 - 3. Size and location of concrete equipment bases.
 - 4. Rough-in of piping and electrical provisions for equipment.
- E. Sequence, coordinate, and integrate installation of mechanical materials and equipment for efficient flow of the Work. Coordinate installation of large equipment requiring positioning prior to closing in the building.
- F. Coordinate connection of mechanical systems with exterior utilities and services. Comply with requirements of governing regulations, franchised service companies, and controlling agencies.

PART 2 – PRODUCTS

2.01 MANUFACTURERS, GENERAL

- A. Subject to compliance and requirements, manufacturers offering products that may be incorporated in the work including but not limited to manufacturers included in respective Contract Documents in one of the following forms:
 - 1. Named (Referenced) Products: Where proprietary names, names of particular manufacturers or vendors and catalog/model numbers, etc. are referenced in Specifications, on Drawings, etc.; specific item referenced shall be understood as establishing general type, function, approximate dimensions, appearance, and quality desired. Products furnished shall be configured and equipped, with alterations when and as required, to provide all features and functions specified or shown and to conform to all conditions effecting incorporation of the product into the work.
 - a. Actual manufacturer's ordering numbers denoting configuration, features, capacities, etc. specified or required shall be determined by Contractor and supplier, through comparison of respective manufacturer's specifications and options with Project Specifications and Drawings (schedules, notes, details, etc.), job conditions, and applicable codes and regulations.
 - 2. Listed (Acceptable) Manufacturers: Manufacturers listed as "acceptable" in specifications are believed to have the ability to manufacture products which are equivalent to the product described and referenced (named) in respective Specifications or on Drawings. Contractor has the option to furnish products that are manufactured by one of the listed acceptable manufactures provided that products furnished comply with respective product specifications and are suitable for the application and intent of design.
- B. Subject to compliance with requirements, manufacturers not referenced or listed in Specifications or on Drawings who offer products equivalent to referenced products may be acceptable if proposed substitution is requested ten (10) working days prior to bidding and approved in compliance with provisions of "Substitutions" in "Instructions to Bidders".

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COMMON WORK RESULTS FOR PLUMBING

2.02 GROUT

- A. Non-shrink, Non-metallic Grout: ASTM C 1107, Grade B.
- B. Characteristics: Post-hardening, volume adjusting, dry, hydraulic -cement grout, non-staining, non-corrosive, non-gaseous, and recommended for interior and exterior applications, design mix to be 5000 PSI, 28-day compressive strength with premixed factory packaged.

2.03 PLUMBING VENT FLASHING

- A. Vent flashing shall be fabricated from four (4) lb. lead sheet.
- B. Pre-formed rubber boot flashing

2.04 THERMOSTATIC MIXING VALVES (TMV)

- A. Provide in location shown or required on each water system.
 - 1. TMV must have integral check valves, stop valves, strainer and adjustable temperature settings, 2" diameter thermometer in discharge line and same size as service line valved by pass all mounted inside a surface mounted cabinet as manufactured by Lawler series 800.

2.05 REDUCED PRESSURE BACKFLOW PREVENTER (BFP)

- A. Provide as required by the serving utility and or code on the main building service and at any point of water connection to mechanical or other equipment.
 - 1. BFP is to be bronze construction with stainless steel internal parts, bronze strainer, shut-off isolation valves, test cocks, and pressure differential relief valve located between two positive seating check valves as manufactured by Watts series 909 with USC approval for cross connection control.
 - 2. Install BFP with unions for easy removal all over a stainless steel drain pan with a ¾" line to a floor drain.

2.06 WALL HYDRANTS

- A. Provide where shown on the drawings
 - 1. Recessed box with locking bronze chrome plated cover
 - 2. Hose connection, vacuum breaker and "T" handle operator
 - 3. Acceptable Manufacturers: Smith 5509 or equal by Wade or Woodford.
 - a. Cast iron body with flashing clamp
 - b. Cast iron strainer hinged with sediment bucket
 - c. Acceptable Manufacturers: JR Smith 2415 with 4595 P-trap and 4103 cleanout or approved equal by Wade, Watts or Zurn or as specified on drawings.

PART 3 – EXECUTION

3.01 CORRELATION OF WORK WITH DRAWING AND SPECIFICATION DISPARITY

- A. If specifications for a particular product, process, material, or installation differ from representations on Drawings, respective product, material, or process utilized shall comply with the more comprehensive quality and quantity requirements and the more restrictive limits, unless directed otherwise by A/E/D.
 - 1. Verify governing requirements for respective installation with A/E/D prior to ordering respective product or performing respective work.
- B. Work which meets the less comprehensive requirements or the less restrictive limits may be provided for an installation if both of the following two (2) conditions are met:

COMMON WORK RESULTS FOR PLUMBING

1. A/E/D shall have determined that the more comprehensive requirements or the more restrictive limits are not required for the particular installation and confirmed the determination in writing.
2. Contractor shall give Owner a credit for the cost difference, if any, between the subject variant material or method requirements; credited by change order or other acceptable means.

3.02 EXAMINATION, GENERAL

- A. Examine areas and conditions under which work is to be installed. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to Installer.

3.03 ROUGH-IN, GENERAL

- A. Verify required rough-in nature, size, and locations for actual equipment to be connected and coordinate field measurements. Respective rough-in provisions are specified in respective equipment and system Sections and indicated necessary on Drawings.

3.04 PLUMBING INSTALLATIONS, GENERAL

- A. All work must be adequately supported and secured in place and performed in a craftsman like manner adjudged by the A/E/D and by using acceptable approved hardware, hangers, carriers etc. designed and appropriate for the respective installation.
- B. Adjust all operating parts and packing nuts of valves, faucets, etc. to operate freely without any leakage and adjust all manual and automatic flush valves and faucets for correct operation.
- C. Adjust all pop up waste stops to close effectively and retain water in bowl and adjust all flow and temperature regulators to required flow rates and operating ranges.
- D. Sequence, coordinate, and integrate the various elements of mechanical systems, materials, and equipment.
 1. Coordinate mechanical systems, equipment, and materials installation with other building components. Verify all dimensions by field measurements.
 2. Arrange for chases, slots, and openings in other building components during progress of construction, to allow for mechanical installations. Coordinate penetrations with fire stopping work.
 3. Coordinate the installation of required supporting devices and sleeves to be set in poured-in-place concrete and other structural components, as they are constructed.
 4. Sequence, coordinate, and integrate delivery and installation of mechanical materials and equipment for efficient flow of the work. Give particular attention to large equipment requiring positioning prior to closing in the building.
- E. Work shall be performed by fully qualified respective trade craft-persons skilled in execution of the respective tasks; following industry standard practices, in compliance with applicable codes, regulations, specified methods and procedures, and respective manufacturer's instructions.
- F. All systems and equipment shall be installed complete and fully operable, unless specifically instructed otherwise for a particular system or item.
 1. Provide appropriate automatic control devices compatible with existing controls and systems, installed and arranged as required to operate and sequence respective equipment and systems to maintain intended conditions.
 2. Provide proper type and capacity safety and relief devices, installed where required, in compliance with applicable codes and regulations.

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COMMON WORK RESULTS FOR PLUMBING

3. Provide appropriate interface devices (valves, unions, stops, arresters, vacuum breakers, traps, expansion and contraction devices etc., strainers) and fittings, installed at each piping termination (plumbing fixture, item of equipment, outlet, etc.).
 - G. Where mounting heights are not dimensioned or detailed, install systems, materials, and equipment to provide maximum possible headroom.
 - H. Install systems, materials, and equipment generally to conform to arrangements indicated by Contract Documents and approved submittal data, including coordination drawings, to greatest extent possible. Where coordination requirements conflict with individual system requirements, refer conflict to A/E/D.
 1. Install work level and plumb, parallel and perpendicular to other building systems and components where exposed in finished spaces, except where indicated otherwise. Give right-of-way priority to systems required to be installed at a specified slope.
 - I. In addition to conforming to these general provisions, install respective products and systems in compliance with provisions in respective Sections and on respective Drawings. Refer to Project Manual "Table of Contents" for respective Section numbers and titles.
 - J. Electrical Work provided as a Part of Mechanical Work: Comply with applicable requirements of Division 26.
 - K. Provide access panels or doors where concealed equipment, devices, etc., are not accessible through accessible ceiling or are not accessible by other appropriate acceptable access means.
 - L. Provide identification specified in Section "Mechanical Identification" Section 22 05 53.
- 3.05 EQUIPMENT POSITIONING AND CONNECTIONS, GENERAL
- A. Provide complete wiring and piping diagrams of each piece of equipment. Furnish diagrams to other trades involved, with all of manufacturer's requirements and recommendations included.
 - B. Where equipment piping details are not shown on Drawings, manufacturers' recommendations plus code requirements shall be considered to be minimum requirements.
 - C. Position and connect all equipment for convenient servicing. Extend grease fittings to an accessible location. Prior to final hook-up and demonstrate that there is room to remove and service all respective components (coils, burners, tube bundles, filters, pumps, motors, controls, etc.).
- 3.06 ERECTION OF METAL AND WOOD SUPPORTS AND ANCHORAGE
- A. Cut, fit, and place supports and anchorage accurately in location, alignment, and elevation; sized and arranged to adequately support and anchor respective mechanical materials and equipment. Attach to substrates as required to support applied loads. Make tight connections between members.
 - B. Metal Supports and Anchorage: Appropriate miscellaneous metal. Field welding shall comply with AWS D1.1.
 - C. Wood Supports and Anchorage: Grounds, nailers, blocking, anchorage, etc.
- 3.07 Select fastener size that will not penetrate through members where opposite side will be exposed to view or will receive finish materials. Install fasteners without splitting wood members.
- 3.08 CUTTING AND PATCHING, GENERAL
- A. Division 1 Section "Cutting and Patching" governs respective work.
 - B. Coordinate timing of mechanical work installation with related construction to eliminate the need for cutting and patching as much as possible.

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COMMON WORK RESULTS FOR PLUMBING

- C. Cut, channel, chase, and drill floors, walls, partitions, ceilings, and other surfaces necessary for mechanical installations. Skilled mechanics of the trades involved shall perform cutting. Repair cut surfaces to match material and finish of adjacent surfaces.

