FORM OF AGREEMENT

THIS AGREEMENT is made and entered into by and between the **Domestic Violence Intervention Program of Iowa City, Iowa** ("Owner"), and **Kennedy Construction, Inc.** ("Contractor").

Whereas the Owner has prepared certain plans, specifications, proposal and bid documents dated the **26** day of **January** , **2016**, for the **DVIP Restroom Remodeling Project** ("Project"), and

Whereas, said plans, specifications, proposal and bid documents accurately and fully describe the terms and conditions upon which the Contractor is willing to perform the Project.

NOW, THEREFORE, IT IS AGREED:

1. The Owner hereby accepts the attached proposal and bid documents of the Contractor for the Project, and for the sums listed therein.
2. This Agreement consists of the following component parts which are incorporated herein by reference:
   a. Addenda Numbers **1**;
   b. "General Conditions of the Contract for Construction" AIA DOC A201-2007, as amended;
   c. Plans;
   d. Specifications and Supplementary Conditions;
   e. Notice to Bidders;
   f. Proposal and Bid Documents;
   g. and This Instrument.

The above components are deemed complementary and should be read together. In the

event of a discrepancy or inconsistency, the more specific provision shall prevail.

3. Payments are to be made to the Contractor in accordance with the Supplementary Conditions.

The Project base bid submitted by form of proposal is in the amount of:

One-hundred-thirty-five-thousand-six-hundred-forty-seven and 95/100 Dollars ($ 135,647.95).

DATED this **22** day of **February** , 2016.

Owner

Domestic Violence Intervention Program
Iowa City, Iowa

(Signature)

Kristie Fortmann-Doser
(Printed name)

Executive Director

ATTEST:

Notarized By:
~~Approved By:~~

Byron Waite, Controller

BYRON C WAITE
Commission Number 784811
My Commission Expires
June 27, 2017

Contractor

Kennedy Construction, Inc.
Iowa City, Iowa

(Signature)

MARK O KENNEDY
(Printed name)

PRESIDENT
(Title)

ATTEST:

(Title) OFFICE ADMINISTRATOR
(Company Official)

State of Iowa, County of JOHNSON
Signed and sworn to (or affirmed) before me
on 2/22/16 by Kristie Fortmann-Doser

Signature of Notary Public

Kennedy Construction, Inc.
319-351-5454

DVIP Restroom Remodel: Rebid
Itemized Cost Estimate

February 19th, 2016

#	Description	Total	Comments
1	Plans & Specifications	$207.00	
2	Mobilization	$345.00	
4	Bathroom accessories	$5,388.90	
5	Plumbing	$45,451.45	
6	Concrete Flatwork	$1,472.00	
7	Electric Wiring/ Fixtures	$8,912.50	
8	HVAC/ venting	$5,750.00	
9	Interior Framing/ demolition	$12,420.00	
10	Framing Lumber	$2,047.00	
11	Finish Labor/ door install	$2,530.00	
12	Insulation System - interior and exterior	$218.50	
13	Drywall	$13,826.45	
14	Doors, Hardware	$8,315.65	
15	Dumpster	$920.00	
16	Painting	$6,900.00	
17	Ceramic Tile	$6,532.00	
18	Temporary Facilities	$207.00	
19	Pedestrian/ Vehicle Control	$115.00	
20	Miscellaneous	$322.00	
21	Cleanup	$2,530.00	
22	Overhead	$920.00	
23	Miscellaneous Labor	$2,300.00	
24	Acoustical Ceiling	$2,587.50	
25	Supervision	$1,380.00	
26	Building Permit	$1,050.00	
27	Contingency	$3,000.00	
27	TOTAL INVESTMENT	$135,647.95	

Special Conditions Exhibit B

Supplement for all CDBG Contracts and Agreements

City of Iowa City is referred to as "recipient" below and KENNEDY CONSTRUCTION/~~as~~ "contractor and subcontractor." CITY OF IOWA CITY and KENNEDY CONSTRUCTION, INC agree to abide by the following provisions, as applicable:

1) Clean Air Act (42 U.S.C. 7401 et seq.) and the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.), as amended.

Contracts and subgrants of amounts in excess of $100,000 shall comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401 **et seq.**) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251 **et seq.**). Violations shall be reported to HUD and the Regional Office of the Environmental Protection Agency (EPA).
Contractors and subcontractors agree:
a. That any facility to be used in the performance of the contract or subcontract or to benefit from the contract is not listed on the Environmental Protection Agency (EPA) List of Violating Facilities;

b. To comply with all the requirements of Section 114 of the Clean Air Act, as amended, 42 U.S.C. 1857 et seq. and Section 308 of the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in Section 114 and Section 308 of the Acts, respectively, and all other regulations and guidelines issued thereunder;

c. That, as a condition for the award of this contract, the contractor or subcontractor will notify the awarding official of the receipt of any communication from the EPA indicating that a facility to be used for the performance of or benefit from the contract is under consideration to be listed on the EPA List of Violating Facilities;

d. To include or cause to be included in any construction contract or subcontract which exceeds $100,000 the aforementioned criteria and requirements.

2) Contract Work Hours and Safety Standards Act (40 U.S.C. 327 through 333)

Where applicable, all contracts awarded by recipients in excess of $2,000 for construction contracts and in excess of $2,500 for other contracts that involve the employment of mechanics or laborers shall include a provision for compliance with Sections 102 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-333), as supplemented by Department of Labor regulations (29 CFR part 5). Under Section 102 of the Act, each contractor shall be required to compute the wages of every mechanic and laborer on the basis of a standard workweek of 40 hours. Work in excess of the standard workweek is permissible provided that the worker is compensated at a rate of not less than 1 1/2 times the basic rate of pay for all hours worked in excess of 40 hours in the workweek. Section 107 of the Act is applicable to construction work and provides that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

3) Copeland ``Anti-Kickback'' Act (18 U.S.C. 874 and 40 U.S.C. 276c)

All contracts and subgrants in excess of $2,000 for construction or repair awarded by recipients and subrecipients shall comply with the Copeland ``Anti-Kickback'' Act (18 U.S.C. 874), as supplemented by Department of Labor regulations (29 CFR part 3, ``Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States''). The Act provides that each contractor or subrecipient shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he is otherwise entitled. The recipient shall report all suspected or reported violations to HUD.

CONTRACTOR'S BID FOR WORK TO BE FINANCED
BY CITY OF IOWA CITY COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) FUNDS

TO: DOMESTIC VIOLENCE INTERVENTION PROGRAM (DVIP) of IOWA CITY ("OWNER")

1105 S. Gilbert Ct, Suite #300, Iowa City, IA 52240
ADDRESS

A. PROPOSAL

KENNEDY CONSTRUCTION, INC ("CONTRACTOR"), OFFERS TO FURNISH ALL LABOR AND MATERIALS TO ACCOMPLISH ALL OF THE WORK LISTED ON EXHIBIT A, ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF, AT THE PROPERTY LOCALLY KNOWN AS: (ADDRESS)
DVIP, IOWA CITY, IA, IOWA CITY, IOWA, FOR THE ABOVE-DESCRIBED OWNERS, SUBJECT TO THE SPECIAL CONDITIONS ON EXHIBIT B, ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF.

UPON ACCEPTANCE OF THIS BID BY THE OWNER, THIS CONTRACT SHALL CONSIST OF THE BID AND PROPOSAL, THE SPECIAL CONDITIONS IN EXHIBIT B, AND THE SPECIFICATIONS IN EXHIBIT A. EXHIBIT A INCLUDES THE SPECIFICATIONS, ALTERNATES, ADDENDA CONSISTING OF 5 PAGES AND IS ATTACHED AND INCORPORATED HEREIN.

NOTICE TO PROCEED

UPON ACCEPTANCE OF THIS BID AND SUBMISSION OF EVIDENCE OF SATISFACTORY INSURANCE COVERAGE, THE WORK WILL BE STARTED WITHIN 2 DAYS AFTER A NOTICE TO PROCEED IS DELIVERED TO CONTRACTOR. WORK SHALL NOT BEGIN UNTIL A PROCEED ORDER HAS BEEN ISSUED. EACH ALTERNATE WILL REQUIRE A SEPARATE PROCEED ORDER BEFORE WORK ON THAT ALTERNATIVE CAN BEGIN. THIS PROCEED ORDER WILL AUTHORIZE PAYMENT ON THAT ALTERNATE AS INDICATED IN EXHIBIT A.

TIME FOR COMPLETION

WORK SHALL BE COMPLETED WITHIN 89 DAYS AFTER CONTRACTOR PROCEEDS. IF THE CONTRACTOR IS UNABLE TO PERFORM WITHIN THIS PERIOD BECAUSE OF INCLEMENT WEATHER, THE TIME OR PERFORMANCE MAY BE EXTENDED IN WRITING, SIGNED BY OWNER AND CONTRACTOR AND APPROVED BY THE CITY. WHEN THE WORK HAS BEEN FULLY COMPLETED, ACCEPTED BY THE OWNER, AND ALL WAIVERS AND RELEASES OF LIENS ARE SUBMITTED, PAYMENT SHALL BE MADE.

B. BID

FOR THE CONSIDERATION NAMED THEREIN, THE CONTRACTOR PROPOSES TO FURNISH ALL THE MATERIALS AND DO ALL THE WORK DESCRIBED IN, AND IN ACCORDANCE WITH THIS CONTRACT FOR THE LUMP SUM PRICE OF $135,647.95. PAYMENT UNDER THIS CONTRACT DUE TO ALTERNATES OR DUE TO CHANGE ORDERS WILL BE ADDED TO OR SUBTRACTED FROM THE FINAL PAYMENT AS APPROPRIATE.

C. LEAD-BASED PAINT CONCESSION **APPLICABLE** _____ **YES** ✓ **NO**

IT IS UNDERSTOOD THAT UNDER FEDERAL REGULATIONS, A LEAD-BASED PAINT HAZARD MUST BE CORRECTED. THIS MAY INVOLVE AN ADDITIONAL LOAN OR CHANGE ORDER TO CORRECT THE LEAD-BASED PAINT HAZARD. FURTHERMORE, THE CONTRACTOR WILL COMPLY WITH THE LEAD-BASED PAINT POISONING PREVENTION ACT 24 CFR, PART 35, AS APPLICABLE.

CONTRACTOR

MARK O KENNEDY
NAME OF CONTRACTOR

Mark O Kennedy
SIGNATURE OF CONTRACTOR

931 MAIDEN LN, IOWA CITY, IA
ADDRESS OF CONTRACTOR

January 26th 2016
DATE OF PROPOSAL AND BID

ACCEPTANCE BY OWNER

Kristie Fortmann-Doser, Executive Director
NAME OF OWNER

Kristie Fortmann-Doser
SIGNATURE OF OWNER

February 19, 2016
DATE ACCEPTED

KENNEDY CONSTRUCTION, INC.
Commercial Residential
Steel Building Systems
kennedy.construction321@gmail.com

931 Maiden Lane
Iowa City, Iowa 52240
(319) 351-5454 (office) • (319) 351-0425 (fax)
www.KennedyConstructionInc.com

DVIP Restroom Remodel
Contractor Contact Information
General Contractor: Mark Kennedy 319-621-0524

DIVISION 1000: GENERAL CONDITIONS

General Contractor
Kennedy Construction, Inc.
931 Maiden Lane
Iowa City, IA 52240

Mark Kennedy, Site Supervisor
Cell 319-621-0524

Tyler Kennedy, Site Supervisor
Cell 319-325-1800

Jenna Kennedy, Office Administrator
Office 319-351-5454
Fax 319-351-0425

DIVISION 1000: GENERAL CONDITIONS

Architect
Thomas McInerney
1208 Marcy Street
Iowa City, Iowa 52240
319-331-0365

Project Owner
DVIP
1105 S. Gilbert Ct Suite 300
Iowa City, IA, 52240
Kristie Doser, Executive Director
319-356-9863 ext. 2

City of Iowa City
Building Department
Terry Goerdt 319-356-5124
Tim Hennes 319-356-5122

SUBCONTRACTORS

Electrical
Steve's Electric, Inc.
4041 Cosgrove Rd SW, Oxford, IA 52322
Office (319) 545-2118
Steve Rohret (319) 430-9406

HVAC
Westphal Heating and Cooling, Inc.
543 W. 7th Street, Monticello, Iowa 52310
Chris Westphal (319) 480-3354

Flooring Installation
Chuck Burgess
PO Box 5101, Coralville, IA 52241
Chuck Burgess (319) 631-8778

Painting
DL Bokhoven
PO Box 527, North Liberty, IA 52317
Darrell Bokhoven (319) 362-3043

SUBCONTRACTORS

Plumbing
Nelson and Sons Plumbing and Heating, Inc.
2190 140th St Kalona, IA 52247
Dianne Nelson (319) 356-2278

Framing
Tracy Hansen Framing
865 275th Street, West Branch, IA 52358
Tracy Hansen (319) 631-0986

Door Supplier
Iowa City Window and Doors
51 Hwy 1 West, Iowa City, IA 52246
Office (319) 351-3513
Liz Finnegan

KENNEDY CONSTRUCTION, INC.
Commercial Residential
Steel Building Systems
kennedy.construction321@gmail.com

931 Maiden Lane
Iowa City, Iowa 52240
(319) 351-5454 (office) • (319) 351-0425 (fax)
www.KennedyConstructionInc.com

EMERGENCY CONTACTS	**EMERGENCY CONTACTS**
Iowa City Fire Department 319-356-5265 2001 Lower Muscatine Rd Iowa City, IA 52240	**Iowa City Police Department** 319-356-5275 410 E Washington St Iowa City, IA 52240
EMERGENCY CONTACTS	**NOTES**
UI QuickCare Express: North Dodge 319-384-8822 1125 N Dodge St, Iowa City, IA 52245	

PLANS, SPECIFICATIONS, PROPOSAL AND CONTRACT
FOR THE

DVIP RESTROOM REMODELING PROJECT

IOWA CITY, IOWA

Issued January 26, 2016

PROJECT MANUAL

FOR

DVIP RESTROOM REMODELING PROJECT

OWNER: Domestic Violence Prevention Program
P.O. Box 3170
Iowa City, Iowa 52244

ARCHITECT: Thomas McInerney, Architect
1208 Marcy Street, Iowa City, IA 52240
Telephone: (319)331-0365
Project Architect: Thomas McInerney
e-mail: thomas@thomasarchitect.com

BIDS DUE: February 19, 2016
2:30 PM
Office of the Domestic Violence Prevention Program
1105 S Gilbert Court, Suite #300
Iowa City, Iowa 52240

PREBID MEETING: February 9, 2016, 10:00am
Location: Call or text (319)331-0365

ISSUE FOR BID: January 26, 2016

THIS PAGE

INTENTIONALLY

LEFT BLANK

TABLE OF CONTENTS

SPECIFICATIONS

DIVISION 22 — PLUMBING

DIVISION 23 — HEATING, VENTILATING, AND AIR CONDITIONING

DIVISION 26 — ELECTRICAL

END OF SECTION

THIS PAGE

INTENTIONALLY

LEFT BLANK

SECTION 01 0115 - LIST OF DRAWING SHEETS

A-000	Cover Sheet
A-100	Floor Plans
A-101	Floor Plans
A-401	Interior Elevations
A-402	Exterior Elevations
A-501	Details & Schedules
E01	Electrical - Demolition
E02	Electrical - New Work
E03	Electrical - Notes & Details
P01	Plumbing Demolition Plans
P02	Plumbing Plans
P03	Plumbing Schedule and Details

END OF SECTION

NOTICE TO BIDDERS
DVIP RESTROOM REMODELING PROJECT

Sealed proposals will be received by the Domestic Violence Intervention Program (DVIP), 1105 S. Gilbert Ct., Suite 300, Iowa City, Iowa, 52240 until 2:30 P.M. on the 19th day of February, 2016. Sealed proposals will be opened immediately thereafter. Bids submitted by fax machine shall not be deemed a "sealed bid" for purposes of this Project. Proposals received after this deadline will be returned to the bidder unopened. Proposals will be acted upon within 1 business day. A pre-bid meeting will be held on site in Iowa City, Iowa on February 9, 2016 at 10:30 AM (contact Architect at phone number 319-331-0365 for the location).

The Project will involve the following:

The project is an interior renovation of two existing public restrooms on the second floor of an existing building. The intent is to provide accessibility to the restrooms. The project also includes the replacement of the entry doors and hardware to each of the second floor dwelling units.

ENGINEER'S ESTIMATE:$ 115,000

The following limitations shall apply to this Project:
Working Days: 89 (eighty-nine days)
Specified Start Date: February 22, 2016
Liquidated Damages: $100 per day
Estimated completion date: May 20, 2016

Copies of said plans and specifications and form of proposal blanks may be secured at the Office of Thomas McInerney Architect Iowa City, Iowa, 52240, phone number (319) 331-0365, by bona fide bidders. A $20 non-refundable handling fee is required for each set of plans and specifications provided to bidders or other interested persons. The fee shall be in the form of a check, made payable to "Thomas McInerney Architect".

Prospective bidders are advised that the DVIP of Iowa City desires to employ minority contractors and subcontractors on DVIP projects. A listing of minority contractors can be obtained from the Iowa Department of Economic Development at (515) 242-4721 and the Iowa Department of Transportation Contracts Office at (515) 239-1422. By virtue of statutory authority, preference must be given to products and provisions grown and coal produced within the State of Iowa, and to Iowa domestic labor, to the extent lawfully required under Iowa Statutes. The Iowa reciprocal resident

bidder preference law applies to this Project. DVIP reserves the right to reject any or all proposals, and also reserves the right to waive technicalities and irregularities.

INSTRUCTIONS TO BIDDERS

ARTICLE 1 - DEFINITIONS

1. Bidding documents include the bidding requirements and the contract documents. The bidding requirements include the Advertisement or Invitation to bid, Instructions to Bidders, the Bid Form, other sample bidding and contract forms, and the Contract Forms including addenda issued prior to receipt of bids.

1.2 The contract documents for the work consist of the Owner/Contractor Agreement, the Conditions of the Contract (General and Supplementary Conditions), the Drawings, the Specifications and all addenda issued prior to and all modifications issued after execution of the Contract.

1.3 Definitions set forth in AIA document A201, "General Conditions of the Contract for Construction", 2007 edition, or in other Contract Documents are applicable to the bidding documents.

A. Addenda are written or graphic instruments issued by the Architect prior to execution of the Contract which modify or interpret the Bidding Documents by addition, deflection, clarifications or correction.

B. A bid is a complete and properly signed proposal to do the work or designated portion thereof for the sums stipulated therein, submitted in accordance with the bidding documents.

C. The base bid is the sum stated in the bid for which the Bidder offers to perform the work described in the bidding documents as the Base, to which work may be added, or from which work may be deducted for sums stated in alternate bids.

D. An alternate bid (or Alternate) is an amount stated in the bid to be added to or deducted from the amount of the base bid if the corresponding change in the work, as described in bidding documents, is accepted.

E. A unit price is an amount stated in the bid as a price per unit of measurement for materials or services as described in the bidding documents or in the contract documents.

F. A bidder is a person or entity who submits a bid.

G. A sub-bidder is a person or entity who submits a bid to a bidder for materials, equipment or labor for a portion of the work.

ARTICLE 2 – BIDDER'S REPRESENTATIONS

1. The bidder by making a bid represents that the bidder has read and understands the bidding documents, and the bid is made in accordance with those documents.

A. The Bidder has read and understands the bidding documents or contract documents, to the extent that such documentation relates to the work for which the bid is submitted.

B. The bidder has visited the site, has become familiar with local conditions under which the work is to be performed, and has correlated the bidder's personal observations with the requirements of the contract documents.

C. The bid is based upon the materials, equipment and systems required by the bidding documents without exception.

ARTICLE 3 – BIDDING DOCUMENTS

1. Documents

A. Complete sets of the bidding documents may be obtained from the office of Office of **Thomas McInerney Architect Iowa City, Iowa, 52240, phone number (319) 331-0365,** for the non-refundable handling fee as indicated.

B. Bidders shall use complete sets of bidding documents in preparing bids. Neither the Owner nor the Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of bidding documents. No partial sets will be issued.

C. In making copies of the bidding documents available on the above terms, the Owner and the Architect do so only for the purpose of obtaining bids for the work, and do nor confer license or grant permission for any other use of the bidding documents.

D. Interpretation or Correction of Bidding Documents

1. The bidder shall carefully study and compare the bidding documents with each other, and with other work being bid concurrently or presently under construction to the extent that it relates to the work for which the bid is being submitted, shall examine the site and local conditions, and shall at once report to the Architect errors, inconsistencies or ambiguities discovered.

2. Bidders and sub-bidders requiring clarification or interpretation of the bidding documents shall make a written request which shall reach the Architect at least nine days prior to the date for receipt of bids.

3. Interpretations, corrections and changes of the bidding documents will be made by addendum. Interpretations, corrections and changes to the bidding documents made in any other manner will not be binding, and bidders shall not rely upon them.

E. Substitutions

1. The materials, products and equipment described in the bidding documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution. Refer to for substitution requirements in Section 01 6000 - Product Requirements.

2. If the Architect approves a proposed substitution prior to receipt of bids, such approval will be set forth in an addendum. Bidders shall not rely upon approvals made in any other manner.

F. Addenda

1. Addenda will be mailed or delivered to all who are known by the Architect to have a complete set of bidding documents.

2. Copies of addenda will be made available for inspection wherever bidding documents are on file for that purpose.

3. No addenda will be issued later than four (4) days prior to the date for receipt of bids, except for any one or more of the following reasons:
    1. An addendum withdrawing the request for bids.
    2. An addendum which includes postponement of the date for receipt of bids.
    3. An addendum issued after receipt of bids and prior to execution of the

contract.

4. Each bidder shall ascertain prior to submitting a bid that he has received all addenda issued, and the bidder shall acknowledge their receipt in the proper location on the bid form.

ARTICLE 4 – BIDDING PROCEDURES

1. Form and Style of Bids

A. A separate copy of the bid form is contained within the back cover of this document.

B. Fill in all blanks on the bid form by typewriter or manually in ink.

C. Where so indicated by the makeup of the bid form, sums shall be expressed in both words and numerals, and in case of discrepancy between the two, the amount written in words will govern.

D. Interlineations, alterations or erasures shall be initialed by the signer of the bid.

E. All requested alternates shall be bid. If no change in the base bid is required, enter "No Change".

F. Where two or more bids for designated portions of the work have been requested, the bidder may, without forfeiture of the bid security, state the bidder's refusal to accept award of less than the combination of bids stipulated by the bidder. The bidder shall make no additional stipulation on the bid form, nor qualify the bid in any other manner.

G. Each copy of the bid shall include the legal name of the bidder and a statement that the bidder is a sole proprietor, a partnership, a corporation or some other legal entity. Each copy shall be signed by the person or persons legally authorized to bind the bidder to a contract.

H. No bid may be withdrawn for a period of 30 calendar days after the date of opening.

3. Submission of Bids

A. The form for bid and the bid security shall be enclosed in **separate** sealed opaque envelopes. Both envelopes shall be addressed to the party receiving the bids ("Domestic Violence Intervention Program, Iowa City, Iowa"), and shall be identified with the project name, the bidder's name and address, and the envelope's contents. If the bid is sent by mail, the sealed envelopes shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face of that envelope.

B. Bids shall be deposited at the designated location prior to the time and date for receipt of bids.
   1. Location: Office of the Domestic Violence Intervention Program, 1105 S Gilbert Court, Suite #300, Iowa City, Iowa, 52240.
   2. Time and Date: Bids due before and opened at 2:30 p.m., February 19, 2016.

C. *Bids received after the time and date for receipt of bids <u>will be returned</u> unopened.*

D. The bidder shall assume full responsibility for timely delivery at the location designated for receipt of bids.

E. Oral, telephonic, or telegraphic bids are invalid and will not receive consideration.

4.Modification or Withdrawal of Bid

A. A bid may not be modified, withdrawn or canceled the bidder after the stipulated time and date designated for the receipt of bids, and each bidder so agrees in submitting his bid.

B. Prior to the time and date designated for receipt of bids, a bid submitted may be modified or withdrawn by notice to the party receiving bids at the place designated for receipt of bids. Such notice shall be in writing, signed by the person or persons legally authorized to bind the bidder to a contract. If written notice is electronic, written confirmation from the person or persons legally authorized to bind the bidder to a contract shall also be mailed and postmarked on or before the date and time set for receipt of bids, and it shall be so worded as not to reveal the amount of the original bid.

C. Withdrawn bids may be resubmitted up to the time designated for the receipt of bids provided that they are then fully in conformance with these Instructions to Bidders.

ARTICLE 5 – CONSIDERATION OF BIDS

1. Opening of Bids

A. The properly identified bids received on time will be opened publicly and will be read aloud.

2. Rejection of Bids

A. The Owner will have the right to reject any or all bids, and to reject a bid not accompanied by the required bid security or by another data required by the bidding documents, or to reject a bid which is in any way incomplete or irregular.

3. Acceptance of Bid (Award)

A. It is the intent of the Owner to award a contract to the lowest responsive responsible bidder provided the bid has been submitted in accordance with the requirements of the bidding documents, and does not exceed the funds available. The Owner will have the right to waive informalities or irregularities in a bid received, and to accept the bid which, in his judgment, is in his own best interest.

B. The Owner will have the right to accept bid alternates in any order or combination, and to determine the low bidder on the basis of the sum of the base bid and the accepted alternates.

ARTICLE 6 – POST-BID INFORMATION

1. Submittals

A. The names of those persons, firms, companies or other parties with whom the bidder intends to enter into a major subcontract, together with the type of subcontracted work and approximate dollar amount of the subcontract will be submitted within 24 hours of bid opening by the apparent lowest responsive, responsible bidder.

B. The bidder shall, within seven (7) days of notification of selection for the award of a contract for the work, submit the following information to the Architect:

3. A designation of the work to be performed by the bidder with the bidder's own forces.
4. The proprietary names and the suppliers or principal items or system of materials and equipment proposed for the project.

C. The bidder will be required to establish to the satisfaction of the Architect and the Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the work described in the bidding documents.

D. Prior to the award of the contract, the Architect will notify the bidder in writing if either the Owner or Architect, after due investigation, has reasonable objection to any such proposed person or entity. If the Owner or the Architect has reasonable objection to such proposed person or entity, the bidder may, at the bidder's option:

1. Withdraw the bid.
2. Submit an acceptable substitute person or entity with an adjustment in the bid price to cover the difference in cost occasioned by such substitution.

D. The Owner may accept the adjusted bid price or may disqualify the bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

ARTICLE 8 – PRE-BID CONFERENCE

1. Conference

A. Bidder is encouraged to attend a pre-bid conference on January 9, 2016, 10:30am, on-site in Iowa City. Contact the office of Thomas McInerney Architect at (319) 331-0365 for the address.

FORM OF PROPOSAL

DVIP RESTROOM REMODELING PROJECT
IOWA CITY, IOWA

Name of Bidder: _____

Address of Bidder: _____

_____

_____

BIDS RECEIVED BEFORE: **2:30 PM local time on January 7, 2016**

TO: Domestic Violence Intervention Program (DVIP)
1105 S. Gilbert Ct., Suite 300
Iowa City, Iowa 52240

In response to your request for bids, and in compliance with the Procurement and Contracting Requirements, the undersigned proposes to furnish all labor, materials and equipment, all supervision, coordination, and all related incidentals necessary to perform the work to complete **DVIP RESTROOM REMODELING PROJECT** in strict accordance with the Project Manual and the Drawings dated January 26, 2016 including Addenda numbered _____, _____ and _____, inclusive, prepared by Thomas McInerney Architect, for the Base Bid Lump Sum of :

BASE BID

_____

_____

_____

_____ Dollars ($_____)

The undersigned bidder certifies that this proposal is made in good faith, and without collusion or connection with any other person or persons bidding on the work.

The undersigned bidder states that this proposal is made in conformity with the Contract Documents and agrees that, in the event of any discrepancies or differences between any conditions of this proposal and the Contract Documents prepared by Thomas McInerney Architect, the more specific shall prevail.

In submitting this Proposal, The undersigned agrees that the Bid will not be withdrawn for a period of thirty (30) consecutive calendar days following the date of the Bid Opening. Further, that if a Notice to Proceed or a prepared Agreement provided by the Owner is received at the business address identified below within the thirty (30) day period, the undersigned will, within ten (10) days of receipt, acknowledge acceptance of the contract award.

The undersigned will then execute and deliver to the Owner address the Agreement, the Procurement, and the certificates of insurance, and will proceed in accordance with requirements

of the Contract Documents for this project, and have the Project at Substantial Completion on or before May 20, 2016.

Firm: _____

Signature: _____

Printed Name: _____

Title: _____

Address: _____

_____

Phone: _____

Contact: _____

FORM OF AGREEMENT

THIS AGREEMENT is made and entered into by and between the Domestic Violence Intervention Program of Iowa City, Iowa ("Owner"), and _____ ("Contractor").

Whereas the Owner has prepared certain plans, specifications, proposal and bid documents dated the _____ day of _____, 20___, for the _____ _____ Project ("Project"), and

Whereas, said plans, specifications, proposal and bid documents accurately and fully describe the terms and conditions upon which the Contractor is willing to perform the Project.

NOW, THEREFORE, IT IS AGREED:

1. The Owner hereby accepts the attached proposal and bid documents of the Contractor for the Project, and for the sums listed therein.
2. This Agreement consists of the following component parts which are incorporated herein by reference:
    a. Addenda Numbers _____;
    b. "General Conditions of the Contract for Construction" AIA DOC A201-2007, as amended;
    c. Plans;
    d. Specifications and Supplementary Conditions;
    e. Notice to Bidders;
    f. Note to Bidders;
    g. Performance and Payment Bond;
    h. Restriction on Non-Resident Bidding on Non-Federal-Aid Projects;
    i. Contract Compliance Program (Anti-Discrimination Requirements);
    j. Proposal and Bid Documents; and
    k. This Instrument.

The above components are deemed complementary and should be read together. In the

event of a discrepancy or inconsistency, the more specific provision shall prevail.

3. Payments are to be made to the Contractor in accordance with the Supplementary Conditions.

The Project base bid submitted by form of proposal is in the amount of:

To be completed after award and no/100 Dollars ($ 0.00).

DATED this _____ day of _____, 20____.

Owner	Contractor
_____	_____
(Signature)	(Signature)
_____	_____
(Printed name)	(Printed name)
_____	_____
	(Title)
ATTEST:	ATTEST: _____
_____	(Title) _____
	(Company Official)

Approved By:

_____

GENERAL CONDITIONS

"General Conditions of the Contract for Construction" AIA DOC A201-2007 amended, shall apply except as amended in the Supplementary Conditions.

SUPPLEMENTARY CONDITIONS

INTENT

These Supplementary conditions amend and supplement the "General Conditions of the Contract for Construction", AIA document A201, 2007 edition and other provisions of the contract documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

Modifications to articles of AIA document to A201 (2007):

Refer to ARTICLE 1 - GENERAL PROVISIONS:

After subparagraph 1.2.3, add:

1.2.3.1 Miscellaneous definitions:

Products: Means new material, machinery, components, equipment, fixtures, and systems forming the Work, but does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components required for reuse.

Provide: To furnish or supply, plus install complete in place, tested and approved.

Furnish or Supply: To supply and deliver, unload, inspect for damage.

Install: To unpack, assemble, erect, apply, place, finish, cure, protect, clean, and ready for use.

The terms "approved," "required," and "as directed" refer to and indicate the work or materials that may be approved, required, or directed by the Architect acting as the Owner's representative.

The terms "shown," "indicated," "detailed," "noted," "scheduled," and terms of similar import, refer to requirements contained in the Contract Documents.