3.09 GROUTING

- A. Install non-metallic, no shrink, grout for mechanical equipment base bearing surfaces, pump and other equipment base plates, and anchors. Mix grout according to manufacturer's printed instructions.
- B. Clean surfaces that will come into contact with grout and provide forms for placement of grout, as required.
- C. Avoid air entrapment when placing grout and place grout completely filling equipment bases.
- D. Place grout on concrete bases to provide a smooth bearing surface for equipment.
- E. Place grout around anchors and cure placed grout according to manufacturer's printed instructions.

3.10 FIRESTOPPING

- A. Fire stopping will be performed by Mechanical Contractor or Installer responsible for Division 7 Section "Fire Stopping". Refer to "Fire Stopping" Section, if used in this manual, for requirements for fire stopping through-penetrations in fire-resistance-rated construction, smoke barriers, etc.
- B. Cooperate with Fire Stopping Installer and coordinate mechanical installation work with fire stopping materials and work. Keep Fire Stopping Installer informed of mechanical installation progress so fire stopping preparation and work may be performed in a timely manner.
- C. Arrange mechanical installations so that respective fire stopping can be installed in compliance with governing requirements. Coordinate hole sizes, locations, arrangements, sleeves, etc. with respective mechanical items and fire stopping materials and methods.

3.11 PLUMBING PIPE MATERIAL SCHEDULE

Service	Material	Joint
Gravity waste inside above ground	Cast Iron (SV or NH)	Compression gasket
	PVC Schedule 40	Primed and solvent weld
Gravity sewer outside below ground	Cast Iron (SV or NH)	Compression gasket
	PVC Schedule 40	Primed and solvent weld
Domestic Water Supply above and below ground	Type "L" copper	Brazed
Roof drains and vents	PVC Schedule 40	Primed and solvent weld
Low pressure steam supply	Steel schedule 40	screwed or welded
Low pressure steam condensate	Steel schedule 80	Screwed or welded
Heating supply and return	Type "L" copper	soldered

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COMMON WORK RESULTS FOR PLUMBING

3.12 VALVE SCHEDULE

Service	Size	Type	Joint	Reference Product
Heating/Cooling and Domestic Water	0-2"	Ball Valve	Screwed or Soldered Flanged	Crane Series 9400 Notes 1,2 & 3
Heating/Cooling and Domestic Water	2½" – Up	Butterfly Valve	Flanged	Crane Series 2200 Notes 1,2 & 3
Low Pressure Steam and Condensate	0 – 2"	Gate Valve	Screwed or Flanged	Crane 430
Low Pressure Steam and Condensate	2½" - Up	Gate Valve	Flanged	Crane 461
High Pressure Steam and Condensate	0 – 2"	Globe Valve	Screwed or Flanged	Crane 1 Nibco 211
High Pressure Steam and Condensate	2 ½" – Up	Globe Valve	Flanged	Crane 351 Nibco 718

- Notes: 1. Provide memory stop when used for balance purposes.
 2. Gate valve may be used on domestic cold water incoming service.
 3. No-lead silver solder is to be used on domestic water lines.

END OF SECTION 22 05 00

22 05 01
GENERAL PLUMBING REQUIREMENTS

PART 1 – GENERAL

1.01 SCOPE

- A. This section is coordinated with and complementary to the 22 05 00 Common Work Results for Plumbing wherever applicable to plumbing work. Where items of the General Conditions or Supplementary General Conditions are repeated in this section of the Specifications, it is intended to call particular attention to or qualify them; it is not intended that any other parts of the General Conditions or Supplementary General Conditions shall be assumed to be omitted if not repeated herein.
- B. This section applies equally and specifically to all Trades supplying labor and/or equipment, and/or materials as required under the plumbing section of the specifications.
- C. It is the intention of these plans and specifications to call for finished work, completely tested and ready for the Owner's operation. The Contractor shall submit before bidding the project a detailed description of any problems to the Bid Documents for any reason whatsoever: i.e., materials or apparatus believed unsuitable or inadequate, violation of codes, ordinances, rules or regulations, items of work omitted, incorrect service locations or condition etc. The absence of such written notice shall indicate agreement that all cost of any such required changes have been anticipated and included in the Bid.

1.02 INTERFACE

- A. Refer to drawings and specifications for other Divisions of work to determine materials and conditions of other work where Division 22 work meets or connects to such other work. Coordinate respective Division 22 work with work of other Divisions.

1.03 DEFINITIONS

- A. The following list of words is defined to amplify their meaning whenever used on the Plumbing drawings, or in Division 22 of these specifications. Those definitions supersede any other definitions, given or inferred by the General Provisions, Supplementary Conditions or any (Webster) standard definitions for usage in Division 22 only:
 - 1. Furnish - to supply (only) to another party for their use or installation, with all cost of delivery to job site.
 - 2. Install - to unload, distribute, uncrate, assemble and fix into the intended final position, the installer to provide all miscellaneous hardware required to anchor and/or support securely, clean up and dispose of rubbish.
 - 3. Connect - to bring service(s) to point of installation and make all final connections of the service(s) to the installed equipment, and provide all miscellaneous auxiliary appurtenances necessary to make operable for its intended final use.
 - 4. Provide - to furnish, install and connect operating and complete.
 - 5. The "Contractor" means specifically the Contractor and/or Subcontractor working under his respective section of the specifications.
 - 6. "Piping" includes, in addition to pipe, all fittings, valves, hangers, insulation and other accessories relating to such piping.
 - 7. "Concealed" means hidden from sight in trenches, chases, furred spaces, shafts, hung ceiling, embedded in construction, or in crawl spaces.
 - 8. "Equal" means any equipment or material which, in the opinion of the Architect/ Engineer/ Designer, is equal in quality, durability, appearance, strength, design and performance to the equipment or material specified and will function adequately in accordance with the general design.

22 05 01
GENERAL PLUMBING REQUIREMENTS

9. The General, Mechanical (Plumbing and HVAC), Electrical and Temperature Control Contractor's are referred to herein and on the drawings as G.C., M.C., E.C. and T.C.C. respectively.

10. The Architect/Engineer/Designer shall be referred to as A/E/D.

1.04 CONTRACT DOCUMENTS

- A. The accompanying drawings and these specifications are complementary each to the other and what is called for on one shall be as binding as if called for by both. The drawings being more specific with quantity, the specifications more specific with quality.
- B. This Contractor is requested and shall be held to having examined all drawings and specifications for all trades, such as Architectural, Structural, Plumbing, Electrical, Heating, Site, etc., in order to familiarize himself with the requirements of all of the trades as applied to this Contractor's work. No allowances will be made for deviations from work shown to coordinate this Contractor's work with work of other Contractors.
- C. Any doubt as to the intent of the drawings and/or specifications shall be submitted to the A/E/D in writing, requesting an interpretation. Interpretation will be by Addendum only, issued by the A/E/D. The person submitting the request will be responsible for its delivery.
- D. Under no circumstances shall any sizes be decreased or radical changes in any part of the installation be made without the written consent of the A/E/D.
- E. Elevations and grades shown on drawings are approximate only. This Contractor shall verify same on premises and shall take all measurements and determine all final elevations and be responsible for same applying to his work.

1.05 EQUIPMENT LIST AND SUBSTITUTIONS

- A. Each Bidder shall prepare a list covering typical important items of equipment involved in his portion of the Contract. A sub-contractor and material list is to be provided with the Bid. This may or may not also be in the front portion of this Specification.
- B. Certain manufactured articles specified herein are mentioned under one or more trade or manufacturer's names. These manufactured articles, as specified and detailed on drawings, shall form the basis of the Contractor's Bid. Additional products or product manufacturers will be permitted by addendum only.
- C. Articles of other manufacturers, of equivalent design, quality and capacity, as adjudged by the A/E/D will be considered no later than ten (10) working days prior to bid date. Establishing proof of the equality of the product to that specified shall be the responsibility of the bidder. Determination of equality of all products is vested in the A/E/D whose decision shall be final and binding upon all concerned. No substitutions will be allowed after the Contract is awarded.
- D. Where a Contractor proposes to use an item of equipment other than that as designed and detailed on the drawings (even though listed as an acceptable manufacturer) which requires purchase of additional and/or specific equipment, more space, or any re-design of any other part of the mechanical, electrical or architectural layout, all such re-design and all new drawings required shall be prepared by the Contractor, at his own expense. And, should this re-design require additional cost to other Contractors, this expense shall be borne by the Contractor making such changes. All changes must be approved by A/E/D. The Contractor and manufacturer and/or representative shall be responsible to coordinate physical limitations of equipment prior to bidding. No requests for extras will be allowed due to changes required by equipment substitutions.

1.06 CODES, LAWS, ORDINANCES, PERMITS AND FEES

- A. Plumbing installation shall comply with all requirements of the State Board of Health, and the Indiana Plumbing Code with all their respective amendments.

GENERAL PLUMBING REQUIREMENTS

- B. Plumbing installation shall comply with the International Mechanical Code with Indiana amendments and Indiana Plumbing Codes in effect at the time of Construction.
- C. Underground water mains and associated installations shall conform to the AWWA Standards and the National Fire Protection Association "NFPA" Pamphlet No. 24.
- D. Pipe welding shall conform to "Welding Code for Steel and Wrought Iron Pipe" of the "Heating, Piping, and Air Conditioning Contractors' National Associations."
- E. All installations shall comply with the latest editions, issues or supplements of all applicable codes, ordinances, regulations and requirements without increase in contract price. Such provision, rules, regulations and ordinances are to be considered as much a part of these specifications as if repeated herein or attached hereto. All changes or modifications required to conform to such codes, regulations, or requirements must be reviewed, the same as Shop Drawings, by the A/E/D.
- F. The Contractor shall give all necessary notices, obtain and pay all utility company bills or governmental taxes, fees for connections, water taps and other costs in connection with his work; and he shall also maintain and pay special charges, overtime, or provide any special protection, barricades, lights, personnel as may be required by the State, County, Owner or City in the performance of the contract requirements, as well as providing the necessary equipment to dig or drive and provide de-watering or shoring by any means designated so as to comply with the governing bodies' procedures.
- G. All materials furnished and all work installed shall comply with the rules and recommendations of the National Fire Protection Association, with all requirements of the local utility companies, with the recommendations of the Owner's fire insurance rating organization having jurisdiction, and with the requirements of all governmental departments having jurisdiction.
- H. This Contractor shall assume all responsibility of proper installation of services to meet all rules and regulations of the utility or governmental agent involved and pay all fees or charges required.
- E. All details shall be verified before bidding with each utility or agency and no allowances will be made in the Contract to properly or differently than detailed install any service.