After Paragraph 1.6.1, add the following Paragraph:

1.6.2 Six copies of the Drawings and Project Manual will be furnished, free of charge, to the Contractor for use during the construction of the Work. The Contractor may secure additional copies of Project Manual and Drawings from the Architect at the Architect's usual charge for reproduction and handling.

Refer to ARTICLE 3 - CONTRACTOR

At the end of Paragraph 3.4.2, add the following words to the sentence:

"...or Construction Change Directive."

At the end of Subparagraph 3.7.1, add:

"The Owner, through the Architect, will submit for review and approval Drawings and Specifications to the appropriate public authorities and governmental agencies having jurisdiction."

Delete the last sentence at the end of Subparagraph 3.10.2:

"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."

Refer to ARTICLE 7 - CHANGES IN THE WORK

Add Paragraph 7.2.2 as follows:

7.2.2 Adjustment to the Contract Sum shall be based on mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation. The lump sum shall include the expenditures and savings of those performing the Work attributable to the change plus a percentage fee for overhead and profit and subsequent markup(s).

Expenditures and savings attributable to changes in the Work shall be limited to the following:

1) cost of labor, including social security, unemployment insurance, fringe benefits, and workmen's compensation insurance;

2) cost 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; and

4) cost of field supervision directly attributable to the change, and

5) costs of premium increases for bonds and insurance related to the Work.

In case of an increase in the Contract Sum, an allowance for overhead and profit determined as follows:

Fee for overhead and profit for those performing the Work attributable to the change is fifteen percent of the sum of 1), 2), 3), and 4) above.

The Contractor shall be allowed to add a five percent markup to the cost of change order work performed by a subcontractor.

A subcontractor shall be allowed to add a five percent markup to the cost of change order work performed by a sub subcontractor.

Delete Paragraph 7.3.6, and substitute the following:

7.3.6 If the Contractor does not respond promptly or disagrees with the adjustment in the Contract Sum, the Architect shall determine the adjustment in the Contract Sum based on the method provided in Paragraph 7.2.2, using reasonable expenditures and savings of those performing the Work attributable to the change.

Refer to ARTICLE 8 - TIME

Add the following Paragraph:

8.1.5: Contract Time is identified in Document 00 5200 - Agreement Form.

Refer to ARTICLE 9 - PAYMENTS AND COMPLETION

Delete Subparagraph 9.5.3 entirely.

Change paragraph 9.6.1 to read as follows:

9.6.1 After the Architect has issued a Certificate of Payment, the Owner shall make partial payments to the Contractor each month. To insure proper performance of the Contract, the Owner will retain 5% of each payment amount or such larger amount that will insure that there always remains a sufficient balance to complete the work, such retainage to be held until Final Acceptance of Work and shall so notify the Architect.

Delete the first two sentences from Subparagraph 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."

At the end of Paragraph 9.10.1, add the following:

"Final Payment shall be released after thirty-one (31) days following completion and final written acceptance by the Owner of all Work required by the Contract."

Refer to ARTICLE 11 - INSURANCE AND BONDS

Delete original Paragraph 11.1.2, and replace with the following:

11.1.2 Contractor's insurance policies required by this Section 11.1 shall be maintained without interruption from the date of commencement of the Work until final payment and termination of any coverage required to be maintained after final payment.

All Contractor's insurance policies shall contain provisions that the insurance companies have no right of recovery or subrogation against the "Additional Insured"; it being the intent that the insurance as effected shall protect all parties, and the Contractor's Carrier shall be primary (liable).

All Contractor's insurance policies shall name as "Additional Insured":

The Owner, its Employees, Agents and Assigns, and

The Architect, its Employees, Agents and Assigns.

The Contractor's liability insurance required by Subparagraph 11.1.1 shall be written on an "occurrence" basis for not less than the following coverages:

.1 Workers' Compensation and Employer's Liability:

Workers' Compensation: Statutory

Employer's Liability:

$500,000 per Accident.

$500,000 Disease, policy limit.

$500,000 Disease, each employee.

The Contractor's policy shall include the "Alternate Employer" endorsement specifically naming the Owner.

.2 Commercial General Liability (Including Premises--Operations; Products and Completed Operations; Contractual Liability; and Broad Form Property Damage):

General Aggregate: $2,000,000 and it shall apply, in total, to this project only.

Products - Completed Operations Aggregate: $2,000,000; maintain for one (1) year after final payment. Broad form property damage coverage shall include completed operations.

Personal Injury Limit: $1,000,000 each occurrence.

Fire Damage: $100,000 on any one fire.

Medical Expense: $5,000 on any one person.

Umbrella Excess Liability: $5,000,000 over primary insurance.

.3 Comprehensive Automobile Liability (owned, non-owned, and hired vehicles):

Combined Single Limit: $1,000,000 each occurrence.

The entire amount of the Contractor's liability insurance policy coverage limits shall be payable by the Contractor's insurer, with no deductible to be paid by, or self-insured retention to be attributed to, the Contractor unless this requirement is waived by the Owner. If policy is subject to any special exclusions or limitations not common to the type of coverage being provided, such exclusions or limitations shall be noted on the Certificate of Insurance.

In the event that any of the policies of insurance or insurance coverage identified on the Contractor's Certificate of Insurance are cancelled or modified, or in the event that the Contractor incurs liability losses, either due to activities under this Contract, or due to other activities not under this Contract but covered by the same insurance, and such losses exhaust the aggregate limits of Contractor's liability insurance, then in that event the Owner may at their discretion either suspend Contractor's operations or activities under this Contract or terminate this Contract, and withhold payment for work performed on the Contract.

At the end of Paragraph 11.1.3, add the following:

"Certificates shall be ACORD Form 25-S and AIA Document G715, Instruction Sheet and Supplemental Attachment for ACORD Certificate of Insurance 25-S."

Refer to Section 11.3 - PROPERTY INSURANCE:

Delete the words "**Unless otherwise provided, the Owner**..." from the beginning of the first sentence in Paragraph 11.3.1 and replace with the following: "**The Contractor**".

Delete Subparagraph 11.3.1.3 entirely.

Delete Paragraph 11.3.2 entirely.

Delete Paragraph 11.3.3 entirely.

Delete Paragraph 11.3.4 entirely.

Delete the words "**Owner as fiduciary**..." from the end of the first sentence in Paragraph 11.3.7 and replace with the following: "**Contractor as fiduciary**".

Change the beginning of the first sentence in Paragraph 11.3.8 to read as follows: "A loss insured under **Contractor's** property insurance shall be adjusted by the **Contractor** as fiduciary and made payable to the **Contractor** as fiduciary for the insureds.".

Delete Paragraph 11.3.9 entirely.

Delete Paragraph 11.3.10 entirely.

Refer to Section 11.4 - PERFORMANCE BOND AND PAYMENT BOND

At the end of Paragraph 11.4.1, add the following:

The Contractor shall provide the following bonds:

100 percent Payment Bond on AIA A311.

100 percent Performance Bond on AIA A312.

Deliver bonds within 3 days after execution of the Contract.

Refer to ARTICLE 13 - MISCELLANEOUS PROVISIONS

Delete the following words from the first sentence of Paragraph 13.1 GOVERNING LAW:

"...except that, if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4 ..."

Delete Paragraph 13.7 TIME LIMITS ON CLAIMS entirely and replace with the following:

13.7 TIME LIMITS ON CLAIMS

13.7.1 As between the Owner and Contractor:

.1 Before Substantial Completion. As to acts or failures to act occurring prior to the relevant date of Substantial Completion, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than such date of Substantial Completion;

.2 Between Substantial Completion and Final Certificate for Payment. As to acts or failures to act occurring subsequent to the relevant date of Substantial Completion and prior to issuance of the final Certificate for Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of issuance of the final Certificate for Payment; and

.3 After Final Certificate for Payment. As to acts or failures to act occurring after the relevant date of issuance of the final Certificate of Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of any act or failure to act by the Contractor pursuant to any Warranty provided under Paragraph 3.5, the date of any correction of the Work or failure to correct the Work by the Contractor under Paragraph 12.2, or the date of actual commission of any other act or failure to perform any duty or obligation by the Contractor or Owner, whichever occurs last.

END OF SECTION

SECTION 00 8100 - SPECIAL CONDITIONS

PART 1 - GENERAL

1. **Special Conditions** - Supplement for all CDBG Contracts and Agreements Exhibit B.

   A. Comply with all requirements of the attached: Supplement for all CDBG Contracts and Agreements Exhibit B.

   B. In accordance with special conditions — Supplement for all CDBG Contracts and Agreements Exhibit B, comply with the Prevailing Wage Rates set forth in the attached: General Decision Number: IA160037 01/22/2016 IA37.

2. **Special Conditions** - Regarding the safety of residents and confidentiality at the DVIP Shelter.

   A. The Domestic Violence Intervention Program will conduct background checks for criminal charges, child-abuse charges or convictions for the past five years for any and all persons representing the Contractor who may be on site at any time in association with subject project.

      1. The Contractor will be required to submit the names of all individuals schedule to visit the site to the Owner's representative at least 24 hours in advance of scheduled visit.

      2. All individuals who work on site in association with subject property will be required to sign a confidentiality statement regarding the location of the shelter, information concerning any individuals on site, and any activities witnessed on the premises.

Special Conditions Exhibit B

Supplement for all CDBG Contracts and Agreements

City of Iowa City is referred to as "recipient" below and _____ as "contractor and subcontractor." _____ and _____ agree to abide by the following provisions, as applicable:

1) Clean Air Act (42 U.S.C. 7401 et seq.) **and the Federal Water Pollution Control Act (33 U.S.C. 1251** et seq**.), as amended**.

Contracts and subgrants of amounts in excess of $100,000 shall comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401 **et seq**.) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251 **et seq**.). Violations shall be reported to HUD and the Regional Office of the Environmental Protection Agency (EPA).
Contractors and subcontractors agree:
a. That any facility to be used in the performance of the contract or subcontract or to benefit from the contract is not listed on the Environmental Protection Agency (EPA) List of Violating Facilities;

b. To comply with all the requirements of Section 114 of the Clean Air Act, as amended, 42 U.S.C. 1857 et seq. and Section 308 of the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in Section 114 and Section 308 of the Acts, respectively, and all other regulations and guidelines issued thereunder;

c. That, as a condition for the award of this contract, the contractor or subcontractor will notify the awarding official of the receipt of any communication from the EPA indicating that a facility to be used for the performance of or benefit from the contract is under consideration to be listed on the EPA List of Violating Facilities;

d. To include or cause to be included in any construction contract or subcontract which exceeds $100,000 the aforementioned criteria and requirements.

2) Contract Work Hours and Safety Standards Act (40 U.S.C. 327 through 333)

Where applicable, all contracts awarded by recipients in excess of $2,000 for construction contracts and in excess of $2,500 for other contracts that involve the employment of mechanics or laborers shall include a provision for compliance with Sections 102 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-333), as supplemented by Department of Labor regulations (29 CFR part 5). Under Section 102 of the Act, each contractor shall be required to compute the wages of every mechanic and laborer on the basis of a standard workweek of 40 hours. Work in excess of the standard workweek is permissible provided that the worker is compensated at a rate of not less than 1 1/2 times the basic rate of pay for all hours worked in excess of 40 hours in the workweek. Section 107 of the Act is applicable to construction work and provides that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

3) Copeland ``Anti-Kickback'' Act (18 U.S.C. 874 and 40 U.S.C. 276c)

All contracts and subgrants in excess of $2,000 for construction or repair awarded by recipients and subrecipients shall comply with the Copeland ``Anti-Kickback'' Act (18 U.S.C. 874), as supplemented by Department of Labor regulations (29 CFR part 3, ``Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States''). The Act provides that each contractor or subrecipient shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he is otherwise entitled. The recipient shall report all suspected or reported violations to HUD.

4) Davis-Bacon Act, as amended (40 U.S.C. 276a to 276a-5)

When required by Federal program legislation, all construction contracts awarded by the recipients and subrecipients of more than $2,000 shall include a provision for compliance with the Davis- Bacon Act (40 U.S.C. 276a to 276a-5) and as supplemented by Department of Labor regulations (29 CFR part 5, ``Labor Standards Provisions Applicable to Contracts Governing Federally Financed and Assisted Construction''). Under this Act, contractors shall be required to pay wages to laborers and mechanics at a rate not less than the minimum wages specified in a wage determination made by the Secretary of Labor. In addition, contractors shall be required to pay wages not less than once a week. The recipient shall place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation and the award of a contract shall be conditioned upon the acceptance of the wage determination. The recipient shall report all suspected or reported violations to HUD.

5) Debarment and Suspension (E.O.s 12549 and 12689)

No contract shall be made to parties listed on the General Services Administration's List of Parties Excluded from Federal Procurement or Nonprocurement Programs in accordance with E.O.s 12549 and 12689, ``Debarment and Suspension,'' as set forth at 24 CFR part 24. This list contains the names of parties debarred, suspended, or otherwise excluded by agencies, and contractors declared ineligible under statutory or regulatory authority other than E.O. 12549. Contractors with awards that exceed the small purchase threshold shall provide the required certification regarding its exclusion status and that of its principal employees.

6) Drug-Free Workplace Requirements

The Drug-Free Workplace Act of 1988 (42 U.S.C. 701) requires grantees (including individuals) of federal agencies, as a prior condition of being awarded a grant, to certify that they will provide drug-free workplaces. Each potential recipient must certify that it will comply with drug-free workplace requirements in accordance with the Act and with HUD's rules at 24 CFR part 24, subpart F.

7) Equal Employment Opportunity

Contractor shall comply with E.O. 11246, ``Equal Employment Opportunity,'' as amended by E.O. 11375, ``Amending Executive Order 11246 Relating to Equal Employment Opportunity,'' and as supplemented by regulations at 41 CFR part 60, ``Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor.''

During the performance of the contract, the Contractor agrees as follows:
a. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The Contractor will take affirmative action to insure that applicants are employed and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the municipality setting forth the provisions of the non-discrimination clause.

b. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

c. The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the property Owner, advising the labor union of workers' representative of the Contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

d. The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations and relevant orders of the Secretary of Labor.

e. The Contractor will furnish all information and reports required by Executive Order 11246 amended as of September 24, 1965, and by the rules, regulations and orders of the Secretary of Labor, or the Secretary of Housing and Urban Development, pursuant thereto, and will permit access to his books, records, and accounts by the property owner, the City, the Secretary of Housing and Urban Development and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.

f. In the event of the Contractor's non-compliance with the non-discrimination clauses of this contract or with any of such rules, regulations or orders, this contract may be cancelled, terminated or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or Federally funded constructed contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies involved as provided in Executive Order 11246 of September 24, 1965, or by rule, regulations or order of the Secretary of Labor, or as otherwise provided by law.

g. The Contractor will include the provisions of paragraphs (a) through (g) in every subcontract or purchase order unless exempted by rules, regulations or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the property owner may direct as a means of enforcing such provisions, including sanctions for non-compliance; provided, however, that, in the event the Contractor becomes involved in, or is threatened with litigation with a subcontractor or vendor as a result of such direction, the Contractor may request the United States to enter into such litigation to protect the interest of the United States.

In addition to the federal EEO requirements above, Contractor agrees that its employees and agents shall not discriminate against any person in employment or public accommodation because of race, religion, color, creed, gender identity, sex, national origin, sexual orientation, mental or physical disability, marital status, or age. “Employment” shall include but not be limited to hiring, accepting, registering, classifying, promoting, or referring to employment. "Public accommodation" shall include but not be limited to providing goods, services, facilities, privileges and advantages to the public.

8) Lobbying and Influencing Federal Employees
i. No Federal appropriated funds shall be paid, by or on behalf of the contractor, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the making of any Federal grant and the amendment or modification of any Federal grant.

ii. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any Federal grant, the contractor shall complete and submit Standard Form-LLL, “Disclosure of Lobby Activities,” in accordance with its instructions.

iii. The Recipient shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure."

9) Nonsegregated Facilities
The federally-assisted construction contractor certifies that she or he does not maintain or provide, for his employees, any segregated facilities at any of his establishments and that she or he does not permit his

employees to perform their services at any location, under his control, where segregated facilities are maintained. The federally-assisted construction contractor certifies that she or he will not maintain or provide, for his employees, segregated facilities at any of his establishments and that she or he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The federally assisted construction contractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this contract.

As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms, and washrooms, restaurants and other eating areas, timeclocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directives or are, in fact, segregated on the basis of race, color, religion, or national origin because of habit, local custom, or any other reason. The federally-assisted construction contractor agrees that (except where she or he has obtained identical certifications from proposed subcontractors for specific time periods) she or he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause and that she or he will retain such certifications in his files.

10) Section 3 of the Housing and Urban Development Act of 1968
Contractor agrees to comply with Section 3 requirements, the regulations set forth in 24 CFR 135, and to include the following language in all subcontracts executed under this Agreement:
a. The work to be performed under this contract is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of Section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by Section 3 shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

b. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement Section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.

c. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this Section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the Section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

d. The contractor agrees to include this Section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this Section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.

e. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135.

f. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

g. With respect to work performed in connection with Section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work

to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of Section 3 and section 7(b) agree to comply with Section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).

11) Women and Minority Owned Business Enterprises
Contractor shall use its best efforts to afford minority and women-owned business enterprises (at least fifty-one (51) percent owned and controlled by minority group members or women) the maximum practicable opportunity to participate in the performance of this Agreement.

12) Federal Labor Provisions

Applicability
The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.
A. 1. (i) Minimum Wages. All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section l(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible, place where it can be easily seen by the workers.
(ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
(2) The classification is utilized in the area by the construction industry; and
(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 12150140.)
(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including

the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 12150140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii) (b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

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

3. (i) Payrolls and basic records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section l(b)(2)(B) of the Davis-bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section l(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i). This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, DC 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

(b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
(1) That the payroll for the payroll period contains the information required to be maintained under 29 CFR 5.5 (a)(3)(i) and that such information is correct and complete;
(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;
(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph A.3.(ii)(b).
(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.
(iii) The contractor or subcontractor shall make the records required under subparagraph A.3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.
(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman ‟s hourly rate) specified in the contractor's or subcontractor ‟s registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of

Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

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

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract

6. Subcontracts. The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 of this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.

7. Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. (i) Certification of Eligibility. By entering into this contract the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1 01 0, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration..... makes, utters or publishes any statement knowing the same to be false..... shall be fined not more than $5,000 or imprisoned not more than two years, or both."

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

B. Contract Work Hours and Safety Standards Act. The provisions of this paragraph B are applicable only where the amount of the prime contract exceeds $100,000. As used in this paragraph, the terms "laborers" and

"mechanics" include watchmen and guards. **(1) Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.
(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in sub paragraph (1) of this paragraph.
(3) Withholding for unpaid wages and liquidated damages. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contract, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.
(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.
C. Health and Safety. The provisions of this paragraph C are applicable only where the amount of the prime contract exceeds $100,000.
(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.
(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, 40 USC 3701 et seq.
(3) The Contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The Contractor shall take such action with respect to any subcontract as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

13) Access and Maintenance of Records
The contractor must maintain all required records for five years after final payments are made and all other pending matters are closed.
At any time during normal business hours and as frequently as is deemed necessary, the contractor shall make available to the Iowa Department of Economic Development, the State Auditor, the General Accounting Office, and the Department of Housing and Urban Development, for their examination, all of its records pertaining to all matters covered by this contract and permit these agencies to audit, examine, make excerpts or transcripts from such records, contract, invoices, payrolls, personnel records, conditions of employment, and all other matters covered by this contract.

14) Civil Rights Provisions
As applicable, the Subcontractor agrees to comply with:
a. Title VI of the Civil Rights Act of 1964 as amended Title VI, codified at 42 U.S.C. § 2000d, prohibits racial discrimination by recipients of federal funds as follows: No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

b. Title VIII of the Civil Rights Act of 1968 as amended Title VIII of the Civil Rights Act of 1968, as amended by the Fair Housing Act of 1988, which is codified at 42 U.S.C. § 3604, prohibits discriminating against persons in the sale or rent or a dwelling based on disability. Discrimination includes a refusal to make reasonable accommodations in rules and policies, when such accommodations may be necessary to afford such person equal opportunity to use and enjoy a dwelling.

Iowa Civil Rights Act of 1965: The Iowa Civil Rights Act prohibits discrimination in employment based on positive HIV tests or on AIDS or the symptoms of AIDS and on the basis of pregnancy, childbirth, and related conditions. Also prohibited is employment discrimination based on age, race, creed, color, sex, national origin, religion, and disability. The Iowa Civil Rights Act is administered and enforced by the Iowa Civil Rights Commission (ICRC).
c. Section 109 of Title I of the Housing and Community Development Act of 1974 as amended
Section 109 is codified at 42 USC 5309 and provides that no person shall on the ground of race, color, national origin, religion, or sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with CDBG funds.
d. Americans with Disabilities Act of 1990 as amended
The Americans with Disabilities Act of 1990, as amended, prohibits private employers, state and local governments, employment agencies and labor unions from discriminating against qualified individuals with disabilities in job application procedures, hiring, firing, advancement, compensation, job training, and other terms, conditions, and privileges of employment. The ADA covers employers with 15 or more employees, including state and local governments.
e. Section 504 of the 1973 Rehabilitation Act
The Subcontractor agrees to comply with all Federal regulations issued pursuant to compliance with Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794), which prohibits discrimination against the individuals with disabilities or handicaps in any Federally assisted program. The Contractor shall provide the Subcontractor with any guidelines necessary for compliance with that portion of the regulations in force during the term of this Agreement.
f. Age Discrimination Act of 1975
This prohibits discrimination on the basis of age in programs or activities receiving Federal financial assistance.
g. Executive Order 11063

This Executive Order signed by President Kennedy "prohibits discrimination in the sale, leasing, rental, or other disposition of properties and facilities owned or operated by the federal government or provided with federal funds."

15) Prevailing Wage.

General Decision Number: IA150037 01/22/2016 IA37

Superseded General Decision Number: IA20140037

State: Iowa

Construction Type: Building

County: Johnson County in Iowa.

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

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of $10.15 for 2016 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is issued on or after January 1, 2015. If this contract is covered by the

EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/08/2016
1	01/22/2016

BRIA0001-007 05/05/2013

	Rates	Fringes
BRICKLAYER	$ 27.32	10.28

BRIA0001-009 07/01/2013

	Rates	Fringes
TILE SETTER	$ 25.27	9.30

CARP1260-014 05/01/2014

	Rates	Fringes
CARPENTER, Includes Drywall Hanging, Form Work, and Metal Stud Installation	$ 26.00	15.27

CARP2158-003 06/01/2014

	Rates	Fringes
MILLWRIGHT	$ 26.79	19.50

ENGI0234-013 05/01/2013

	Rates	Fringes
Power equipment operators:		
GROUP 1	$ 25.70	13.40
GROUP 2	$ 24.32	13.40
GROUP 3	$ 21.99	13.40

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1 - Backhoe; Crane; Excavators
GROUP 2 - Bulldozer; Forklift; Scraper
GROUP 3 - Bobcat/Skid Loader; Grader/Blade; Loader; Roller

IRON0089-005 05/01/2014

	Rates	Fringes
IRONWORKER (Ornamental, Reinforcing and Structural)	$ 26.67	16.68

LABO0309-009 05/01/2012

	Rates	Fringes
LABORER		
Mason Tender - Brick	$ 21.36	9.91
Mason Tender - Cement/Concrete	$ 21.36	9.91
Pipelayer	$ 21.36	9.91
Plasterer Tender	$ 21.36	9.91

* PAIN0447-006 05/05/2015

	Rates	Fringes
PAINTER, Excludes Drywall Finishing/Taping		
Brush and Roller	$ 22.35	9.69
Spray	$ 22.85	9.69

PLUM0125-013 05/01/2013

	Rates	Fringes
PIPEFITTER	$ 35.79	13.44

ROOF0182-005 05/01/2015

	Rates	Fringes
ROOFER	$ 22.66	10.09

TEAM0238-003 05/01/2015

	Rates	Fringes
TRUCK DRIVER	$ 25.54	5.60+a

a. Pension - $208.80 per week

SUIA2008-033 09/11/2008

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR	$ 14.05	0.00
CEMENT MASON/CONCRETE FINISHER	$ 17.12	2.38
DRYWALL FINISHER/TAPER	$ 20.88	0.00
ELECTRICIAN	$ 18.88	3.37
GLAZIER	$ 15.40	3.99
LABORER: Common or General	$ 14.35	3.62
LABORER: Landscape & Irrigation	$ 8.98	0.00
PLASTERER	$ 22.90	0.00
PLUMBER	$ 20.60	3.86
SHEET METAL WORKER	$ 14.60	2.54

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

==========

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

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

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey.

Example:
PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

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

Survey Rate Identifiers

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

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

Union Average Rate Identifiers

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

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

WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

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

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

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

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

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

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

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

END OF SECTION

SECTION 011000 - SUMMARY

PART 1 GENERAL

1.01 PROJECT

A. Project Name: DVIP RESTROOM REMODELING PROJECT.

B. Owner's Name: Domestic Violence Intervention Program of Iowa City.

C. Architect's Name: Thomas McInerney Architect.

D. The Project consists of the interior renovation of two existing public restrooms on the second floor of an existing building. The intent is to provide accessibility to the restrooms. The project also includes the replacement of the entry doors and hardware to each of the second floor dwelling units.

1.02 CONTRACT DESCRIPTION

A. Contract Type: A single prime contract based on a Stipulated Price as described in Document FG - Form of Agreement.

1.03 DESCRIPTION OF ALTERATIONS WORK

A. Scope of demolition and removal work is the responsibility of the Contractor.

B. Plumbing: Alter existing system and add new construction, keeping existing in operation.

C. HVAC: Alter existing system and add new construction, keeping existing in operation.

D. Electrical Power and Lighting: Alter existing system and add new construction, keeping existing in operation.

1.04 OWNER OCCUPANCY

B. OWNER intends to occupy the Project upon Substantial Completion.

C. Cooperate with OWNER to minimize conflict and to facilitate OWNER's operations.

D. Schedule the Work to accommodate OWNER occupancy.

1.05 CONTRACTOR USE OF SITE AND PREMISES

A. Arrange use of site and premises to allow:
   1. OWNER occupancy and continued operation.
   2. Use of site and premises by the public and adjacent Tenant.

B. Provide access to and from site as required by law, adjacent Property Owners and by OWNER:
   1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
   2. Do not obstruct roadways, sidewalks, or other public ways without permit.

C. Existing building spaces may not be used for storage.

D. Time Restrictions:

1. Prohibit the conduct of especially noisy interior and exterior work (over 90 decibels within 10 feet of source) between the hours of 6PM to 8AM.

1.06 WORK SEQUENCE

A. Coordinate construction schedule and operations with OWNER.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 012000 - PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Procedures for preparation and submittal of applications for progress payments.

B. Change procedures.

1.02 RELATED SECTIONS

A. Section FG - Form of Agreement: Contract Sum, payment period.

B. Section GC - General Conditions: Additional requirements for progress payments, final payment, changes in the Work.

C. Section SC - Supplementary Conditions: Percentage allowances for Contractor's overhead and profit.

D. Section 01 7700 - Closeout Procedures.

1.03 SCHEDULE OF VALUES

A. Submit a printed schedule on AIA Form G703 - Application and Certificate for Payment Continuation Sheet. Contractor's standard form or electronic media printout will be considered.

B. Submit Schedule of Values in duplicate within 15 days after date established in Notice to Proceed.

C. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification Section. Identify site mobilization, bonds and insurance, and Contractor's overhead and profit.

D. Revise schedule to list approved Change Orders, with each Application For Payment.

1.04 APPLICATIONS FOR PROGRESS PAYMENTS

A. Make applications for progress payments in amounts equal to ninety-five percent of the value of Work completed, including cost of materials and equipment properly stored at the jobsite, less the amount of previous payments.

B. Payment Period: Submit at intervals stipulated in the Agreement.

C. Present required information in typewritten form.

D. Form: AIA G702 Application and Certificate for Payment and AIA G703 - Continuation Sheet including continuation sheets when required.

E. Execute certification by signature of authorized officer.

F. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored Products.

G. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of Work.

H. Submit three copies of each Application for Payment.

I. Include the following with the application:
   1. Construction progress schedule, revised and current as specified in Section 01 3000 - Administrative Requirements.
   2. Partial release of liens from major Subcontractors and vendors.
   3. Affidavits attesting to off-site stored products.

J. When Architect requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

1.05 MODIFICATION PROCEDURES

A. Architect will advise of minor changes in the Work not involving an adjustment to Contract Sum or Contract Time as authorized by the Conditions of the Contract by issuing supplemental instructions on Architect's form.

B. Construction Change Directive: Architect may issue a document, signed by OWNER, instructing Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
   1. The document will describe changes in the Work, and will designate method of determining any change in Contract Sum or Contract Time.
   2. Promptly execute the change in Work.

C. Proposal Request: Architect may issue a document which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 15 days.

D. Contractor may propose a change by submitting a request for change to Architect, describing the proposed change and its full effect on the Work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation and a statement describing the effect on Work by separate or other contractors. Document any requested substitutions in accordance with Section 01 6000.

E. Computation of Change in Contract Amount:
   1. For change requested by Architect for work falling under a fixed price contract, the amount will be based on Contractor's price quotation.
   2. For change requested by Contractor, the amount will be based on the Contractor's request for a Change Order as approved by Architect.
   3. For pre-determined unit prices and quantities, the amount will based on the fixed unit prices.
   4. For change ordered by Architect without a quotation from Contractor, the amount will be determined by Architect based on the Contractor's substantiation of costs as specified for Time and Material work.

F. Substantiation of Costs: Provide full information required for

evaluation.

1. On request, provide following data:
   a. Quantities of products, labor, and equipment.
   b. Taxes, insurance, and bonds.
   c. Overhead and profit.
   d. Justification for any change in Contract Time.
   e. Credit for deletions from Contract, similarly documented.
2. Support each claim for additional costs with additional information:
   a. Origin and date of claim.
   b. Dates and times work was performed, and by whom.
   c. Time records and wage rates paid.
   d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
3. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.

G. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract on AIA G701.

H. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.

I. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.

J. Promptly enter changes in Project Record Documents.

1.06 APPLICATION FOR FINAL PAYMENT

A. Final Payment shall be the remaining balance of five percent of the final contract sum (contract retainage).

B. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.

C. Application for Final Payment will not be considered until the following have been accomplished:
   1. All closeout procedures specified in Section 01 7700 - Closeout Procedures .
   2. Owner's written acceptance of the completed Work.

D. Final Payment shall become due after 30 days following the Owner's final acceptance of the Work.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 012100 - ALLOWANCES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Cash allowances.

B. Contingency allowance.

1.02 RELATED SECTIONS

A. Section 01 2000 - Price and Payment Procedures: Additional payment and modification procedures.

1.03 CASH ALLOWANCES

A. Costs Included in Cash Allowances: Cost of product to Contractor or subcontractor, less applicable trade discounts, less applicable taxes.

B. Costs Not Included in Cash Allowances: Product handling at the site, including unloading, uncrating, and storage; protection of products from elements and from damage; and labor for installation and finishing.

C. Architect Responsibilities:
   1. Select products in consultation with OWNER and transmit decision to Contractor.
   2. Prepare Change Order.

D. Contractor Responsibilities:
   1. Obtain proposals from suppliers and offer recommendations.
   2. On notification of which products have been selected, execute purchase agreement with designated supplier.
   3. Arrange for and process shop drawings, product data, and samples. Arrange for delivery.

E. Differences in costs will be adjusted by Change Order.

1.04 CONTINGENCY ALLOWANCE

A. Contractor's costs for products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit will be included in Change Orders authorizing expenditure of funds from this Contingency Allowance.