1.07 SITE VERIFICATION

- A. This Contractor is directed to visit the premises and make him self thoroughly familiar with the general layout of the building site and the location of present lines to which connections shall be made. He shall also check present grades, ditches, pavements, sewers, and/or all other conditions affecting the service installations contemplated under this Contract. Such offsets as may be required to leave new work clear, etc. must be included in the Contractor's proposal, and the Contractor must assume the full responsibility for having made a proper and thorough investigation of these requirements. The contractor is to review the construction documents and visit the premises prior to bidding. Visits to the facility by the prospective contractors must be coordinated with the A/E/D.
- B. No extras will be allowed subsequently to the successful Contractor to cover any such error, omission and/or oversight on the part of the contractor for not having made a thorough inspection of the grounds, facilities, building conditions, proposed drawings etc.
- C. Contractor shall further inspect the site and see for himself the available storage space, trucking facilities for bringing materials into the building/area and must assume responsibility for receiving, unloading, storing freight, demurrage, theft and any and all other factors influencing the work under this specification.

1.08 COORDINATION OF WORK

- A. Locations of various parts of the equipment, ductwork, services and piping shown by Mechanical Plans are diagrammatic and approximately correct. Exact location shall be

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GENERAL PLUMBING REQUIREMENTS

determined on job and governed by structural conditions of the building and work of other Contractors, subject to decision of A/E/D, who reserves the right to make any reasonable change in locations indicated without extra charge to Owner.

- B. Contractor shall study and become familiar with contract drawings of other trades and A/E/D's drawings in order to obtain all necessary information in order that all interferences with work of other trades may be avoided. Cooperate with all other workmen and install work in such a way that all interferences are avoided. All work shall be installed so that all parts required are readily accessible for inspection, operation, removal, maintenance and repair.
- C. All pipe, apparatus, appliances or other items interfering with proper placement of other work, as indicated on the drawings, specified, or required, shall be removed and shall be re-located and re-connected without extra cost. All damage to other work caused by this Contractor, his Subcontractors or his workmen, by reason of neglect, accident or any cause whatsoever, shall be repaired and made good in the same manner as specified for new work of the same character.
- D. Openings and chases shall be left in new walls for this Contractor's work when so requested before general work so affected is completed. Where this Contractor has failed to make such request at proper time, he shall pay for all cutting, patching, etc., of the building required for this work.

1.09 LAYING OUT

- A. This Contractor shall take all measurements necessary for his work and shall assume responsibility for their accuracy. This Contractor shall not scale Mechanical Drawings but shall obtain all dimensions from building and the Construction Drawings unless specified herein or shown on drawings.

1.12 PROTECTION

- A. The Contractor shall be responsible for the maintenance and protection of all equipment, materials, and tools supplied by him and stored or installed on the job site from loss, theft, vandalism or damage until final acceptance by the Owner.
- B. The Contractor shall be responsible for the protection of Owner's materials and equipment, and any finished work of other trades from damage or defacement by his operations and must remedy any such injury at his own expense.
- C. Openings in exterior walls, and roofs, particularly at or below grade, shall be kept properly plugged at all times. After completion of work, openings for which the Contractor is responsible shall be permanently sealed and caulked in the manner approved by the A/E/D.

1.13 SHOP DRAWINGS

- A. Contractor shall submit a electronic copy in PDF Format of each shop drawing to A/E/D and Owner for review before commencing any work or providing materials. Review of shop drawing does not relieve contractor of correct ordering and installations. Electronic shop drawing systems may be employed and will be detailed at the on set if allowed.
- B. Drawings submitted shall bear the stamp of approval of the Contractor as evidence that the drawings have been checked by the Contractor and comply with the requirements of the contract drawings and specifications. Any drawings submitted without this stamp of approval will not be considered and will be returned to the Contractor for resubmission. If the drawings submitted show variations from the requirements of the Contract, the Contractor shall make specific mention of such variations in his letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment, otherwise, the Contractor will not be relieved of the responsibility of executing the work in accordance with the Contract even though such drawings have been reviewed.
- C. The A/E/D and Owner's reviewing of the Contractor's and Subcontractor's Drawings or Equipment Details does not relieve the Contractor from responsibility for errors, omissions, or

GENERAL PLUMBING REQUIREMENTS

equipment capacities which may exist or develop even though work is done and equipment furnished in accordance with such checked or reviewed drawings.

- D. The reviewing of Contractor's and Subcontractor's drawings or equipment details by the A/E/D is a gratuitous assistance and the A/E/D does not thereby assume responsibility for errors or omissions. Where such errors or omissions are discovered later, they shall be made good by the Contractor irrespective of any review by the A/E/D.
- E. Review by A/E/D and Owner applies only to capacity, quality, general arrangement, design and type. Approval does not apply to quantities, dimensions, connection locations and similar. In all cases, Contractors shall be responsible for furnishing the proper quantities of equipment and/or materials required, that all equipment fits the available space in satisfactory manner and that all piping, electrical and other connections are suitably located.
- F. Review by A/E/D and Owner will not modify or nullify any provisions of Contract Documents which include Drawings and Specifications, nor will approval relieve Contractor from responsibility for error, omissions and deviations from Contract Documents.

1.14 RECORD DRAWINGS

- A. The Contractor shall keep an accurate, current and progressive record of all installed work, including all changes and deviations from the design drawings. Recordings shall be made on prints kept in good condition at the job site as the work progresses and before any work is covered. Detail drawings shall be made if necessary for clarity.
- B. Recordings shall be made on prints kept in good condition at the job site as the work progresses and before any work is covered. The field drawings are to be brought to the construction progress meetings for periodic checks.
- C. Upon completion of the contract work, the Contractor shall deliver the marked-up prints to the A/E/D with a signed certification by a principal of the contracting firm, that all work was installed as shown.
- D. All labor and material costs incurred in the accomplishment of the foregoing requirements shall be borne by the Contractor. Final approval of the work and final payment shall be withheld until after receipt of the marked as built prints.

1.15 FIELD INSTRUCTIONS

- A. During construction, the A/E/D shall observe the work and give written field instructions as required without invalidating the Contract. Such field instruction shall not be construed as authority to change the terms of the Contract
- B. In cases where extra cost or reductions in cost of the Contract are involved, the Contractor shall notify the A/E/D in writing at the time of such instructions and shall establish cost difference and shall receive written approval before proceeding. The Contractor shall not be reimbursed for extra work unless this procedure has been followed.

1.16 CLEAN-UP

- A. Contractor shall remove from site, and legally dispose of, rubbish resulting from the work under his Contract. Rubbish shall be removed daily and not be allowed to accumulate. Owner has first right of salvage. Owner salvaged items shall be delivered to Owner by the Contractor at specified locations.

PART 2 – PRODUCTS

2.01 PRODUCT WARRANTY

- A. All work shall be guaranteed (parts and labor) for a period of one (1) year.
- B. Warranty shall run from written date of substantial completion of the work, not from date of installation of a device or piece of equipment, nor from any date set by the equipment supplier relative to his equipment.

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GENERAL PLUMBING REQUIREMENTS

2.02 PLUMBING REFERENCE SYMBOLS, DETAILS AND DRAWINGS

- A. Symbols used are diagrammatic are generally generic in nature.
- B. Details and Drawings are typical in nature and are subject to variations to suit specific products and project conditions and available space

PART 3 – EXECUTION

3.01 WORKMANSHIP

- A. All work is to be performed in a craftsman like manner as judged by the A/E/D and conform to the Trade Association Standard of Installation.

3.02 INSTALLATION

- A. Whenever necessary, the Contractor shall provide all bases and supports not part of the building structure, of required size, type and strength, as approved by the A/E/D for all equipment and materials furnished by him. When earthquake loads are applicable in accordance with the Building Code, mechanical system supports shall be designed and installed for the seismic forces in accordance with the Building Code. Generally all Mechanical systems are to be supported in accordance with the Mechanical Code.
- B. Escutcheons shall be installed on pipes wherever they pass through floors, ceiling, walls or partitions.
 - 1. Escutcheons for pipes passing through floors shall be split-hinged, cast-brass type, designed to fit pipe on one end and cover sleeve projecting through floor on the other end.
 - 2. Escutcheons for pipes passing through interior walls, partitions and ceilings shall be split-hinged, cast-brass, chromium-plated type.

3.03 CLEANING

- A. Piping and equipment shall be thoroughly cleaned of all foreign substance inside and out before being placed in operation.
 - 1. All piping to be flushed with water and run to drain until water leaving the pipe systems is free of all oil, dirt, and scale; and all new potable water piping shall be cleaned as installed, and in addition, domestic piping shall be sterilized, using pressure sterilization in accordance with the recommendation of the State Department of Health. See Section 22 11 17 Disinfection of Domestic Water Piping.
 - 2. Hydronic systems are to be flushed free of dirt, oil, scale and waste etc. with water. Run water to waste until it runs clear.
 - 3. Domestic water systems are to be sterilized as specified in Section 22 11 17 Disinfection of Domestic Water Piping.
- B. All pipe strainers are to be cleaned prior to testing and balancing and cleaned again just prior to turning project over to Owner. Remove screens, clean screens and interior of strainer bodies and reinstall screens
- C. All equipment and premises are to be thoroughly cleaned.

3.04 RESPONSIBILITIES

- A. The Prime Contractor shall be responsible to coordinate with his subcontractors and to pursue all job problems concerning repair, replacement or proper operation of all systems.
- B. It shall be the Contractor's responsibility to determine, in conjunction with the A/E/D if required, the source of any problems and obtain solution and correction of same with all expediency.

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GENERAL PLUMBING REQUIREMENTS

3.05 EQUIPMENT ACCESSIBILITY AND SPACE COORDINATION AND PER-BID VERIFICATION REQUIREMENTS

- A. Physical size and arrangement of proposed equipment and apparatus must be suitable for the space available. Maintain required clearances and allow space for proper maintenance and placing in the facility and removing from the facility.
 - 1. Prior to bidding project each Contractor and equipment representative must review the installation, arrangement, space available and verify that the proposed installation will retain required clearance and maintain accessibility. Maintenance space must be demonstrated by Contractor.
 - 2. Any deviations required to accommodate equipment etc. must be coordinated by Contractor with A/E/D before bids are accepted on the project. After bids are accepted such work will be part of the Contractor's work and will add no additional expense to the project.
- B. Contractor is responsible for furnishing equipment which is suitable for the space available and must bear the costs for all modifications to his work and the work of others required to accommodate his equipment both the installing and moving into place.

3.06 EQUIPMENT SERVICE AND CONNECTION REQUIREMENTS COORDINATION AND PRE-BID VERIFICATION REQUIREMENTS

- A. Service and connection requirements of proposed equipment and apparatus must be compatible with the respective services available as required to accommodate the intent of the design.
- B. Mechanical and electrical service connection requirements of a manufacturer's equipment, even if listed as acceptable, may not be the same as the requirements as the product specified or shown on the construction drawings. Contractor is to make adjustments as required. All connections are to be made complete to accommodate the intent of the design.
 - 1. Prior to bidding the project, each bidding Contractor and respective equipment manufacturer's representative must review the installation arrangement and mechanical and electrical service connections indicated on the Construction Drawings and verify that installation of the proposed equipment will be compatible with the Construction Drawing's, available space and actual conditions.
- C. The Contractor is responsible for furnishing equipment etc. which is suitable for the existing or proposed space and services. The Contractor must bear the costs for all modifications to his work and the work of others required to accommodate equipment furnished by the Contractor.

3.07 MARKING UNDERGROUND UTILITIES

- A. Install an appropriate 6" wide plastic marker tape a minimum of 12" above any direct buried utility line.
- B. Concrete encased utility lines shall have the concrete dyed or painted the appropriate color for the particular utility.

3.08 TESTING AND ADJUSTING

- A. Thoroughly test for leaks and operate each system device and item of equipment installed as part of this project and cooperate with the Testing and Balancing Agency performing the final testing and adjusting of the respective systems.
- B. Notify A/E/D 48 hours previous to all testing, adjusting or balancing. Tests must be conducted in the presence of a representative of the A/E/D and a written report is to be provided.
- C. System testing and balancing is to be performed after the respective systems have been deemed by the Contractor to be complete and operating in full working order.

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GENERAL PLUMBING REQUIREMENTS

END OF SECTION 220501

22 11 17
DISINFECTION OF DOMESTIC WATER PIPING

PART 1 – GENERAL

1.01 SUMMARY

- A. Section includes provisions for disinfection of potable water distribution piping system.
- B. Prior to use, clean and disinfect new potable water distribution systems and parts of existing potable water systems that have been involved in the work (altered, extended, repaired, etc.). Ensure that entire system is disinfected prior to use.

1.02 SUBMITTALS

- A. Furnish to A/E/D a certificate stating disinfection was conducted in accordance with specifications and all authorities. Provide water sample analysis report from Board of Health.

1.03 QUALITY ASSURANCE

- A. Disinfection shall comply with applicable requirements of governing agencies, including but not limited to the following:
 - 1. Indiana State Board of Health
 - 2. Local Regulatory Agency
 - 3. Local Water Utility

1.04 EXTRA DISINFECTION

- A. If domestic water piping is modified or extended after disinfection has been performed, clean and disinfect portions that have been modified or added and submit certification and analysis report(s) for respective portions.

PART 2 – NOT USED

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Prior to starting disinfection operations, verify that domestic water piping system has been completely installed.

3.02 PREPARATION

- A. Test, clean, and flush all system piping prior to starting disinfection operations.

3.03 POSTING OF SIGNS

- A. Post warning signs at each outlet and fixture prior to starting disinfection and keep signs in place during disinfecting period.
- B. Signs: Clearly warn that water should not be drawn or consumed.

3.04 DISINFECTION PROCEDURE

- A. Entire system may be disinfected at one time or system may be disinfected in parts, in a manner that will ensure entire system is disinfected.
- B. Introduce chlorine solution through gravity injection or suitable pump feeder at the meter of at least 50 parts per million strength for 24 hours; 100 parts per million for 12 hours; 200 parts per million for 6 hours.
- C. Open faucets, hydrants, etc. at fixtures and ends of branches until solution is distributed throughout entire system and is obtained at all outlets, faucets, fixtures, hydrants, etc. Obtained ppm shall be approximately the same as injected.
- D. Solution shall stand in system for 8 hours or more and then be flushed out of all lines until not over .2 ppm residual remains.

DISINFECTION OF DOMESTIC WATER PIPING

3.05 TESTS

- A. After disinfecting and final flushing, several samples from various ends of lines shall be drawn and submitted for testing by State Board of Health, local health authority or an independent laboratory approved by Board of Health.
- B. Repeat sampling and testing three times at 24 hour intervals. Repeat disinfection until findings of all three tests are satisfactory and approved in writing by Board of Health.

END OF SECTION 22 11 17

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PLUMBING FIXTURES AND TRIM

PART 1 – GENERAL

1.01 QUALITY ASSURANCE

- A. All units of each individual type of item must be from one manufacturer.

PART 2 – PRODUCTS

2.01 TRIM AND ACCESSORIES

- A. Carriers must be specifically designed for the fixture supported and appropriate for the installation.
- B. Shut off valves are to be chrome plated with wheel handles and supplies to fixtures are to be chrome plated and flexible with stop valves, threaded nipples and escutcheons at wall or floor.
- C. Traps for fixtures are to be chrome plated, 17 gauge adjustable ground joint swivel pattern P-Trap with cleanout, tube outlet with chrome plated escutcheon at wall or floor. In general all exposed hardware and trim to be chrome plated. Traps are to be insulated per ADA where appropriate.
- D. Faucet trim must have a removable operating unit or cartridge consisting of all wearing parts complete with seat.
- E. Water closet seats, unless otherwise specified on the construction drawings, are to be white plastic, open front equipped with check hinges as manufactured by Olsonite # 95.

2.02 PLUMBING FIXTURES

- A. The following American Standard or Zurn Plumbing fixtures are to be used:
1. Water Closets Aftwall (wall mounted) are to be with top spud for flushvalve, 4 bolt hole, siphon jet elongated bowl # 3351.001 1.6 gpf. Install ADA bowl at 18" above floor. All other bowls 15" above floor. (White) Seat to be open front white plastic as Olsonite # 95. (White) or Zurn #Z 5615.213.01 EcoVantage 1.28 gpf wall hung top spud flushvalve system with open S.S. Hinged seat. (White)
 2. Urinals Allbrook (wall mounted) top spud low consumption .7 gpf as #6541.132 (White) with wall hanger or Zurn #Z5798 .125 gpf EcoVantage system.
 3. Lavatories Murro (wall mounted) are to be 22"X 21 1/4" X W , with 4"center faucet holes # 0954.000 with knee shroud # 0059.020. Top of front rim mounted 34" above floor. Concealed arm supports. (White) or Zurn # Z5324-PED 23"x20" with #Z8946-3-NT trap protector. (White). Both with wall carriers.
 4. Lavatories Aqualyn (counter top) are to be 20"X 17"X5 7/8" deep, with 4"center faucet holes # 0476.028. (White) or Zurn #Z5114 23"x 20" (White) or Zurn #Z5114 23"x20" (White)
 5. Kitchenette Sinks are to 18 gauge stainless steel 20"X17"X10 1/2" deep with 4"center faucet holes "Just" # SLX-2017-A-GR.
 6. Water Closets Madera (ADA floor mounted) flush valve with elongated bowl,# 3043.102, 1.6 gpf, rim 17 1/4" above floor. (White) Seat to be open front white plastic as Olsonite # 95. (White) or Zurn #5665 1.28 gpf HET series. (White).
 7. Water Closets Champion (ADA floor mounted) tank type with elongated bowl # 2002.014 Chamion 4 1.6 gpf, rim 16 1/2" above floor. (White) Seat to be open front plastic as Olsonite # 95. (White)
 8. Water Closets Aftwall (ADA wall mounted retrofit) are to be where applicable, flush valve with elongated bowl, # 2294.011, 1.6 gpf, rim 16 1/2" above floor. (White) Seat to be open front white plastic as Olsonite # 95. (White)

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PLUMBING FIXTURES AND TRIM

9. Kitchen Sinks are to be 18 gauge stainless steel 19"X 33"X 7 ½" deep with 8"center faucet holes "Just" DL – 1933-A-GR double bowl.
10. Wheelchair Showers (ADA) are to be nominal 62"L x 36"D x 74 7/8"H white "Lasco" 1603-BFST acrylic units with folding seat, hand held spray with adjustable height mounting bar, L- shaped grab bar and chrome curtain rod.
11. Private Showers are to be nominal 36" x 36" x 72"H white "Lasco" 1363 – 2P acrylic unit with aluminum framed shower doors.
12. Electric Water Cooler (ADA dual unit) are to be UL listed and rated for 80 deg. F. inlet, 90 deg. F. ambient, 50 deg. F. drinking water at 8 gph capacity. Unit to have a hermetically sealed compressor, 115 volt wired or plugged into a GFI circuit, self closing adjustable angle bubbler, 17 ga. tube trap with cleanout, angle valve and 3/8" flexible supply, lead out filter inside cabinet with stainless tops and adjustable water temperature as manufactured by "Halsey Taylor"# HAC8 BL-Q.
13. Wall Mounted Laundry/Utility Sink "Mustee" Utilatub 16 molded utility sink. 12 gal capacity or Zurn #M 2620-W. Provide strainer, cleanable trap and hanger.
14. Floor Mounted Mop Sink "Swanstone" MS -2424 24" x 24" fiberglass with removable stainless steel strainer.

2.03 STRAINERS

- A. Strainers must be "Y" pattern and full line size with stainless steel screens with 3/64" perforations, rated at 125 PSI working pressure and have a centered blow-down.

2.04 FLOOR DRAINS

- A. Finished Areas
 1. Drain to be same size as connected piping.
 2. Epoxy coated cast iron body with anchorage flange, weep holes, seepage collection sump and 1/2" polished nickel bronze strainer as "Watts" # FD – 200 or Zurn #Zn415. Trap by contractor in piping.
- B. Utility, Mechanical, Equipment Rooms and Unfinished Areas
 1. Drain to be same size as connected piping (minimum 3")
 2. Cast Iron body, caulked outlet, flashing clamp, and cast iron hinged square grate inlet. Trap to have removable sediment bucket as "J.R. Smith" 2425 flanged.
- C. Trap Seal Primers are to be installed where called for on the construction drawings. Piping and valve location is to be determined by contractor and approved by A/E/D /ISU. Valve to be as manufactured by Precision Products Inc.

2.05 FLOOR CLEANOUTS

- A. Finished Areas
 1. Cleanout to be same size as connected piping.
 2. Round scoriated cover screwed to a cast iron body. Cover to be satin nickel bronze as "Watts" CO-100 or equivalent by Zurn. Use tile or carpet covers as required.