B. Funds will be drawn from the Contingency Allowance only by Change Order.

C. At closeout of Contract, funds remaining in Contingency Allowance will be credited to Owner by Change Order.

1.05 INSPECTING AND TESTING ALLOWANCES

A. Costs Included in Inspecting and Testing Allowances: Cost of engaging an inspecting or testing agency; execution of inspecting and tests; and reporting results.

B. Costs Not Included in the Inspecting and Testing Allowances:
   1. Costs of incidental labor and facilities required to assist

inspecting or testing agency.
2. Costs of testing services used by Contractor separate from Contract Document requirements.
3. Costs of retesting upon failure of previous tests as determined by Architect.

C. Payment Procedures:
1. Submit one copy of the inspecting or testing firm's invoice with next application for payment.
2. Pay invoice on approval by Architect.

D. Differences in cost will be adjusted by Change Order.

1.06 ALLOWANCES SCHEDULE

A. Contingency Allowance: Include the stipulated sum/price of **$3,000** for use upon Owner's instructions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 013000 - ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Preconstruction meeting.

B. Progress meetings.

C. Construction progress schedule.

D. Submittals for review, information, and project closeout.

E. Number of copies of submittals.

F. Submittal procedures.

1.02 RELATED SECTIONS

A. Section 01 1000 - Summary.

B. Section 01 7700 - Closeout Procedures.

C. Section 01 7800 - Closeout Submittals: Project record documents.

D. Section 01 7900 - Demonstration and Training: Instruction of Owner's operating personnel.

1.04 PROJECT COORDINATION

A. Project Coordinator: Owner's designated contact person.

B. Cooperate with the Project Coordinator in allocation of mobilization areas of site; for field offices and sheds, for construction access, traffic, and parking facilities.

C. During construction, coordinate use of site and facilities through the Project Coordinator.

D. Comply with instructions of the Project Coordinator for use of temporary utilities and construction facilities.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRECONSTRUCTION MEETING

A. Architect will schedule a meeting after Owner's "Notice to Proceed".

B. Attendance Required:
   1. OWNER.
   2. Architect.
   3. Contractor.
   4. Major Subcontractors.

C. Agenda:
   1. Distribution of Contract Documents.
   2. Submission of list of Subcontractors, list of Products, schedule of values, and progress schedule.
   3. Designation of personnel representing the parties to Contract, the Owner's jobsite representative, the Contractor's key administrative

and field personnel, and Architect.
4. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
5. Scheduling.

D. Architect will record minutes and distribute copies within three days after meeting to participants, with two copies to OWNER, Contractor participants, and those affected by decisions made.

3.02 CONTRACTOR'S PROGRESS MEETINGS

A. Schedule and administer meetings throughout progress of the Work at maximum monthly intervals.

B. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.

C. Attendance Required: Job superintendent, major Subcontractors and suppliers, OWNER, Architect, as appropriate to agenda topics for each meeting.

D. Agenda:
1. Review minutes of previous meetings.
2. Review of Work progress.
3. Field observations, problems, and decisions.
4. Identification of problems which impede planned progress.
5. Review of submittals schedule and status of submittals.
6. Review of off-site fabrication and delivery schedules.
7. Maintenance of progress schedule.
8. Corrective measures to regain projected schedules.
9. Planned progress during succeeding work period.
10. Maintenance of quality and work standards.
11. Effect of proposed changes on progress schedule and coordination.
12. Other business relating to Work.

E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, OWNER, participants, and those affected by decisions made.

3.03 CONSTRUCTION PROGRESS SCHEDULE - See Section 01 3216

A. Within 15 days after date established in Notice to Proceed, submit preliminary schedule defining planned operations for the first 60 days of Work, with a general outline for remainder of Work.

B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.

C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
1. Include written certification that major contractors have reviewed and accepted proposed schedule.

D. Incorporate the following schedule for contract closeout:
1. Closeout Meeting: Schedule at least 45 days prior to anticipated date of Substantial Completion. Submit initial copy of Operation

and Maintenance Manuals for review.
2. Demonstration and Instruction: Schedule at least 15 days prior to Substantial Completion.
3. Contractor's Punchlist and Notification of Substantial Completion: Submit at least 10 days prior to anticipated date of Substantial Completion.
   a. Architect will schedule verification inspection of Work within 5 days of receipt of Contractor's Notice of Substantial Completion.
4. Architect will issue "Certificate of Substantial Completion" in accordance with provisions in the Conditions of the Contract.
5. Closeout Submittals: See Section 01 7800 - Execution and Closeout Requirements. Submit within 25 days following Substantial Completion.
6. Final Change Order: Architect will prepare and issue within 5 days after Substantial Completion.
7. Contractor's Notification of Final Completion: Architect will schedule Final Inspection of the Work within 5 days of receipt of Contractor's Notice.
8. Architect will issue Final Certificate for Payment upon Owner's Final Acceptance of the Work.
9. Final Payment: See Section 01 2000 - Price and Payment Procedures. Payment due and payable 30 days after Owner's Final Acceptance of the Work.

E. Submit updated schedule with each Application for Payment.

3.04 SCHEDULE FORMAT

A. Bar Charts: Include a separate bar for each major portion of Work or operation.

B. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.

C. Sheet Size: Multiples of 8-1/2 x 11 inches.

D. Scale and Spacing: To allow for notations and revisions.

3.05 SUBMITTALS FOR REVIEW

A. When the following are specified in individual sections, submit them for review:
   1. Product data.
   2. Shop drawings.
   3. Samples for selection.
   4. Samples for verification.

B. Submit to Architect for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.

C. Samples will be reviewed only for aesthetic, color, or finish selection.

D. After review, provide copies and distribute in accordance with

Submittal Procedures article below and for record documents purposes described in Section 01 7800 - CLOSEOUT SUBMITTALS.

3.06 SUBMITTALS FOR INFORMATION

A. When the following are specified in individual sections, submit them for information:
   1. Design data.
   2. Certificates.
   3. Test reports.
   4. Inspection reports.
   5. Manufacturer's instructions.
   6. Manufacturer's field reports.
   7. Other types indicated.

B. Submit for Architect's knowledge as contract administrator or for OWNER. No action will be taken.

3.07 SUBMITTALS FOR PROJECT CLOSEOUT

A. When the following are specified in individual sections, submit them at project closeout:
   1. Project record documents.
   2. Operation and maintenance data.
   3. Warranties.
   4. Bonds.
   5. Other types as indicated.

B. Submit for OWNER's benefit during and after project completion.

3.08 NUMBER OF COPIES OF SUBMITTALS

A. Documents for Review:
   1. Small Size Sheets, Not Larger Than 8-1/2 x 11 inches: Submit the number of copies which the Contractor requires, plus two copies which will be retained by the Architect.
   2. Larger Sheets, Not Larger Than 24 x 36 inches: Submit one reproducible transparency and two opaque reproduction.

B. Documents for Information: Submit two copies.

C. Documents for Project Closeout: Make three reproductions of submittal originally reviewed. Submit one extra of submittals for information.

D. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
   1. After review, produce duplicates.
   2. Retained samples will not be returned to Contractor unless specifically so stated.

3.09 SUBMITTAL PROCEDURES

A. Transmit each submittal with approved form.

B. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.

C. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as

appropriate on each copy.

D. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.

E. Deliver submittals to Architect at business address.

F. Schedule submittals to expedite the Project, and coordinate submission of related items.

G. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.

H. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.

I. Provide space for Contractor and Architect review stamps.

J. When revised for resubmission, identify all changes made since previous submission.

K. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.

L. Submittals not requested will not be recognized or processed.

3.10 ATTACHED FORMS

A. Transmittal Form for "Construction Submittals".

END OF SECTION

CONSTRUCTION SUBMITTAL

Project No.: 15.42

NOTE: A Construction Submittal is required for each Specification Section.
DO NOT bind together separate submittals from different Specification Sections.

This form is to be used *only* if there are no deviations from the Contract Documents.

Project Description: *(Project Title, Facility Name and Address)*

DVIP RESTROOM REMODELING PROJECT
IOWA CITY, IOWA

SUBMITTAL TYPE:

	Re-Submittal	Information (Waiver)	**Comply with all submittal requirements in the Project Manual as per Section 013000 and the particular Specification Section for which you are transmitting material.**
Product Data	Shop Drawings	Quality Control/Assurance	
Test Reports	Certificate	Contract Closeout	
Design Data	Samples	Other	

TO:

FROM:

DATE:

Specification Number and Title:

Part	Type	Description

Contractor's Certification:

We have verified that all material or equipment contained in this submittal meets all the requirements specified or shown **(no exceptions)**.

Contractor/Contractor's Representative *(Print Name)* Signature

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Quality assurance submittals.

B. Mock-ups.

C. Control of installation.

D. Tolerances.

E. Testing and inspection services.

F. Manufacturers' field services.

1.02 RELATED SECTIONS

A. Section 01 3000 - Administrative Requirements: Submittal procedures.

B. Section 01 6000 - Product Requirements: Requirements for material and product quality.

1.03 REFERENCES

1.04 SUBMITTALS

A. Testing Agency Qualifications:
   1. Prior to start of Work, submit agency name, address, and telephone number, and names of full time specialist and responsible officer.

B. Test Reports: After each test/inspection, promptly submit two copies of report to Architect and to Contractor.
   1. Include:
      a. Date issued.
      b. Project title and number.
      c. Name of inspector.
      d. Date and time of sampling or inspection.
      e. Identification of product and specifications section.
      f. Location in the Project.
      g. Type of test/inspection.
      h. Date of test/inspection.
      i. Results of test/inspection.
      j. Conformance with Contract Documents.
      k. When requested by Architect, provide interpretation of results.
   2. Test reports are submitted for Architect's knowledge as contract administrator or for the OWNER, for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

C. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect, in quantities specified for Product Data.
   1. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and

certifications as appropriate.
2. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect.

D. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the OWNER's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

E. Manufacturer's Field Reports: Submit reports for Architect's benefit as contract administrator or for OWNER.
1. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1.05 TESTING AND INSPECTION AGENCIES

A. OWNER will employ and pay for services of an independent testing agency to perform specified testing and inspection.

B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply with manufacturers' instructions, including each step in sequence.

C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.

D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Have Work performed by persons qualified to produce required and specified quality.

F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.

G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 MOCK-UPS

A. Tests will be performed under provisions identified in this section

and identified in the respective product specification sections.

B. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.

C. Accepted mock-ups shall be a comparison standard for the remaining Work.

D. Where mock-up has been accepted by Architect and is specified in product specification sections to be removed, remove mock-up and clear area when directed to do so.

3.03 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

3.04 TESTING AND INSPECTION

A. See individual specification sections for testing required.

B. Testing Agency Duties:
   1. Test samples of mixes submitted by Contractor.
   2. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
   3. Perform specified sampling and testing of products in accordance with specified standards.
   4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
   5. Promptly notify Architect and Contractor of observed irregularities or non-conformance of Work or products.
   6. Perform additional tests and inspections required by Architect.
   7. Submit reports of all tests/inspections specified.

C. Limits on Testing/Inspection Agency Authority:
   1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
   2. Agency may not approve or accept any portion of the Work.
   3. Agency may not assume any duties of Contractor.
   4. Agency has no authority to stop the Work.

D. Contractor Responsibilities:
   1. Deliver to agency at designated location, adequate samples of materials proposed to be used which require testing, along with proposed mix designs.
   2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
   3. Provide incidental labor and facilities:
      a. To provide access to Work to be tested/inspected.

b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
c. To facilitate tests/inspections.
d. To provide storage and curing of test samples.

4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
6. Arrange with OWNER's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.

E. Re-testing required because of non-conformance to specified requirements shall be performed by the same agency on instructions by Architect. Payment for re testing will be charged to the Contractor by deducting testing charges from the Contract Price.

3.05 MANUFACTURERS' FIELD SERVICES

A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.

B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.06 DEFECT ASSESSMENT

A. Replace Work or portions of the Work not conforming to specified requirements.

B. If, in the opinion of Architect, it is not practical to remove and replace the Work, Architect will direct an appropriate remedy or adjust payment.

END OF SECTION

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Temporary utilities.

B. Temporary telephone service.

C. Temporary sanitary facilities.

D. Temporary Controls: Barriers, enclosures, and fencing.

E. Security requirements.

F. Vehicular access and parking.

G. Waste removal facilities and services.

H. Project identification sign.

1.02 TEMPORARY UTILITIES

A. Provide and pay for all electrical power, lighting, heating and cooling, and ventilation required for construction purposes.

B. Existing facilities may not be used.

C. New permanent facilities may not be used.

D. Use trigger-operated nozzles for water hoses, to avoid waste of water.

1.03 TELEPHONE SERVICE

A. Provide, maintain, and pay for telephone service to field office at time of project mobilization.

B. Provide, maintain and pay for facsimile service and a dedicated telephone line to field office at time of project mobilization.

1.04 TEMPORARY SANITARY FACILITIES

A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.

B. Maintain daily in clean and sanitary condition.

1.05 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.

C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.06 EXTERIOR ENCLOSURES

A. Provide temporary insulated weather tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

1.07 INTERIOR ENCLOSURES

A. Provide temporary partitions and ceilings as indicated to separate work areas from OWNER-occupied areas, to prevent penetration of dust and moisture into OWNER-occupied areas, and to prevent damage to existing materials and equipment.

B. Construction: Framing and reinforced polyethylene sheet materials with closed joints and sealed edges at intersections with existing surfaces:

1.08 SECURITY

A. Provide security and facilities to protect Work, existing facilities, and OWNER's operations from unauthorized entry, vandalism, or theft.

B. Coordinate with OWNER's security program.

1.09 VEHICULAR ACCESS AND PARKING

A. Coordinate access and haul routes with governing authorities and OWNER.

B. Provide and maintain access to fire hydrants, free of obstructions.

C. Provide means of removing mud from vehicle wheels before entering streets.

D. Designated existing on-site roads may be used for construction traffic.

E. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.

1.10 WASTE REMOVAL

A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.

B. Provide containers with lids. Remove trash from site periodically.

C. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.

D. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

1.11 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary utilities, equipment, facilities, materials, prior to

Substantial Completion inspection.

B. Remove underground installations to a minimum depth of 2 feet. Grade site as indicated.

C. Clean and repair damage caused by installation or use of temporary work.

D. Restore existing facilities used during construction to original condition.

E. Restore new permanent facilities used during construction to specified condition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. General product requirements.

B. Transportation, handling, storage and protection.

C. Product option requirements.

D. Substitution limitations and procedures.

E. Spare parts and maintenance materials.

1.02 RELATED SECTIONS

A. Section 01 4000 - Quality Requirements: Product quality monitoring.

1.03 SUBMITTALS

A. Proposed Products List: Submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
   1. Submit within 15 days after date of Notice to Proceed.
   2. For products specified only by reference standards, list applicable reference standards.

B. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

C. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

D. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
   1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

E. Indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

PART 2 PRODUCTS

2.01 NEW PRODUCTS

A. Provide new products unless specifically required or permitted by the Contract Documents.

2.02 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.

C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.03 SPARE PARTS AND MAINTENANCE PRODUCTS

A. Provide spare parts, maintenance, and extra products of types and in quantities specified in individual specification sections.

B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 EXECUTION

3.01 SUBSTITUTION PROCEDURES

A. Substitutions may be considered when a product becomes unavailable through no fault of the Contractor.

B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.

C. A request for substitution constitutes a representation that the submitter:
   1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
   2. Will provide the same warranty for the substitution as for the specified product.
   3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to OWNER.
   4. Waives claims for additional costs or time extension which may subsequently become apparent.
   5. Will reimburse OWNER and Architect for review or redesign services associated with acceptance of substitutions and re-approval by authorities.

D. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.

E. Substitution Submittal Procedure:
   1. Submit three copies of request for substitution for consideration. Limit each request to one proposed substitution. Requests shall be submitted on Form 01 6000A: REQUEST/CERTIFICATION FOR PROPOSED SUBSTITUTE PRODUCTS (this form is found after the end of this Section).
   2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence. Burden of proof is on proposer.
   3. Thomas McInerney Architect will notify Contractor in writing of decision to accept or reject request.

3.02 TRANSPORTATION AND HANDLING

A. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.

B. Transport and handle products in accordance with manufacturer's instructions.

C. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.

D. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.

E. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

3.03 STORAGE AND PROTECTION

A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.

B. Store and protect products in accordance with manufacturers' instructions.

C. Store with seals and labels intact and legible.

D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.

E. For exterior storage of fabricated products, place on sloped supports above ground.

F. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.

G. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

H. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.

I. Prevent contact with material that may cause corrosion, discoloration, or staining.

J. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

K. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

FORM 01 6000A

REQUEST/CERTIFICATION FOR PROPOSED SUBSTITUTE PRODUCTS

TO: _____

PROJECT: _____

BID DATE: _____

The undersigned hereby states the following:

Having examined the Drawings, Specifications and other Bidding Documents, and being familiar with the conditions surrounding the installation of materials/products/systems herein proposed for acceptance for the above project, do hereby certify that the function, appearance, quality and performance of the following:

Complies with requirements contained in the Drawings and the following specifications sections:

Upon acceptance of the above materials/products/system, full compliance with the proposed Contract Documents shall be maintained.

Submitted by:

_____
Signature Title

_____
Firm

_____
Address

_____
Telephone Date

Signature shall be by person having authority to legally bind his firm to the above terms. Failure to provide legally binding signature will result in retraction of approval

SECTION 017300 - EXECUTION REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Examination, preparation, and general installation procedures.

B. Requirements for alterations work, including selective demolition, except removal, disposal, and/or remediation of hazardous materials and toxic substances.

C. Pre-installation meetings.

D. Cutting and patching.

E. Laying out the work.

F. Cleaning and protection.

G. Starting of systems and equipment.

1.02 RELATED SECTIONS

A. Section 01 1000 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated equipment and materials.

B. Section 01 5000 - Temporary Facilities and Controls: Temporary exterior enclosures, heating, cooling, and ventilating facilities.

D. Section 01 7700 - Closeout Procedures: Closeout procedures related to achieving Substantial Completion and Final Completion of the Work.

E. Section 01 7800 - Closeout Submittals: Project record documents, operation and maintenance data, warranties and bonds.

G. Section 01 7900 - Demonstration and Training: Training Owner personnel in operation and maintenance of equipment and systems.

H. Individual Product Specification Sections:
   1. Advance notification to other sections of openings required in work of those sections.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Survey work: Submit name, address, and telephone number of Surveyor before starting survey work.
   1. On request, submit documentation verifying accuracy of survey work.
   2. Submit a copy of site drawing signed by the Land Surveyor, that the elevations and locations of the work are in conformance with Contract Documents.
   3. Submit surveys and survey logs for the project record.

C. Cutting and Patching: Submit written request in advance of cutting or alteration which affects:
   1. Structural integrity of any element of Project.
   2. Integrity of weather exposed or moisture resistant element.

3. Efficiency, maintenance, or safety of any operational element.
4. Visual qualities of sight exposed elements.

D. Project Record Documents: Accurately record actual locations of capped and active utilities.

1.05 PROJECT CONDITIONS

A. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.

B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.

C. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

D. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere.

E. Erosion and Sediment Control: Plan and execute work by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
1. Provide temporary measures such as berms, dikes, and drains, to prevent water flow.
2. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.

F. Rodent Control: Provide methods, means, and facilities to prevent rodents from accessing or invading premises.

G. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.

1.06 COORDINATION

A. See Section 01 1000 - Summary, for occupancy-related requirements.

B. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements.

C. Notify affected utility companies and comply with their requirements.

D. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.

E. Coordinate space requirements, supports, and installation of mechanical and electrical work which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

F. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.

G. Coordinate completion and clean-up of work of separate sections.

H. After OWNER occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of OWNER's activities.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

A. New Materials: As specified in product sections; match existing products and work for patching and extending work.

B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.

C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.

B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.

C. Examine and verify specific conditions described in individual specification sections.

D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.

E. Verify that utility services are available, of the correct characteristics, and in the correct locations.

F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in

contact or bond.

3.03 PREINSTALLATION MEETINGS

A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.

B. Require attendance of parties directly affecting, or affected by, work of the specific section.

C. Notify Architect four days in advance of meeting date.

D. Prepare agenda and preside at meeting:
   1. Review conditions of examination, preparation and installation procedures.
   2. Review coordination with related work.

E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, OWNER, participants, and those affected by decisions made.

3.04 LAYING OUT THE WORK

A. Verify locations of survey control points prior to starting work.

B. Promptly notify Architect of any discrepancies discovered.

C. Contractor shall locate and protect reference points.

D. Control datum for survey is that indicated on Drawings.

E. Protect and preserve permanent reference points during construction.

F. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.

G. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect.

H. Utilize recognized engineering survey practices.

I. Establish a minimum of two permanent bench marks on site, referenced to established control points. Record locations, with horizontal and vertical data, on project record documents.

J. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
   1. Site improvements including pavements; stakes for grading and fill placement; utility locations, slopes, and invert elevations.
   2. Grid or axis for structures.
   3. Building foundation and ground floor elevations.

K. Periodically verify layouts by same means.

L. Maintain a complete and accurate log of control and survey work as it progresses.

3.05 GENERAL INSTALLATION REQUIREMENTS

A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.

B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.

C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.

D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.

E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.06 ALTERATIONS

A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
   1. Verify that construction and utility arrangements are as shown.
   2. Report discrepancies to Architect before disturbing existing installation.
   3. Beginning of alterations work constitutes acceptance of existing conditions.

B. Separate areas in which alterations are being conducted from other areas that are still occupied.
   1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 5000 in locations indicated on drawings.

C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
   1. Where openings in exterior enclosure exist, provide construction to make exterior enclosure weatherproof.
   2. Insulate existing ducts or pipes that are exposed to outdoor ambient temperatures by alterations work.

D. Remove existing work as indicated and as required to accomplish new work.
   1. Remove items indicated on drawings.
   2. Relocate items indicated on drawings.
   3. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
   4. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.

E. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove, relocate, and extend existing systems to accommodate new construction.

1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
   a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
   b. Provide temporary connections as required to maintain existing systems in service.
4. Verify that abandoned services serve only abandoned facilities.
5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.

F. Protect existing work to remain.
   1. Prevent movement of structure; provide shoring and bracing if necessary.
   2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
   3. Repair adjacent construction and finishes damaged during removal work.
   4. Patch as specified for patching new work.

G. Adapt existing work to fit new work:
   1. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.
   2. Where removal of partitions or walls results in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.
   3. Where a change of plane of 1/4 inch or more occurs in existing work, submit recommendation for providing a smooth transition for Architect review and request instructions.

H. Refinish existing surfaces as indicated:
   1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
   2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.
   3. Patch as specified for patching new work.

I. Clean existing systems and equipment.

J. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.

K. Do not begin new construction in alterations areas before demolition is complete.

L. Comply with all other applicable requirements of this section.

3.07 CUTTING AND PATCHING

A. Execute cutting and patching including excavation and fill to complete the work, to uncover work in order to install improperly sequenced work, to remove and replace defective or non-conforming work, to remove samples of installed work for testing when requested, to provide openings in the work for penetration of mechanical and electrical work, to execute patching to complement adjacent work, and to fit products together to integrate with other work.

B. Execute work by methods to avoid damage to other work, and which will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.

C. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.

D. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.

E. Restore work with new products in accordance with requirements of Contract Documents.

F. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

G. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.

H. Make neat transitions. Patch work to match adjacent work in texture and appearance. Where new work abuts or aligns with existing, perform a smooth and even transition.

I. Patch or replace surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. Repair substrate prior to patching finish. Finish patches to produce uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest intersections.

3.08 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.09 PROTECTION OF INSTALLED WORK

A. Protect installed work from damage by construction operations.

B. Provide special protection where specified in individual specification sections.

C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

G. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

3.10 STARTING SYSTEMS

A. Coordinate schedule for start-up of various equipment and systems.

B. Notify Architect and owner seven days prior to start-up of each item.

C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.

D. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.

E. Verify that wiring and support components for equipment are complete and tested.

F. Execute start-up under supervision of applicable Contractor personnel and manufacturer's representative in accordance with manufacturers' instructions.

G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.

H. Submit a written report that equipment or system has been properly installed and is functioning correctly.

3.11 DEMONSTRATION AND INSTRUCTION

A. See Section 01 7900 - Demonstration and Training.

3.12 ADJUSTING

A. Adjust operating products and equipment to ensure smooth and unhindered operation.

B. Testing, adjusting, and balancing HVAC systems: See Section 23 05 93.

3.13 FINAL CLEANING

A. Execute final cleaning prior to final project assessment.
   1. Clean areas to be occupied by OWNER prior to final completion before OWNER occupancy.

B. Use cleaning materials that are nonhazardous.

C. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.

D. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.

E. Clean filters of operating equipment.

F. Clean debris from roofs, gutters, downspouts, and drainage systems.

G. Clean site; sweep paved areas, rake clean landscaped surfaces.

H. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.14 CLOSEOUT PROCEDURES

A. Refer to Section 01 7700.

B. Make submittals that are required by governing or other authorities.
   1. Provide copies to Architect and OWNER.

C. OWNER will occupy all of the building as specified in Section 01 1000 - Summary.

3.15 MAINTENANCE SERVICE

A. Furnish service and maintenance of components indicated in specification sections for 1 (one) year from date of Substantial Completion.

B. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.

C. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.

D. Maintenance service shall not be assigned or transferred to any agent or Subcontractor without prior written consent of the OWNER.

END OF SECTION

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Contract closeout procedures related to:
   1. Substantial Completion of the Work and
   2. Final inspection and Owner's acceptance of the Work.

B. Closeout submittals including:
   1. Substantial Completion documents.
   2. Final Application for Payment with supporting documents.
   3. Project Record Documents.
   4. Warranties and Bonds.

1.02 RELATED SECTIONS

A. Section GC - General Conditions: Warranty, and correction of work.

B. Section 01 3000 - Administrative Requirements: Submittal procedures for shop drawings, product data, and samples.

C. Section 01 7800 - Operation and Maintenance Data: Preparation of Operation and Maintenance Manuals.

D. Section 01 7900 - Demonstration and Training: Operation and maintenance instruction of Owner's personnel.

E. Individual product sections: Specific requirements for operation and maintenance data.

F. Individual product sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

A. Contractor's Declaration of Substantial Completion: Submit three copies of required forms and related documentation certifying that status of Work is consistent with "Substantial Completion".

B. Operation and Maintenance Manuals: Provide three sets of revised documents in final form for use by Owner's personnel. Submit at least 45 days prior to date of Declaration of Substantial Completion.

C. Material and Product Warranties: Submit fully executed manufacturers' warranties within ten days following Date of Substantial Completion except as follows:
   1. For equipment and component parts of equipment put into service during construction with OWNER"S permission, submit documents within ten days after acceptance; list date of acceptance as the beginning of the warranty period .
   2. For items of Work for which acceptance is delayed beyond date of Substantial Completion, submit within ten days after acceptance; list date of acceptance as the beginning of the warranty period.

D. Contractor's Statement of Final Completion: Submit two copies of required forms certifying that Work has been fully completed; make submittal within 45 days after Date of Substantial Completion.

E. Claim for Final Payment: Submit two copies of required final Application for Payment forms together with supporting documents.

F. Evidence of Payments and Release of Liens: Submit two copies of required forms with claim for Final Payment.

G. Project Record Documents: Submit required Record Documents with claim for Final Payment.

1.04 COORDINATION

A. Coordinate scheduling, submittals, and inspection of the work of the various sections of the Project Manual to ensure efficient and orderly closeout procedure, with provision for accommodating items installed later.

B. Final Utility Connections: Notify affected utility companies and comply with their requirements for final connections.

1.05 PRE- SUBSTANTIAL COMPLETION MEETING

A. Convene 30 days before submitting Declaration of Substantial Completion for purpose of reviewing required closeout procedures with representatives of Owner and Architect.

1.06 PROJECT CONDITIONS

A. Coordinate completion and ensure clean-up of work of separate sections of the Project Manual.

B. The Owner intends to occupy the entire project area at Date of Substantial Completion.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PREPARATION FOR SUBSTANTIAL COMPLETION

A. Operation and Maintenance Manuals:
   1. Comply with additional requirements in Section 01 7800.
   2. Include operating instructions and maintenance data prepared by personnel experienced in maintenance and operation of described equipment and systems.
   3. Use Operating and Maintenance Manuals as reference for instruction of Owner's personnel.

B. Demonstration and Training:
   1. Comply with additional requirements in Section 01 7900.
   2. Prior to Substantial Completion, perform demonstration and train Owner's personnel in proper operation and maintenance of equipment and systems designated in individual sections of the Project Manual.

C. Preliminary Inspection for Substantial Completion:
   1. Schedule and conduct preliminary inspection of the Work accompanied by Owner's Project Representative.
      a. Determine and identify items to be listed for correction and completion (punchlist) on Contractor's Declaration of Substantial Completion.

2. Verify that surface finish materials are properly installed in accordance with manufacturer's recommendations and exposed surfaces are clean and free from damage.
3. Verify final adjustment of operating items, equipment and system components to ensure smooth and unhindered operation.
4. Verify specific operating and performance requirements described in individual specification sections.
   a. Secure certification by TAB contractor that testing, adjusting and balancing work has been completed, and respective systems are performing in accordance with specified design requirements.
   b. Replace filters of operating equipment.
5. Verify that utility services are properly connected and of the correct characteristics.
6. Verify inspection and acceptance of the respective portions of the Work by Authorities Having Jurisdiction (AHJ).

3.02 SUBSTANTIAL COMPLETION DOCUMENTS

A. Contractor's Declaration of Substantial Completion:
   1. Provide the necessary assurance that the progress of the Work is consistent with Substantial Completion as defined by the Contract Documents.
   2. Upon receipt of the required forms the Architect will schedule and conduct a Substantial Completion Inspection.

B. Certificate of Substantial Completion: Upon verification of Contractor's Punchlist, and subsequent determination by Architect that status of Work is suitable for occupancy by the Owner, the Architect will prepare Certificate of Substantial Completion (AIA Doc G704-2000).

C. Complete and correct respective items of work listed and attached to the Certificate of Substantial Completion within 30 days following Date of Substantial Completion.

3.03 FINAL CLOSEOUT DOCUMENTS

A. Contractor's Statement of Final Completion: Certify that the Work is complete and has been inspected and found to be in compliance with the Contract Documents.

B. Claim for Final Payment:
   1. Prepare application for payment on approved forms.
   2. Amount of final payment shall be the Contractor's retainage (5% of the contract amount).
   3. In accordance with Iowa law, final payment shall become due and payable 31 days after the date of Owner's written acceptance of the completed Work.

C. Evidence of Payments and Release of Liens: Prepare the following:
   1. "Contractors Affidavit of Payment of Debts and Claims" (AIA Doc G706).
   2. "Contractor's Affidavit of Release of Liens" (AIA Doc G706A).
      a. Include separate waivers of lien from subcontractors, suppliers, and others with lien rights against property of the

Owner.

3. Obtain "Consent of Surety to Final Payment" (AIA Doc G707).

D. Project Record Documents:
   1. Submit one set of the following Record Documents; record actual revisions to the Work:
      a. Drawings
      b. Specifications
      c. Addenda
      d. Change Orders and other modifications to the Contract.
      e. Reviewed shop drawings, product data, and samples.
   2. Ensure entries are complete and accurate, enabling future reference by the Owner.
   3. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
      a. Manufacturer's name and product model and number.
      b. Product substitutions or alternates utilized.
      c. Changes made by Addenda and modifications.
   4. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
      a. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
      b. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
      c. Field changes of dimension and detail.
      d. Details not on original Contract Drawings.