2.06 DOMESTIC WATER HEATERS

- A. Electric Water Heater
 1. Capacity, voltage and wattage as specified on construction drawings.
 2. Heater to be glass lined steel tank, factory insulated, UL approved suitable for 300psi test and 150psi working pressure, utilizing two (2) heating elements, di-electric nipples, have

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PLUMBING FIXTURES AND TRIM

sacrificial anodes and have ASME temperature relief valve. Unit as Manufactured by "A.O. Smith" or "Lochinvar" high efficiency series.

B. Gas Fired Water Heater

1. Capacity, flue size, combustion air requirements and fuel type as specified on construction drawings.
2. Heater to be glass lined steel tank, factory insulated with minimum of 2" fiberglass insulation, be approved by A.G.A. and meet or exceed ASHRAE Standard 90 for high efficiency. Heater must be suitable for 300 psi test and 150 psi working pressure, utilizing di-electric nipples and ASME temperature relief valve. Unit as manufactured by "A.O. Smith" or "Lochinvar" high efficiency series.

C. Controls and Warranty

1. Water heaters must be complete with all thermostatic and safety controls and have a complete 5 year warranty.

D. Tank Construction Rating

1. Heaters with 65 gal. holding capacity or larger or have a burner rating above 199,999 BTU must have an ASME rated tank.

2.07 WALL HYDRANTS

- A. Recessed bronze box with chrome plated face, locking cover, bronze non-freeze hydrant and casing, hose connector with vacuum breaker, "T" handle key "WATER" cast on the cover as manufactured by Smith # 5509 or equivalent by Zurn.

2.08 PLUMBING TRIM

- A. Water Closets 'Sloan Royal" # 111 with dual filtered by pass, 1 ½" flush valve mounted 18" above water closet with a Sloan side mounted battery operated flush #EBV-89-M with courtesy flush button or Zurn #ZTS6200EV.
- B. Urinals (other than self contained units) "Sloan Royal" # 186.1 top spud ¾" flush valve with a Sloan side mount battery operated flush unit # EBV-89-M with courtesy flush button, American Standard #6063.051 Selectronic FloWise flush valve .5 gpf with manual flush option or Zurn # ZER6003AV.
- C. Lavatories "American Standard" Heritage series faucet # 5402.002 with .172H ADA handles, 4" centers, Sloan battery operated faucet # EBF-650-A-Z, American Standard Selectronic 6058.105, or single lever American Standard Colony soft 2175.209 with pop up and drain or Zurn #Z8100-P, (Adjust if pop up not required).
- D. Showers "American Standard" pressure balance mixing valve #1480.501.002 with trim kit or Zurn #ZZ7300-SS-MT. Shower head to be Sloan AC-51 205 gpm, American Standard FloWise 1660.717 2.0 gpm or Zurn #Z 7000-S8.
- E. Kitchenette Sink "American Standard" Heritage series faucet # 7490.002 with .172H ADA handles and 9" gooseneck, 4" centers OR Zurn #Z812A4-17.
- F. Kitchen Sink "American Standard" Heritage series # 6270.002 with .172H ADA handles, 8" centers or Zurn #Z8771G4-17F.
- G. Wall mounted hand sink (ADA) "American Standard" Heritage #7809.002 with H172 wrist blades. 4" centers or Zurn # Z81104-P-3M.
- H. Wall mounted laundry/utility sink and floor mounted mop sink "American Standard" 8344.112.004 with bucket hook, vacuum breaker and wall support or equivalent by Zurn.

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PLUMBING FIXTURES AND TRIM

PART 3 – EXECUTION

3.01 GENERAL REQUIREMENTS FOR INSTALLATIONS

- A. Shut – off valves are to be installed in each supply to every fixture or piece of equipment. All fixtures, equipment and apparatus are to be secured firmly in place and be adequately supported with hardware designed and appropriate for the use.
- B. Contractor to furnish counter top templates to respective cabinet manufacturer or installer to allow for fixtures to be installed in counters.
- C. Contractor to neatly caulk with water proof non-hardening caulking compound around all fixtures and must cover and protect all fixtures and trim from damage and stains until time of acceptance.
- D. Fixture colors to be white unless specifically noted otherwise. Fixtures are to be set level and parallel with building lines
- E. Contractor must verify locations, mounting heights of (fixtures and trim) and verify with A.E./Owner, all applicable codes and standard usage and report any conflicts prior to installation.
- F. Final connections to fixtures, shall be a minimum unless otherwise shown on the drawings:

Equipment	Hot Water	Cold Water	Waste	Vent
Water Closet (Flush Valve)		1"	4"	2"
Urinal		3/4"	2"	1-1/2"
Lavatory and sinks	1/2"	1/2"	1-1/2"	1-1/2"
Mop Basin	3/4"	3/4"	3"	1-1/2"
Electric Water Cooler		1/2"	1-1/2"	1-1/2"
Interior Hose Bibb		3/4"		
Non-Freeze Wall Hydrant		3/4"		
Floor Drain (See Drawings for pipe size)				
Shower	1/2"	1/2"	2"	

END OF SECTION 22 40 00

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COMMON WORK RESULTS FOR ELECTRICAL

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General, Supplementary, and Special Conditions apply to all electrical work.

1.02 DESCRIPTION OF WORK

- A. Section 260500 applies to all electrical materials, equipment, installations and services supplied under any portion of the work.
- B. All work must meet or exceed all Local, State and Federal Codes and ADA Guidelines.
- C. All Electrical Contractor or Electrical Sub-contractor work shall be performed by a licensed and bonded Electrical Contractor with at least five (5) years of successful installation experience on projects with electrical work similar to this project.
- D. The Electrical Contractor or Electrical Sub-contractor shall coordinate the Basic Requirements as applicable to any equipment, installations and services of an electrical nature.
- E. It is the intention of this Division of the Specifications and the accompanying drawings to describe and provide for the furnishing, installing, testing and placing in satisfactory and successful operation all equipment, materials, devices and necessary appurtenances to provide a complete electrical system.
- F. The Contract drawings indicate the extent and the general location and arrangement of equipment, conduit and wiring. The General Contractor and their Electrical Sub-contractor shall study the plans and details and shall coordinate with all other trades to prevent conflict and interference with other installations.
- G. The Electrical Contractor or the Electrical Sub-contractor is responsible for installation of a complete and operating electrical system in accordance with the intent of the Drawings and Specifications.
- H. Any minor changes in location of equipment and conduits from those shown on the plans shall be made without extra charge if so directed by the Owner prior to installation.
- I. All equipment shall be installed such that maintenance and service may be properly accomplished. If necessary, the Owner may at their option require the contractor to demonstrate the service on any piece of equipment to determine sufficient service space exists. If service space is not adequate, the equipment shall be relocated at no additional cost to the Owner so that sufficient service space is achieved.

1.03 PERMITS AND FEES

- A. This work shall include the procurement of and payment for all permits and fees for the performance of the electrical work.

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1.04 SUBMITTALS

- A. The following items that shall be submitted for approval prior to ordering. Submit individually by the appropriate Specification Section number.
 - 1. Raceway (unless special raceway is specified a letter on Company letterhead stating the products to be used are in conformance with the Specifications is acceptable as a Submittal. Check with Engineer/Owner)
 - 2. Wire (unless special wire is specified a letter on Company letterhead stating the products to be used are in conformance with the Specifications is acceptable as a Submittal. Check with Engineer/Owner)
 - 3. Wiring Devices and Covers
 - 4. Lighting Fixtures
 - 5. Disconnect Switches
 - 6. Motor Starters
 - 7. Panelboards and Switchboards
 - 8. Fire Alarm
 - 9. Others as required by the related Division 26 Section.
- B. Submission of the above information shall be electronically in ISU approved PDF Format.

1.05 PROJECT CLOSEOUT

- A. On Electrical Prime Projects one set of all Project documents shall be submitted electronically in PDF Format on a USB Flash Drive. The following is a list, but not limited to, of required documentation to be included on the USB flash drive:
 - 1. Bid Form
 - 2. Award Letter and Contract for Construction
 - 3. Meeting minutes and supporting documentation.
 - 4. Reviewed submittals and reviewed shop drawings
 - 5. All Change documentation, e.g. ASI, RFI, CCD, RFP, CP, CO, etc.
 - 6. Pay Applications
 - 7. Installation instructions and schematic drawings
 - a. Complete parts list with manufacturer's model numbers.
 - b. Complete wiring diagrams showing all connections and internal wiring. Factory typical wiring diagrams are not acceptable.
 - 8. Operating and maintenance instructions.
 - 9. Warranty and guarantee information
 - 10. Substantial Completion documents to determine start of Warranty Period
- B. When individual Specification Sections call for close-out submission they may be combined on a master Project close-out USB flash drive with itemized files and sub-files for each Section.
- C. Additionally, submit one hard copy of the O&M's in a 3-ring binder and unfolded Record Drawings.

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- D. Prior to release of final payment, Indiana State University must receive a complete set of record drawings in AutoCAD 2010 on a CD or DVD. The Design Engineer and the Indiana State University Department of Facilities Management engineering staff must approve these drawings.

1.06 COPPER REQUIREMENTS FOR ELECTRICAL EQUIPMENT

- A. All current-carrying components (phase, neutral and ground) of all electrical equipment shall be copper. No CUAL allowed without prior approval of Owner.
- B. Exceptions: molded case circuit breakers with in-built lugs and safety switches.

1.07 UNDERGROUND UTILITIES

- A. All underground utility lines shall be buried a minimum of 36" below finished grade.
- B. Place 3" of compacted red sand below all buried utility lines and cover with 12" of red sand.
- C. Remainder of the trench shall be back filled with new topsoil free of debris, compacted in 6" lifts to 98% standard proctor using the water jet method.
- D. Install the appropriate 6" wide marker tape a minimum of 12" above any buried utility line.

1.08 NEUTRAL RULES

- A. Neutral rules and requirements for multi-circuit branch raceway installations.
 - 1. A separate dedicated neutral shall be installed for every phase conductor in a multi-circuit 120-volt or 277-volt raceway.
 - 2. Neutrals shall be marked in such a way as to prevent the accidental crossing of neutrals at device locations.
 - 3. Neutrals in 120-volt applications shall be white, gray in 277-volt applications.
 - 4. This includes pre-wired raceway systems such as ISODUCT and systems furniture.
 - 5. No sharing of neutrals is allowed.
- B. Over sizing of neutral conductors shall not be allowed in lieu of the preceding rules and requirements.
- C. THESE RULES SUPERCEDE ANY OTHER NEUTRAL INSTRUCTIONS EITHER WRITTEN OR IMPLIED IN ANY OTHER SPECIFICATION SECTION OR SHOWN ON DRAWINGS.