E. Material and Product Warranties:
   1. Obtain required warranties executed in duplicate by responsible subcontractors, suppliers and manufacturers, within ten days after completion of the applicable item of work. Except for items put into use with OWNER'S permission, leave date of beginning of time of warranty until Date of Substantial Completion is determined.
   2. Verify that documents are in proper form, contain full information, and are notarized.
   3. Co-execute warranty documents when required.
   4. Retain warranties until time specified for submittal.
   5. Include photocopies of each in operation and maintenance manuals; indicate on Table of Contents.

3.04 FINAL INSPECTION OF THE WORK

A. Following submittal of required closeout documents, the Architect will conduct a Final Inspection of the Work.

B. Accompany Owner's Project Representative and Architect on final inspection of the Work.

C. Complete items of work determined and identified during final inspection.

3.05 OWNER'S FINAL ACCEPTANCE OF THE WORK

A. Upon satisfactory completion of the Work, the Architect will recommend

acceptance of the completed Work by the Owner and final payment to the Contractor.

B. The Owner will notify the Contractor in writing of the effective date of their acceptance of the Work.

END OF SECTION

SECTION 017800 - CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Project Record Documents.

B. Operation and Maintenance Data.

C. Warranties and bonds.

D. Evidence of payments and release of liens.

1.02 RELATED SECTIONS

A. Section GC - General Conditions: Additional requirements for progress payments, final payment, changes in the Work.

B. Section 01 3000 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.

C. Section 01 7000 - Execution and Closeout Requirements: Contract closeout procedures.

D. Section 01 7900 - Demonstration and Training: Operation and maintenance instruction of Owner's personnel.

E. Individual Product Sections: Specific requirements for operation and maintenance data.

F. Individual Product Sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

A. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.

B. Operation and Maintenance Data:
   1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and return one copy with comments.
   2. Submit 1 copy of completed documents 45 days prior to "Substantial Completion". This copy will be reviewed and returned, with Architect comments. Revise content of all document sets required prior to final submission.
   3. Submit three sets of revised final documents in final form at least 15 days prior to "Substantial Completion" for use by Owner's personnel during demonstration and training activities.

C. Warranties and Bonds:
   1. For equipment or component parts of equipment put into service during construction with OWNER's permission, submit documents within ten days after acceptance.
   2. Make other submittals within ten days after Date of Substantial Completion, prior to final Application for Payment.
   3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within ten days after acceptance,

listing the date of acceptance as the beginning of the warranty period.

D. Evidence of Payments and Release of Liens: Submit required documents to Architect with Application for Final Payment.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROJECT RECORD DOCUMENTS

A. Maintain on site one set of the following record documents; record actual revisions to the Work:
   1. Drawings.
   2. Specifications.
   3. Addenda.
   4. Change Orders and other modifications to the Contract.
   5. Reviewed shop drawings, product data, and samples.

B. Ensure entries are complete and accurate, enabling future reference by OWNER.

C. Store record documents separate from documents used for construction.

D. Record information concurrent with construction progress.

E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
   1. Manufacturer's name and product model and number.
   2. Product substitutions or alternates utilized.
   3. Changes made by Addenda and modifications.

F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
   1. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
   2. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
   3. Field changes of dimension and detail.
   4. Details not on original Contract drawings.

3.02 OPERATION AND MAINTENANCE DATA

A. For Each Product or System: List names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.

B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.

C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.

D. Typed Text: As required to supplement product data. Provide logical

sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

A. For Each Product, Applied Material, and Finish:
   1. Product data, with catalog number, size, composition, and color and texture designations.

B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.

3.04 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

A. For Each Item of Equipment and Each System:
   1. Description of unit or system, and component parts.
   2. Identify function, normal operating characteristics, and limiting conditions.
   3. Include performance curves, with engineering data and tests.
   4. Complete nomenclature and model number of replaceable parts.

B. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.

C. Include color coded wiring diagrams as installed.

D. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.

E. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

F. Provide servicing and lubrication schedule, and list of lubricants required.

G. Include manufacturer's printed operation and maintenance instructions.

H. Include sequence of operation by controls manufacturer.

I. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

J. Provide control diagrams by controls manufacturer as installed.

K. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.

L. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

M. Include test and balancing reports.

N. Additional Requirements: As specified in individual product specification sections.

3.05 OPERATION AND MAINTENANCE MANUALS

A. Prepare instructions and data by personnel experienced in maintenance and operation of described products.

B. Prepare data in the form of an instructional manual.

C. Binders: Commercial quality, 8-1/2 x 11 inch three D side ring binders with durable plastic covers; 2 inch maximum ring size. When multiple binders are used, correlate data into related consistent groupings.

D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.

E. Provide tabbed dividers for each separate product and system, with typed description of product and major component parts of equipment.

F. Text: Manufacturer's printed data, or typewritten data on 24 pound paper.

G. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

H. Arrange content by systems under section numbers and sequence of Table of Contents of this Project Manual.

I. Contents: Prepare a Table of Contents for each volume, with each product or system description identified, in three parts as follows:
   1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect, Contractor, Subcontractors, and major equipment suppliers.
   2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
      a. Significant design criteria.
      b. List of equipment.
      c. Parts list for each component.
      d. Operating instructions.
      e. Maintenance instructions for equipment and systems.
      f. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
   3. Part 3: Project documents and certificates, including the following:
      a. Shop drawings and product data.
      b. Air and water balance reports.
      c. Certificates.
      d. Photocopies of warranties and bonds.

J. Table of Contents: Provide title of Project; names, addresses, and telephone numbers of Architect and Contractor with name of responsible parties; schedule of products and systems, indexed to content of the volume.

3.06 WARRANTIES AND BONDS

A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within ten days after completion of the applicable item of work. Except for items put into use with OWNER's permission, leave date of beginning of time of warranty until the Date of Substantial completion is determined.

B. Verify that documents are in proper form, contain full information, and are notarized.

C. Co-execute submittals when required.

D. Retain warranties and bonds until time specified for submittal.

E. Include photocopies of each in operation and maintenance manuals, indexed separately on Table of Contents.

3.07 EVIDENCE OF PAYMENTS AND RELEASE OF LIENS

A. Execute "Contractor's Affidavit of Payment of Debts and Claims" (AIA Doc G706).

B. Submit "Contractor's Affidavit of Release of Liens" (AIA Doc G706A), together with:
   1. Separate waivers of lien from subcontractors, suppliers, and others with lien rights against property of the Owner.

C. Obtain "Consent of Surety to Final Payment" (AIA Doc G707).

END OF SECTION

SECTION 017823 - OPERATION AND MAINTENANCE DATA

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Operation and Maintenance Data.

B. Warranties and bonds.

1.02 RELATED SECTIONS

A. Section GC - General Conditions: Warranty, and correction of work.

B. Section 01 3000 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.

C. Section 01 7700 - Closeout Procedures: Contract closeout procedures.

D. Section 01 7900 - Demonstration and Training: Operation and maintenance instruction of Owner's personnel.

E. Individual Product Sections: Specific requirements for operation and maintenance data.

F. Individual Product Sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

A. Operation and Maintenance Data:
   1. Preliminary Draft: Prepare two copies before start of Work. Indicate proposed formats and outlines of contents. Architect will review draft and return one copy with comments.
   2. Submit 1 copy of completed documents 45 days prior to "Substantial Completion". This copy will be reviewed and returned, with Architect comments. Revise content of all document sets required prior to final submission.
   3. Submit three sets of revised final documents in final form at least 15 days prior to "Substantial Completion" for use by Owner's personnel during demonstration and training activities specified in Section 01 7900.

B. Product and Material Warranties: Obtain required manufacturer's warranties; assemble original documents in separate three-ring binder to be submitted within ten days after Date of Substantial Completion, prior to final Application for Payment.
   1. Ensure that manufacturer's warranties have been completed in OWNER's name and registered with respective manufacturer.
   2. Include photocopies of each in operation and maintenance manuals, indexed separately on Table of Contents.

1.04 PRE-SUBMITTAL MEETING

A. Convene 15 days before starting work on revised Operation and Maintenance Manuals for the purpose of reviewing Architect's comments on preliminary draft.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PREPARATION OF OPERATION AND MAINTENANCE MANUALS

A. Prepare instructions and data by personnel experienced in maintenance and operation of described products.

B. Prepare data in the form of an instructional manual.

C. Binders: Commercial quality, 8-1/2 x 11 inch three D side ring binders with durable plastic covers; 2 inch maximum ring size. When multiple binders are used, correlate data into related consistent groupings.

D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.

E. Provide tabbed dividers for each separate product and system, with typed description of product and major component parts of equipment.

F. Text: Manufacturer's printed data, or typewritten data on 24 pound paper.

G. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

H. Arrange content by systems under section numbers and sequence of Table of Contents of this Project Manual.

I. Contents: Prepare a Table of Contents for each volume, with each product or system description identified, in three parts as follows:
   1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect, Contractor, Subcontractors, and major equipment suppliers.
   2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
      a. Significant design criteria.
      b. List of equipment.
      c. Parts list for each component.
      d. Operating instructions.
      e. Maintenance instructions for equipment and systems.
   3. Part 3: Project documents and certificates, including the following:
      a. Shop drawings and product data.
      b. Air and water balance reports.
      c. Certificates.
      d. Photocopies of warranties and bonds.

J. Provide a listing in Table of Contents for design data, with tabbed dividers and space for insertion of data.

K. Table of Contents: Provide title of Project; names, addresses, and telephone numbers of Architect and Contractor with name of responsible parties; schedule of products and systems, indexed to content of the volume.

3.02 OPERATION AND MAINTENANCE DATA

A. For Each Product or System: List names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.

B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.

C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.

D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

A. For Each Product, Applied Material, and Finish:
   1. Product data, with catalog number, size, composition, and color and texture designations.

B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.

3.04 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

A. For Each Item of Equipment and Each System:
   1. Description of unit or system, and component parts.
   2. Identify function, normal operating characteristics, and limiting conditions.
   3. Include performance curves, with engineering data and tests.
   4. Complete nomenclature and model number of replaceable parts.

B. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.

C. Include color coded wiring diagrams as installed.

D. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.

E. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and

checking instructions.

F. Provide servicing and lubrication schedule, and list of lubricants required.

G. Include manufacturer's printed operation and maintenance instructions.

H. Include sequence of operation by controls manufacturer.

I. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

J. Provide control diagrams by controls manufacturer as installed.

K. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.

L. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

M. Include test and balancing reports.

N. Additional Requirements: As specified in individual product specification sections.

3.05WARRANTIES

A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within ten days after completion of the applicable item of work. Except for items put into use with OWNER's permission, leave date of beginning of time of warranty until the Date of Substantial completion is determined.

B. Retain warranties and bonds until time specified for submittal.

C. Manual: Bind in commercial quality 8-1/2 x 11 inch three D side ring binders with durable plastic covers.

END OF SECTION

SECTION 017900 - DEMONSTRATION AND TRAINING

PART 1 GENERAL

1.01 SUMMARY

A. Demonstration of products and systems where indicated in specific specification sections.

B. Training of OWNER personnel in operation and maintenance is required for:
   1. All software-operated systems.
   2. HVAC systems and equipment.
   3. Plumbing equipment.
   4. Electrical systems and equipment.
   5. Conveying systems.
   6. Items specified in individual product Sections.

C. Training of OWNER personnel in care, cleaning, maintenance, and repair is required for:
   1. Roofing, waterproofing, and other weather-exposed or moisture protection products.
   2. Finishes, including flooring, wall finishes, ceiling finishes.
   3. Fixtures and fittings.
   4. Items specified in individual product Sections.

1.02 RELATED SECTIONS

A. Section 01 7800 - Closeout Submittals: Operation and maintenance manuals.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Training Plan: OWNER will designate personnel to be trained; tailor training to needs and skill-level of attendees.
   1. Submit to Architect for transmittal to OWNER.
   2. Submit not less than four weeks prior to start of training.
   3. Revise and resubmit until acceptable.
   4. Provide an overall schedule showing all training sessions.
   5. Include at least the following for each training session:
      a. Identification, date, time, and duration.
      b. Description of products and/or systems to be covered.
      c. Name of firm and person conducting training; include qualifications.
      d. Intended audience, such as job description.
      e. Objectives of training and suggested methods of ensuring adequate training.
      f. Methods to be used, such as classroom lecture, live demonstrations, hands-on, etc.
      g. Media to be used, such a slides, hand-outs, etc.
      h. Training equipment required, such as projector, projection screen, etc., to be provided by Contractor.

C. Training Manuals: Provide training manual for each attendee; allow

for minimum of two attendees per training session.
1. Include applicable portion of O&M manuals.
2. Include copies of all hand-outs, slides, overheads, video presentations, etc., that are not included in O&M manuals.
3. Provide one extra copy of each training manual to be included with operation and maintenance data.

D. Training Reports:
1. Identification of each training session, date, time, and duration.
2. Sign-in sheet showing names and job titles of attendees.
3. List of attendee questions and written answers given, including copies of and references to supporting documentation required for clarification; include answers to questions that could not be answered in original training session.
4. Include Owner's formal acceptance of training session.

1.04 QUALITY ASSURANCE

A. Instructor Qualifications: Familiar with design, operation, maintenance and troubleshooting of the relevant products and systems.
1. Provide as instructors the most qualified trainer of those contractors and/or installers who actually supplied and installed the systems and equipment.
2. Where a single person is not familiar with all aspects, provide specialists with necessary qualifications.

1.05 PROJECT CONDITIONS

A. Coordinate preparation of operation and maintenance data specified in Section 01 7823.

B. Schedule work to ensure demonstration and training sessions are completed prior to request for Substantial Completion.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 DEMONSTRATION - GENERAL

A. Demonstrations conducted during system start-up do not qualify as demonstrations for the purposes of this section, unless approved in advance by OWNER.

B. Demonstration may be combined with OWNER personnel training if applicable.

C. Operating Equipment and Systems: Demonstrate operation in all modes, including start-up, shut-down, seasonal changeover, emergency conditions, and troubleshooting, and maintenance procedures, including scheduled and preventive maintenance.
1. Perform demonstrations not less than two weeks prior to Substantial Completion.
2. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.

D. Non-Operating Products: Demonstrate cleaning, scheduled and preventive maintenance, and repair procedures.

1. Perform demonstrations not less than two weeks prior to Substantial Completion.

3.02 TRAINING - GENERAL

A. Conduct training on-site unless otherwise indicated.

B. OWNER will provide classroom and seating at no cost to Contractor.

C. Provide training in minimum two hour segments.

D. Training schedule will be subject to availability of OWNER's personnel to be trained; re-schedule training sessions as required by OWNER; once schedule has been approved by OWNER failure to conduct sessions according to schedule will be cause for OWNER to charge Contractor for personnel "show-up" time.

E. Review of Facility Policy on Operation and Maintenance Data: During training discuss:
   1. The location of the O&M manuals and procedures for use and preservation; backup copies.
   2. Typical contents and organization of all manuals, including explanatory information, system narratives, and product specific information.
   3. Typical uses of the O&M manuals.

F. Product- and System-Specific Training:
   1. Review the applicable O&M manuals.
   2. For systems, provide an overview of system operation, design parameters and constraints, and operational strategies.
   3. Review instructions for proper operation in all modes, including start-up, shut-down, seasonal changeover and emergency procedures, and for maintenance, including preventative maintenance.
   4. Provide hands-on training on all operational modes possible and preventive maintenance.
   5. Emphasize safe and proper operating requirements; discuss relevant health and safety issues and emergency procedures.
   6. Discuss common troubleshooting problems and solutions.
   7. Discuss any peculiarities of equipment installation or operation.
   8. Discuss warranties and guarantees, including procedures necessary to avoid voiding coverage.
   9. Review recommended tools and spare parts inventory suggestions of manufacturers.
   10. Review spare parts and tools required to be furnished by Contractor.
   11. Review spare parts suppliers and sources and procurement procedures.

G. Be prepared to answer questions raised by training attendees; if unable to answer during training session, provide written response within three days.