1.09 RACEWAY SYSTEMS INSTALLATION SUMMARY

- A. Provide conduits, cable trays, surface raceways, boxes, fittings and supports to form a complete, coordinated, and continuously grounded raceway system.
- B. No more than three (3) single phase (120volt and 277volt) circuits shall be installed in a conduit raceway system.

1.10 RACEWAY REQUIREMENTS

- A. Conduits indoors in general areas shall be electrical metallic tubing (EMT) with steel set screw or compression fittings.
- B. Conduits indoors in hazardous areas, encased in concrete floorslabs or subjected to water, physical damage or abuse shall be galvanized rigid steel (GRS) or intermediate metal conduit (IMC) with cast or malleable iron threaded fittings and bushings.
- C. Conduits indoors for medium voltage distribution circuits or for fire pump feeders shall be galvanized rigid steel conduit with cast or malleable iron threaded fittings and bushings.

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- D. Conduits outdoors shall be galvanized rigid steel or intermediate metal conduit with cast or malleable iron threaded fittings and bushings.
 - E. Conduits encased in concrete underground shall be Type DB PVC for IT applications and Schedule 80 for MV applications both with matching fittings.
 - F. Conduits direct buried underground shall be Schedule 40 PVC with matching fittings.
 - G. Conduits in steam tunnels shall be galvanized rigid steel or intermediate metal conduit with cast or malleable iron threaded fittings and bushings. Exceptions to this requirement are tunnel segments inside building (i.e., mechanical rooms) where EMT may be used.
 - H. Final connections to recessed lighting fixtures and under counter lights shall be 1/2" minimum flexible metallic conduit, manufactured wiring systems, or galvanized steel Type MC Cable all with steel fittings.
 - 1. Manufactured wiring systems shall
 - a. Only be used above accessible ceilings.
 - b. Shall not be used in walls or above permanent ceilings.
 - c. Shall contain a dedicated, separate, grounding conductor.
 - 2. Type MC cable conductors shall be color coded to match the building color-coding scheme. Type MC Cable shall be terminated with steel setscrew connectors that have integral insulating bushings. Self-locking, twist-in type fittings are not acceptable.
 - I. Final connections to motors, transformers and equipment subject to vibration or removal for maintenance shall be 1/2" minimum liquid tight flexible metallic conduit with steel liquid tight fittings. Transformer connections may be non-liquid tight flexible metallic conduit in electrical rooms only.
 - J. Connections to recessed power receptacles and light switches in areas with accessible ceilings:
 - 1. In new 'metal stud and gypsum board partitions (walls)' and in existing 'metal stud and gypsum board partitions (walls)', where the wall is not being otherwise opened up, the final connections may be made with type MC Cable. This MC Cable, shall:
 - a. Be run to a box immediately above the accessible ceiling, and the box size shall not exceed 4-11/16" square.
 - b. Conduit shall be used for the entire run, from this junction box, to the power source, load (lights), etc.
 - c. No more than three circuits may be run through any given junction box.
 - d. Individual conductors making up the MC cable shall be stranded copper, with separate grounding conductor, and steel corrugated armor. Individual conductors shall be color coded as required in section 16120.
 - e. The MC Cable is terminated using UL listed hardware intended for the cable and boxes being used, (and rated for commercial and industrial environments).
 - f. The MC Cable shall be secured in the wall cavity as required by NEC.
 - g. The MC Cable shall be as short as it is necessary to serve the need and meet the Code
 - K. In areas with non-accessible ceilings devices shall be installed with standard conduit; run back in a continuous installation to a junction box located at an access point in the ceiling
 - L. Connections to other recessed devices, (including communication outlet boxes, junction or pull boxes, etc) shall be with standard conduit of the type appropriate for the wall construction.
- 1.11 CABLE TRAY REQUIREMENTS
- A. Power and telecommunications cable trays shall be aluminum, ladder type, of the sizes shown on the drawings.

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- B. Center spline telecommunications cable tray may only be used where shown.
- C. Changes in cable tray direction or elevation shall be made using standard fittings from the same manufacturer as the cable tray.
- D. Barriers shall be installed in cable trays where shown to separate circuits of different voltage levels.

1.12 SURFACE RACEWAY REQUIREMENTS

- A. When conduits in finished areas cannot be concealed in walls or above ceilings, surface raceways may be used where permitted. Boxes and fittings shall match and be from the same manufacturer as the raceways.
- B. Raceway shall be metal and white in color unless otherwise noted on the drawings.
- C. Contractor shall verify with the Owner if the use of metal surface raceway is acceptable.

1.13 BOX REQUIREMENTS

- A. Provide sheet steel outlet boxes, extensions, and plaster rings for EMT, flexible metal conduit, and MC cable.
- B. Provide cast or malleable iron outlet boxes and covers for galvanized rigid steel conduits, intermediate metal conduits, and liquidtight flexible metal conduits.
- C. Boxes shall be sized for all conductors and devices to be contained within. Box extensions shall not be used to correct for undersized boxes. A single extension may be used as follows only if all free conductors extend at least 3 inches outside of the extension opening.
 - 1. On boxes being flush mounted in masonry walls.
 - 2. On existing boxes in walls that are being furred out.
 - 3. On existing boxes for connecting to an existing circuit.
 - 4. On fire alarm, security and clock system boxes where required by the system manufacturer's instructions.
- D. Plaster rings shall not be considered box extensions, but their capacities may be included in box fill calculations.

1.14 SUPPORT REQUIREMENTS

- A. Mechanical Areas and Tunnels
 - 1. Surface mounted equipment shall be secured to steel channels.
 - 2. Surface mounted raceway 1½" and smaller and boxes maybe attached directly to surfaces.
 - 3. Multiple raceway runs maybe attached to
 - a. A trapeze system with approved straps
 - b. Trapeze shall be attached to the structure by steel channels and threaded rod.
 - 4. Vertical surface race way 1½" maybe attached by:
 - a. Below 8' by one or two hole straps
 - b. 8" and above with pipe hangers ("Minerallac style hangers")
 - 5. The channels and raceway shall be attached with toggle bolts to hollow tile, block or similar surfaces, and attached with screws or bolts and expansion shields to solid masonry or concrete.
- B. Finished Areas Above Suspended Ceilings
 - 1. Raceway and boxes maybe attached directly to surfaces with appropriate straps or hangers.

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2. Multiple raceway runs may be attached to
 - a. A trapeze system with approved straps
 - b. Trapeze shall be attached to the structure by steel channels and threaded rod.
 3. The channels and raceway shall be attached with toggle bolts to hollow tile, block or similar surfaces, and attached with screws or bolts and expansion shields to solid masonry or concrete.
 4. Attachment of raceway to ceiling grid support wires or rods is not permitted.
- C. Finished Areas Inside Walls
1. Raceway and boxes shall be attached to structural members with devices specifically designed for raceway/box attachment to the type of structural member used.
- D. Finished Areas Exposed
1. Surface raceway shall be attached to finished surfaces utilizing the factory approved method of attachment.
 2. Tape is not acceptable for attachment of non-metallic surface raceway.

PART 2 - PRODUCTS

2.01 CONDUITS

- A. Electrical metallic tubing shall be thin wall steel tubing, electro-galvanized or hot dipped galvanized inside and outside. Fittings and bushings shall be galvanized steel set screw type with two screws per connection for sizes over 2".
- B. Galvanized rigid steel conduit and intermediate metal conduit shall be hot dipped galvanized inside and outside, in 10' lengths and threaded on both ends. Fittings and bushings shall be cast or malleable iron, and hot dipped galvanized inside and outside.
- C. PVC conduit and fittings shall be Type DB for encasement in concrete for IT applications, Schedule 40 for direct burial, concealed and exposed work, and Schedule 80 in MV Duct Banks. Fittings shall be of the same type and from the same manufacturer as the conduit. PVC conduit shall be UL Labeled for 90 degrees C cables. Approved Manufacturers:
 1. Cantex
 2. Carlon
 3. National Pipe & Plastic.
- D. Flexible metallic conduit shall be galvanized steel or aluminum. Fittings shall be of steel with cadmium or galvanized finish. Fittings shall be machine screw clamp type, single or two-piece. Self-locking, twist-in type fittings are not acceptable.
- E. Liquid tight flexible metallic conduit shall consist of a flexible, galvanized steel core, a continuous copper ground strip and a polyvinyl chloride jacket. Fittings shall be steel liquid tight grounding type from the same manufacturer as the conduit.

2.02 CABLE TRAYS

- A. Ladder type cable tray shall be aluminum, of the width shown, with 4" rail height, 13/16" minimum rung width, and 9" maximum rung spacing. The tray with a 10' span shall be capable of sustaining a working load of 145 pounds per lineal foot with a load deflection of 1.0" when tested in accordance with NEMA VE1-3.01. Approved Manufacturers:
 1. B-Line
 2. Chalfant
 3. Cope
 4. Globetrax
 5. Husky

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- 6. Mono-Systems
 - 7. Square D
 - 8. Wiremold.
 - B. Center spline cable tray shall be aluminum, of the width shown, with top mounted rungs, 3" load depth, 13/16" minimum rung width, and 9" maximum rung spacing. The tray with a 10' span shall be capable of sustaining a working load of 145 pounds per lineal foot with a load deflection of 1.0" when tested in accordance with NEMA VE1-3.01.
 - C. Tray fittings including horizontal and vertical bends, tees, crosses, reducers, splice plates and expansion joints shall be from the same manufacturer and of the same product line as the tray. Bends, tees, crosses and reducers shall have a 13/16" minimum rung width, a 9" maximum rung spacing, and a 12" minimum bend radius.
 - D. Tray fasteners shall be galvanized or zinc plated steel.
- 2.03 SURFACE RACEWAYS
- A. Where surface raceways are called for on the drawings, or when conduits in finished areas cannot be concealed in walls or above ceilings, surface raceways shall be used. Boxes and fittings shall match and be from the same manufacturer as the surface raceway.
 - B. Surface raceways shall consist of a base and cover, sized for the number of conductors contained within, complete with all connectors, fittings, bushings, boxes, covers and mounting hardware.
 - C. Raceways shall be 600 volt rated, and be in compliance with the applicable paragraphs of NEC Article 352.
 - D. They shall be non-flammable, and UL labeled, under UL 5, or UL 5A (as applicable).
 - E. The completed raceway system shall be vandal resistant.
 - F. Shall accept receptacles, cover plates, telephone/data outlets and other standard wiring devices as specified elsewhere in these specifications.
 - G. The coverplates used for wiring devices and telecommunication outlets shall be of the 'overlapping' type, and shall therefore cover the 'cut-end' of the raceway cover.
 - H. The raceways shall have "scuff" resistant finish, and the raceways shall be paintable.
 - I. All components of the raceway system exposed to view shall be of the same color and shade.
 - J. Barriers shall be provided when necessary to separate conductors of different voltages, or services.
 - K. Surface raceways shall be steel or plastic as noted below, and as noted on the drawings:
 - L. Type Standards Manufacturers
 - 1. Metallic
 - a. Metallic raceways shall be of .040" thick (minimum) zinc plated or galvanized steel.
 - b. The acceptable levels of quality are, generically,
 - 1) Like "Wiremold V500 and V700" for smaller single channel raceway applications,
 - 2) Like "Wiremold V3000" for larger single channel raceway applications, and
 - 3) Like "Wiremold V4000" for larger multi-channel raceway applications.
 - c. Manufacturers include Wiremold, Hubbell, Thomas and Betts, or Mono-System.
 - 2. Plastic
 - a. Plastic raceways shall be of a material meeting all of the requirements of UL 5A, (including flammability, resistivity structural strength, etc.).

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- b. The acceptable levels of quality are, generically,
 - 1) Panduit LD series, or Carlon Series 30 for smaller single channel raceway applications;
 - 2) Panduit Type T-70, or Carlon "Premiere", for larger single channel raceways, and smaller multi-channel raceways; and
 - 3) Panduit Twin 70 or Carlon "Prestige", for larger multi-channel raceway applications.
- c. Manufacturers include Panduit, Carlon, Hubbell, Mono Systems, and Wiremold.
- M. Use vertical surface raceways from junction boxes above the ceiling, to the horizontal portion of the surface raceway. Locate vertical section as close to room corners (or 'vertical breaks' in mid wall) as is possible. Use of exposed vertical conduits is not acceptable.

2.04 BOXES

- A. Boxes for fixtures, outlets, switches, equipment connections and wire pulling shall be
 - 1. Cast or formed from carbon steel sheets of commercial grade steel not less than 14-gauge,
 - 2. One-piece construction, zinc, or cadmium plated,
 - 3. Tapped for mounting plates and covers as required.
- B. Pull and junction boxes shall be
 - 1. Fabricated from galvanized or painted code gauge cold rolled carbon steel sheets.
 - 2. Welded construction with flat removable covers fastened to the box with machine screws.
 - 3. Seams and joints shall be closed and reinforced with flanges formed of the same material from which the box is constructed or by continuous welding which will provide equivalent strength to flange construction.
 - 4. Preferably not provided with 'knockouts'.
- C. Box covers shall be fastened in place by machine screws or hinges and latches. Self-tapping or sheet metal fasteners are not acceptable.

2.05 SUPPORTS

- A. Hangers and brackets shall be made of steel pipe, channel iron, angle iron or prefabricated steel channel. Prefabricated steel channel shall be by B-Line, Hilti, Powerstrut or Unistrut.
- B. Anchors shall be lead shield anchors or plastic expansion anchors for small loads, and expansion or epoxy anchors for large loads. Powder-driven anchors shall not be used.

2.06 LABELS AND DIRECTORIES

- A. Equipment nameplates shall be engraved .125 inch (1/8") thick 'Lanaloid' (Lanacoid) plastic. White, with black letters. The engraved letters shall be at least one quarter inch (1/4") high.
- B. Receptacles and lighting switch covers shall be labeled using clear adhesive backed nylon or Mylar tape with black text permanently laminated to the tape.
- C. Panel directories shall be typed on supplied card stock with panel, or card stock similar in thickness and material as those supplied with the panels. Install supplied clear plastic cover, or one of like material.

PART 3 - EXECUTION**3.01 GENERAL**

- A. All work shall conform to all applicable Codes and Construction Standards.
- B. All installations shall be warranted for a period of one (1) year against defects in material and workmanship.

COMMON WORK RESULTS FOR ELECTRICAL

- C. The Owner reserves the right to relocate any device fifteen (15) feet prior to installation at no additional cost.
- D. Material Storage
 - 1. All materials shall be new and in original factory packaging.
 - 2. All material shall be kept dry and clean.
 - 3. The Owner reserves the right to reject any material not properly stored.
- E. Contractor shall swab clean the interior of all raceway prior to pulling wire.
- F. Device plate screw slots shall be oriented vertically.

3.02 RACEWAYS

- A. Size conduits in accordance with the NEC, but not less than the sizes shown on the drawings. Minimum power, fire alarm and control conduit size shall be $\frac{3}{4}$ ". Minimum telecommunications conduit size shall be 1".
- B. Install concealed and exposed conduits and cable trays parallel to or at right angles to building lines. Conduits shall not be embedded in concrete slabs except where specifically shown. Install surface raceways as close to room corners or trim features as possible to make the surface raceways less obvious.
- C. Make directional changes in primary power distribution conduits above ground with sweeps and long radius elbows, and underground with 20' minimum radius bends.
- D. Conceal conduits wherever possible and practical. When conduits cannot be concealed in finished areas, use surface raceways with matching boxes from the same manufacturer as the raceways.
- E. Metal conduits, fittings, enclosures and raceways shall be mechanically joined together in a firm assembly to form a continuous electrical conductor providing effective electrical grounding continuity.
- F. Provide expansion fittings at the intervals specified in the manufacturer's instructions.
- G. Conduits entering panels located outdoors, in parking structures, in steam tunnels and on cooling towers shall enter from the sides, back, or bottom. Conduits shall not enter from the top.
- H. Separate raceways from uninsulated steam pipes, hot water pipes, and other hot surfaces by a minimum of 4" horizontally or 12" vertically. Separate raceways from ventilation ducts and insulated pipes so that they do not come into contact with each other.
- I. Low voltage signal circuits shall be separated or shielded from power circuits to prevent the induction of noise into the signal circuits.
- J. EMT entering sheet metal enclosures and outlet boxes shall be secured in place by a connector with a locknut. Rigid conduit shall be secured with locknut inside and outside and a bushing. Sufficient thread on the connector or conduit shall extend into the enclosure so that the bushing will butt tight into the connector or conduit. Bushings shall not be used as jamb nuts or in lieu of locknuts.
- K. Flexible metallic conduit to motors and similar equipment shall not exceed 3'-0" in length, and shall have adequate slack to absorb the maximum vibration. Flexible conduit connections to lighting fixtures shall not exceed 6'-0" in length.

3.03 MOUNTING HEIGHTS

- A. Except where shown otherwise, install equipment and devices at the following heights:
 - 1. Receptacles (Wall): 18" A.F.F. to center

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2. Receptacles (Above Counter): 48" A.F.F. to center or 4" minimum above countertop or backsplash.
3. Receptacles (Unfinished Area): 48" A.F.F. to center
4. Surface Raceway Receptacle Strips: 42" A.F.F. to bottom
5. Light Switches: 48" A.F.F. to center
6. Telephone Outlets (Wall Phone): 48" A.F.F. to center
7. Telephone/Data Outlets: 18" A.F.F. to center
8. Clock Outlets: 88" A.F.F. to center
9. Fire Alarm Pull Stations: 45" A.F.F. to center
10. Fire Alarm Horn/Strobes: 80" A.F.F. to bottom or 1' below finished ceiling whichever is lower.
11. Card Readers: 48" A.F.F. to card slot
12. Security System Controls: 48" A.F.F. to center
13. Thermostats/HVAC Controls: 48" A.F.F. to center
14. Panelboards: 72" A.F.F. to top
15. Safety Switches/Motor Starters: 72" A.F.F. to top (except top of handle shall not exceed 78" A.F.F.)
16. Motor Control Pushbuttons: 60" A.F.F. to center
17. Verify with the Owner for heights not otherwise listed.

3.04 SUPPORTS

- A. Provide 4" thick concrete housekeeping pads for floor-mounted equipment.
- B. Support all electrical items independently of supports provided by the other trades.
- C. Support conduits and boxes using steel conduit straps or 1/4-inch minimum diameter threaded rod hangers. Suspended ceiling hangers or hanger wire shall not be used (except to support flexible metallic conduit and manufactured wiring systems).
- D. Support cable trays with support brackets or 3/8" diameter minimum threaded rod hangers at intervals not exceeding 8'-0" for straight runs. Additional supports shall be provided at tray fittings.
- E. Hangers shall be of sufficient strength that their deflection at mid span does not exceed 1/240 of the hanger span length after the cables are installed.
- F. Route flexible metallic conduit, manufactured wiring systems and Type MC cable parallel to or perpendicular to building lines, and in a neat and workmanlike manner. Coil the excess manufactured wiring systems and Type MC cable, and support independently of the ceiling grid system at intervals not exceeding 3 feet.

3.05 PENETRATIONS, SLEEVES AND FIRE SEALS

- A. Cut floor and wall penetrations neatly and to the minimum size required for installation of the equipment and raceways.
- B. Provide galvanized steel pipe sleeves for all conduits penetrating floors, exterior walls and roofs.
 1. Extend floor sleeves above the floor a minimum of 2 inches.
 2. Embed sleeves in new concrete or step-core concrete and grout sleeves into existing concrete with epoxy grout.
 3. Seal floor sleeves using fire-sealing systems approved by a Nationally Recognized Testing Laboratory.
 4. Seal exterior wall and roof penetrations water tight.

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- C. Patch both sides of wall penetrations cut for electrical equipment and raceways to seal against the passage of air, sound and fire.
 - 1. Seal cable tray penetrations in fire rated walls using fire sealant bags approved by a Nationally Recognized Testing Laboratory.
 - 2. Seal conduit penetrations in fire rated walls using firesealing caulk approved by a Nationally Recognized Testing Laboratory.
 - 3. Seal conduit penetrations in non-rated walls using masonry materials that match the wall construction.
 - 4. Fire seal between recessed outlet boxes located on opposite sides of a fire rated wall if the box openings are over 16 square inches and the boxes are less than 24 inches apart.
- 3.06 EXPANSION FITTINGS
 - A. Provide expansion fittings at all building expansion joints.
 - B. Provide expansion fittings, in accordance with manufacture recommendations, in all areas subject to swings in temperature of more than 15 degrees C.
 - C. Install expansion fittings in all locations where expected expansion difference is 1/4", or more, between boxes
- 3.07 IDENTIFICATION
 - A. Provide nameplates and labels in accordance with Article 2.6.
 - 1. Labeled labels shall be mechanically secured in place with sheet metal screws and/or bolts and nuts
 - 2. Labels shall be neatly centered. Place labels in like positions on similar equipment.
 - B. Color code wiring as noted in Section 26 05 19 3.01 B
 - C. Color code junction boxes and box covers of
 - 1. Emergency power circuits with red paint
 - 2. Fire alarm circuits with red paint.
 - 3. Temperature control circuits with blue paint.
 - 4. Phone and Data circuits with orange paint.

END OF SECTION 260500

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26 05 02
SELECTIVE ELECTRICAL DEMOLITION

PART 1 – GENERAL

1.01 SCOPE OF WORK

- A. Demolition of electrical items and associated materials as indicated herein or as indicated on the drawings.

1.02 SECTION INCLUDES

- A. Removal of designated equipment and devices.
- B. Removal of designated construction.
- C. Disposal or storage of removed materials.
- D. Identification of utilities.
- E. Refer to items as indicated.

1.03 SUBMITTALS FOR CLOSEOUT

- A. Project Record Documents: Accurately record actual locations of terminated utilities and subsurface obstructions.

1.04 REGULATORY REQUIREMENTS

- A. Conform to applicable code for demolition work, safety of structure, dust control, products requiring electrical disconnection and re-connection.
- B. Obtain required permits from authorities.
- C. Do not close or obstruct egress width to any building or site exit.
- D. Do not disable or disrupt building fire or life safety systems without 3 days prior written notice to Owner.
- E. Conform to procedures applicable when hazardous or contaminated materials are discovered.

1.05 SCHEDULING

- A. Perform work between the hours of 7 a.m. and 7 p.m.

1.06 PROJECT CONDITIONS

- A. Conduct demolition to minimize interference with adjacent and occupied areas.
- B. Maintain protected egress and access to the Work.

PART 2 – NOT USED

PART 3 – EXECUTION

3.01 PREPARATION

- A. Protect existing materials which are not to be demolished.
- B. Notify affected utility companies before starting work and comply with their requirements.
- C. Utilize OSHA lockout/tag-out procedures for disconnecting means.
- D. Label all wiring to remain (phase and device fed) to assure proper re-connection.
- E. Mark location and termination of utilities.

3.02 DEMOLITION

- A. Disconnect, remove, cap, identify designated utilities to remain and demolish in an orderly and careful manner.
- B. Remove demolished materials from site except where specifically noted otherwise.

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- C. Remove materials as Work progresses. Upon completion of Work, leave areas in clean condition.

3.03 PROTECTION OF SALVAGED ITEMS

- A. Remove, store and protect the materials and equipment scheduled to be re-used.
- B. Protect wiring to be re-used by means of a Junction Box
 - 1. Junction Box shall be of sufficient size to permit reconnection of existing wiring to new wiring per NEC Requirements.
 - 2. In outdoor locations the junction box shall be NEMA 3R or a custom junction box with welded seams and gasketed cover.

END OF SECTION 26 05 02

26 05 26
GROUNDING AND BONDING

PART 1 - GENERAL

1.01 SUMMARY

- A. Provide grounding for all systems and equipment.

1.02 GROUNDING SYSTEM REQUIREMENTS

- A. Each ground rod shall have a maximum resistance to ground of 10 ohms before connection to the other ground rods. If reading is above 10-ohms, drive one extension. Further testing of that individual rod is not needed.
- B. The total grounding system with all connections completed shall have a maximum resistance to ground of 2 ohms for primary services or 5 ohms for secondary services.

1.03 CONNECTION REQUIREMENTS

- A. Provide exothermic weld type, or Burndy Hyground, ground connections for concealed, underground, and concrete encased ground connections, for ground connections to structural steel, connections between sections of the main ground bus and all connections to the substation room ground bus bars.
- B. Exposed ground connections (except connections to structural steel and substation room ground bus bars) may be made with copper or bronze compression ground fittings or bolted compression ring lugs.
- C. Provide exothermic weld type, or Burndy Hyground ground connections for splices and taps of grounding conductors No. 8 AWG and larger. Exposed splices and taps shall be taped.

PART 2 - PRODUCTS

2.01 GROUND RODS

- A. Unless shown otherwise, ground rods shall be 3/4" diameter by 10' long, copper clad steel. Ground rods shall be capable of being extended when additional length is required.

2.02 GROUNDING CONDUCTORS

- A. Grounding conductors for direct burial underground, for encasement in concrete, and for grounding of unit substations shall be No. 4/0 AWG minimum, bare, stranded copper.
- B. Grounding conductors for general use shall be stranded, copper conductor, sized in accordance with the NEC unless shown otherwise on the drawings, and insulated with green NEC Type THHN insulation rated 90 degrees C, 600 volts.

2.03 GROUND CONNECTIONS

- A. Ground connections shall be Burndy Hyground, Cadweld, Thermo-weld or Thomas & Betts Blackburn only.

PART 3 - EXECUTION

3.01 INSTALLATION REQUIREMENTS

- A. Ground duct banks and manholes in accordance with Specification Section 26 05 13
- B. Provide bare copper grounding conductors from duct banks, manholes, unit substations, primary switches, transformers, switchgear, panelboards, motor control centers and control panels to the building grounding system. Equipment rated above 480 volts or 600 amps shall be grounded by a minimum of two independent grounding conductors.
- C. Bond transformer, UPS system, central battery/inverter system, emergency generator, and separately derived electrical system neutrals to the building grounding system.
- D. Ground motors rated 460 volts and below by motor feeder equipment grounding conductors. Stranded copper grounding conductors connected to building steel shall also bond motors rated over 460 volts.

GROUNDING AND BONDING

- E. Provide green insulated equipment grounding conductors in all service, feeder, and branch circuits for connection of load devices to the power source ground. Raceways shall not be used as equipment grounding conductors.
- F. Equipment grounding conductors shall not be daisy-chained.
- G. Bond equipment-grounding conductors in boxes and enclosures where the grounding conductors are terminated or spliced.
- H. Bond conduits, cable trays, wireways, surface raceways, boxes, and enclosures together, and to the building grounding system. Provide bonding bushings and bonding jumpers to bond conduits where they enter a box or enclosure.
- I. Ground the lightning protection system with separate ground rods. The building grounding system ground rods shall not be used. After completion of both systems, the lightning protection system shall be bonded to the building grounding system.
- J. Protect separately routed grounding conductors subject to damage or physical abuse by Schedule 40 PVC nonmetallic conduits. Grounding conductors shall not be routed in metallic conduits except when routed with phase conductors.

END OF SECTION 26 05 26

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WIRING DEVICES

PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

- A. Types and locations of wiring devices are indicated by the Project drawings.
- B. Types of wiring devices in this section include the following
 - 1. Receptacles
 - 2. Switches
 - 3. Cover plates

1.02 QUALITY ASSURANCE

- A. Manufacturers: Firms regularly engaged in manufacture of wiring devices, whose products have been in satisfactory use in similar service for not less than five (5) years.
- B. Installers: Firm with at least five (5) years of successful installation experience with projects utilizing wiring device work similar to those required for this Project.
- C. NEC Compliance: Comply with NEC requirements as applicable to construction, installation and coding of wiring devices.
- D. UL Labels: Provide wiring devices that are UL listed and labeled.

1.03 DELIVERY, STORAGE AND HANDLING

- A. Deliver wiring devices properly packaged in factory-fabricated type containers.
- B. Store wiring devices in a clean dry space. Protect products from weather, damaging fumes, construction debris and traffic.

PART 2 – PRODUCTS

2.01 GENERAL

- A. General use receptacles shall be heavy-duty 20-amp duplex 2 pole 3 wire grounding type.
- B. All switches shall be specification grade quiet switches, 120-277 volt 15 amp.
- C. Device colors shall be as selected by the Owner but generally all devices shall be white on painted walls and brown on wood walls unless for special application.
- D. Devices on emergency circuits shall be red.
- E. All exterior receptacles and any receptacle within six (6) feet of any water shall be GFCI.

2.02 MANUFACTURERS AND CATALOG NUMBERS

- A. Hubbell, legrand, Leviton and Pass & Seymour are the only acceptable manufacturers.
- B. The following is an approved list of receptacles by type (based on Hubbell).
 - 1. 20 amp duplex- # HBL5362 or approved equal
 - 2. 20 amp isolated ground- #IG5362 (orange) or approved equal
 - 3. 20 amp single- # HBL5461 or approved equal
 - 4. 20 amp duplex with two USB charging ports- # USB20X2 or approved equal
 - 5. 20 amp GFCI - # GFR5362SG or approved equal

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WIRING DEVICES

- C. The following is the approved list of switches by type 15 amp (based on Hubbell).
1. Single pole toggle switch-# HBL1201 or approved equal
 2. 2 pole toggle switch - # HBL1202 or approved equal
 3. 3 way toggle switch-# HBL1203 or approved equal
 4. 4 way toggle switch- # HBL1204 or approved equal
 5. Single pole key switch with key- # HBL1201L
 6. 2 pole key switch with key- # HBL1202L
 7. 3 way key switch with key- # HBL1203L
 8. 4 way key switch with key- # HBL1204L
 9. Maintained contact 3 position, 2 circuit, center off, single pole, double throw 20 amp- # HBL1385
 10. Momentary contact 3 position, 2 circuit, center off, 20 amp- # HBL1557
- D. All interior device cover plates are to be nylon (plastic not allowed), color to match device color unless otherwise noted.
- E. All exterior device cover plates shall be weatherproof type unless otherwise noted.

PART 3 - EXECUTION

3.01 INSTALLATION OF WIRING DEVICES

- A. General: Install wiring devices as indicated, in compliance with applicable requirements of NEC, NEMA, UL and NECA's "Standard of Installations", and in accordance with recognized industry practices.
- B. Install all wiring in approved boxes or enclosures.
- C. For vertically install receptacles with ground up and on horizontal receptacles the ground on the left.
- D. Verify proper orientation of all switches
- E. Cover plates must cover all openings around devices and boxes.
- F. All devices must be installed plumb with the surroundings
- G. All device cover plate screws slots shall be vertical.

END OF SECTION 26 27 26