END OF SECTION

SECTION 02 4119 — SELECTIVE DEMOLITION

PART 1 - GENERAL

1.01 REFERENCE STANDARDS AND RELATED DOCUMENTS

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

B. Specifications throughout all Divisions of the Project Manual are directly applicable to this Section, and this Section is directly applicable to them.

C. The latest published edition of a reference shall be applicable to this Project unless identified by a specific edition date.

D. All reference amendments adopted prior to the effective date of this Contract shall be applicable to this Project.

E. All materials, installation and workmanship shall comply with all applicable requirements and standards.

1.02 SUBMITTALS

A. Record Documents:

1. Schedule indicating proposed sequence of operations for selective demolition Work to Owner's Representative for review prior to start of Work. Include coordination for shutoff, capping, and continuation of utility services as required, together with details for dust and noise control protection.

   a. Provide detailed sequence of demolition and removal Work to ensure uninterrupted progress of Owner's on-site operations.

   b. Coordinate with Owner's continuing occupation of portions of existing building and with Owner's partial occupancy of completed new addition.

2. Photographs of existing conditions of structure surfaces, equipment, and adjacent improvements that might be misconstrued as damage related to removal operations. File with Owner's Representative prior to start of Work.

1.03 PROJECT CONDITIONS

A. Owner will occupy portions of the building immediately adjacent to areas of selective demolition. Conduct selective demolition Work in manner that will minimize need for disruption of Owner's normal operations. Provide minimum of 72 hours advance notice to Owner of demolition activities that will affect Owner's normal operations.

F. Owner assumes no responsibility for actual condition of items or structures to be demolished.

1. Conditions existing at time of inspection for bidding purposes will be maintained by Owner insofar as practicable. However, minor variations within structure may occur by Owner's removal and salvage operations prior to start of selective demolition Work.

G. Promptly repair damages caused to adjacent facilities by demolition Work.

H. Conduct selective demolition operations and debris removal to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.

1. Do not close, block, or otherwise obstruct streets, walks, or other occupied or used facilities without written permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.

I. Do not use cutting torches for removal until Work area is cleared of flammable materials. At concealed spaces, such as interior of ducts and pipe spaces, verify condition of hidden space before starting flame cutting operations. Maintain portable fire suppression devices during flame cutting operations.

J. Maintain existing utilities indicated to remain in service and protect them against damage during demolition operations.

1. Do not interrupt utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities.

2. Maintain fire protection services during selective demolition operations.

K. Use water sprinkling, temporary enclosures, and other methods to limit dust and dirt migration. Comply with governing regulations pertaining to environmental protection.

1. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution.

PART 2 - PRODUCTS

2.01 GENERAL

A. All materials shall meet or exceed all applicable referenced standards, federal, state and local requirements, and conform to codes and ordinances of authorities having jurisdiction.

2.02 MATERIAL OWNERSHIP

A. Except for items or materials indicated to be reused, salvaged, or otherwise indicated to remain the Owner's property, demolished materials shall be become the Contractor's property and shall be removed from the Site with further disposition of the Construction's option.

B. Historical items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to the Owner, which may be encountered during demolition, remain the Owner's property. Carefully remove and salvage each item or object in a manner to prevent damage and deliver promptly to the Owner.

PART 3 - EXECUTION

3.01 PREPARATION

L. Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of areas to be demolished and adjacent facilities to remain.

1. Cease operations and notify Owner's Representative immediately if safety of structure appears to be endangered. Take precautions to support structure until determination is made for continuing operations.

2. Locate, identify, stub off, and disconnect utility services that are not indicated to remain.

a. Provide bypass connections as necessary to maintain continuity of service to occupied areas of building. Provide minimum of 72 hours advance notice to Owner if shutdown of service is necessary during changeover.

3.02 INSTALLATION

A. Installation shall meet or exceed all applicable federal, state and local requirements, referenced standards and conform to codes and ordinances of authorities having jurisdiction.

B. All installation shall be in accordance with manufacturer's published recommendations.

3.03 DEMOLITION

A. Perform selective demolition Work in a systematic manner. Use such methods as required to complete Work indicated on Drawings in accordance with demolition schedule and governing regulations.

1. Demolish concrete and masonry in small sections. Cut concrete and masonry at junctures with construction to remain using power driven masonry saw or hand tools; do not use power driven impact tools.

2. Locate demolition equipment throughout structure and promptly remove debris to avoid imposing excessive loads on supporting walls, floors, or framing.

3. Provide services for effective air and water pollution controls as required by local authorities having jurisdiction.

4. Demolish foundation walls to a depth of not less than 12 inches below existing ground surface. Demolish and remove below grade wood or metal construction. Break up below grade concrete slabs.

5. For interior slabs on grade, use removal methods that will not crack or structurally disturb adjacent slabs or partitions. Use power saw where possible.

6. If unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit report to Owner's Representative in written, accurate detail. Pending receipt of directive from Owner's Representative, rearrange selective demolition schedule as necessary to continue overall job progress without undue delay.

3.04 DISPOSAL OF DEMOLISHED MATERIALS

A. Remove from building Site debris, rubbish, and other materials resulting from demolition operations. Transport and legally dispose off Site.

B. If hazardous materials are encountered during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution.

C. Burning of removed materials is not permitted on the Project Site.

CLEANUP AND REPAIR

A. Upon completion of demolition Work, remove tools, equipment, and demolished materials from the Project Site.

B. Remove protections and leave interior areas broom clean.

C. Repair demolition performed in excess of that required.

D. Return elements of construction and surfaces to remain to condition existing prior to start operations.

E. Repair adjacent construction or surfaces soiled or damaged by selective demolition Work.

END OF SECTION 02 4119

SECTION 061000 - ROUGH CARPENTRY

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Framing lumber.

B. Preservative treatment of wood.

C. Miscellaneous framing and sheathing.

D. Telephone and electrical panel boards.

E. Miscellaneous wood nailers and furring strips.

1.3 REFERENCES

A. AFPA T10 - Wood Frame Construction Manual; American Forest and Paper Association.

B. ASTM A 153/A 153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.

C. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

D. AWPA C2 - Lumber, Timber, Bridge Ties and Mine Ties -- Preservative Treatment by Pressure Processes; American Wood-Preservers' Association.

E. AWPA C9 - Plywood -- Preservative Treatment by Pressure Processes; American Wood-Preservers' Association.

F. AWPA C20 - Structural Lumber -- Fire Retardant Treatment by Pressure Processes; American Wood-Preservers' Association.

G. AWPA C27 - Plywood -- Fire-Retardant Treatment by Pressure Processes; American Wood-Preservers' Association.

H. AWPA U1 - Use Category System: User Specification for Treated Wood; American Wood-Preservers' Association.

I. PS 1 - Construction and Industrial Plywood; National Institute of Standards and Technology (Department of Commerce).

J. PS 20 - American Softwood Lumber Standard; National Institute of Standards and Technology (Department of Commerce).

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Manufacturer's Certificate: Certify that wood products supplied for rough carpentry meet or exceed specified requirements.

1.5 QUALITY ASSURANCE

A. Lumber: Comply with PS 20 and approved grading rules and inspection agencies.

1. Acceptable Lumber Inspection Agencies: Any agency with rules approved by American Lumber Standards Committee.

B. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWPA standards.

1.6 DELIVERY, STORAGE, AND HANDLING

A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

B. Fire Retardant Treated Wood: Prevent exposure to precipitation during shipping, storage, or installation.

PART 2 PRODUCTS

2.1 GENERAL REQUIREMENTS

A. Lumber fabricated from old growth timber is not permitted.

2.2 DIMENSION LUMBER

A. Sizes: Nominal sizes as indicated on drawings.

B. Moisture Content: S-dry or MC19.

C. Stud Framing (2 x 2 through 2 x 6):
1. Species: SPF.
2. Grade: No. 2.

D. Joist and Small Beam Framing (2 x 6 through 4 x 16):
1. Species: SPF.
2. Grade: No. 2.

E. Miscellaneous Blocking, Furring, and Nailers:
1. Species: SPF.
2. Lumber: No. 2.

2.3 CONSTRUCTION PANELS

A. Wall or Roof Sheathing: Plywood, PS 1, Grade C-D, Exposure I.

B. Other Applications:
1. Concealed Plywood: PS 1, C-C Plugged, exterior grade.
2. Exposed Plywood: PS 1, A-D, interior grade.
3. Electrical Component Mounting: APA rated sheathing, fire retardant treated.

2.4 ACCESSORIES

A. Fasteners and Anchors:
1. Metal and Finish: Hot-dipped galvanized steel per ASTM A 153/A 153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.
2. Drywall Screws: Bugle head, hardened steel, power driven type, length three times thickness of sheathing.

2.5 FACTORY WOOD TREATMENT

A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.

B. Preservative Pressure Treatment of Lumber Above Grade: AWPA Use Category UC3B, Commodity Specification A (Treatment C2) using waterborne preservative to 0.25 lb/cu ft retention.
   1. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
   2. Treat lumber in contact with roofing, flashing, or waterproofing.
   3. Treat lumber in contact with masonry or concrete.
   4. Preservative Pressure Treatment of Plywood Above Grade: AWPA Use Category UC2 and UC3B, Commodity Specification F (Treatment C9) using waterborne preservative to 0.25 lb/cu ft retention.
      a. Kiln dry plywood after treatment to maximum moisture content of 19 percent.
      b. Treat plywood in contact with masonry or concrete.
      c. Treat plywood in other locations as indicated.

PART 3 EXECUTION

3.1 FRAMING INSTALLATION

A. Extend partition framing to structure above in all locations. Set structural members level, plumb, and true to line. Discard pieces with defects that would lower required strength or result in unacceptable appearance of exposed members.

B. Make provisions for temporary construction loads, and provide temporary bracing sufficient to maintain structure in true alignment and safe condition until completion of erection and installation of permanent bracing.

C. Install structural members full length without splices unless otherwise specifically detailed.

D. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes and AFPA Wood Frame Construction Manual.

E. Install horizontal spanning members with crown edge up and not less than 1-1/2 inches of bearing at each end.

F. Construct double joist headers at floor and ceiling openings and under wall stud partitions that are parallel to floor joists; use metal joist hangers unless otherwise detailed.

G. Frame openings with two or more studs at each jamb; support headers on cripple studs.

H. Provide miscellaneous members as indicated or as required to support finishes, fixtures, specialty items, and trim.

3.2 INSTALLATION OF ACCESSORIES AND MISCELLANEOUS WOOD

A. Place sill gasket directly on cementitious foundation. Puncture gasket cleanly and fit tightly to protruding foundation anchor bolts.

B. Coordinate installation of wood decking and glue laminated structural units.

C. Curb roof openings except where prefabricated curbs are provided. Form corners by alternating lapping side members.

D. Coordinate curb installation with installation of decking and support of deck openings.

3.3 INSTALLATION OF CONSTRUCTION PANELS

A. Wall Sheathing: Secure with long dimension parallel to wall studs, with ends over firm bearing and staggered, using nails or screws.

3.4 TOLERANCES

A. Framing Members: 1/8 inch from true position, maximum.

B. Variation from Plane (Other than Floors): 1/8 inch in 10 feet maximum.

END OF SECTION

SECTION 07 2129 - INSULATION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Medium-density, polyurethane spray foam insulation.

B. Coordinate mechanical ventilation and fresh air supply with Mechanical sections and ASHRAE Guidelines for optimum indoor air quality.

1.02 REFERENCES

A. American Society for Testing and Materials International (ASTM)

B. ASTM C 518: Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus

C. ASTM E 84: Test Method for Surface Burning Characteristics of Building Materials

D. ASTM E 96: Standard Test Methods for Water Vapor Transmission of Materials

E. ASTM E 283: Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen

1.03 SUBMITTALS

A. Product Data for each type of insulation product specified.

B. Product test reports performed by a qualified third-party testing agency evidencing compliance of insulation products with specified requirements including those for thermal resistance, fire-test-response characteristics, water-vapor transmission, and other properties, based on comprehensive testing of current products.

C. Evaluation Report: Evidence of compliance of foam-plastic insulations with International Building Code (IBC), International Residential Code (IRC), International Energy Conservation Code (IECC).

D. Manufacturer’s certificate certifying insulation provided meets or exceeds specified requirements.

E. Installer’s certificate showing the Icynene installation certification.

F. Sample warranty

1.04 QUALITY ASSURANCE

A. Manufacturer’s Qualifications: Product produced in an ISO 9001 registered factory.

B. Single Source Responsibility: Single source product from one manufacturer.

C. Installer Qualifications: Engage an Icynene Licensed Dealer (installer) who has been trained and certified by Icynene.

D. Fire-Test-Response Characteristics: Provide materials specified as determined by testing identical products per test method indicated below by a testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.

E. Surface-Burning Characteristics: ASTM E 84

F. Toxicity/Hazardous Materials

G. Provide products that contain no urea-formaldehyde

H. Provide products that contain no PBDEs

I. Provide products that are “Low-emitting”

1.05 DELIVERY, STORAGE, AND HANDLING

A. Comply with manufacturers written instructions for handling and protection prior to and during installation.

B. Store both components in a temperature controlled area between 65 and 85 degrees F. Do not allow product to freeze.

C. Use only those components that are supplied by the Manufacturer.

1.06 PROJECT CONDITIONS

A. Do not expose to sunlight, except to extent necessary for period of installation and concealment.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Polyurethane Spray Foam Insulation: "ICYNENE MD-C-200" by Icynene Inc.

2.02 MATERIALS

A. General: Provide insulating materials that comply with requirements and with referenced standards.

B. ICYNENE MD-C-200™ Spray Foam Insulation: Medium-density, conforming to the following:

C. Thermal Resistance (for 1 inch of material) (R-Value/inch @75 deg F): ASTM C 518; 6.5 hr.sq ft.degree F/BTU

D. Air Permeance (for 1 inch of material): ASTM E 283: <0.02 L/s.m^2 @75 Pa

E. Water Vapor Transmission (for 1.5 inches of material): ASTM E 96; 0.9 perms

F. Flame Spread and Smoke Developed Rating: ASTM E 84

G. Flame Spread: Less than 25

H. Smoke Development: Less than 450

I. Product Description: ICC/ES Evaluation Report No. ESR 3199

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates and conditions, under which work is to be performed. Do not proceed until unsatisfactory conditions have been corrected.

B. Review placement area to determine final location will not be within 3 inches of any heat source where the temperature will exceed 180 deg F per ASTM C 411 or in accordance with authorities having jurisdiction.

3.02 PREPARATION

A. Clean substrates and cavities of loose materials capable of interfering with insulation placement.

3.03 APPLICATION

A. Site mix liquid components supplied by Icynene and installed by Independent Icynene Licensed Dealer.

B. Apply insulation to substrates in compliance with manufacturer's written instructions.

C. Extend insulation in thickness indicated to envelop entire area to be insulated.

D. Water-Piping Coordination: If water piping is located within insulated exterior walls, coordinate location of piping to ensure that it is placed on warm side of insulation and insulation encapsulates piping.

E. Apply insulation to produce thickness required for indicated following areas:

1. Inside surface of Exterior Walls: 3 inches.

2. Inside surface of Interior Walls: 2 inches.

3.04 REPAIRS

A. Any repairs must be effected by an Icynene Licensed Dealer.

3.05 PROTECTION

A. Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings where insulation is subject to abuse.

SECTION 07 90 05 - JOINT SEALERS

GENERAL

1. SECTION INCLUDES

   A. Joint sealant and sealer.

2. RELATED SECTIONS

   A. Section 09 30 00 - Tiling.

3. REFERENCES

   A. AAMA 808.3 - Specification for Exterior Perimeter Sealing Compound.

   B. ASTM International (ASTM):
      1. ASTM C 510 - Standard Test Method for Staining and Color Change of Single- or Multicomponent Joint Sealants.
      2. ASTM C 661 - Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer.
      3. ASTM C 679 - Standard Test Method for Tack-Free Time of Elastomeric Sealants.
      4. ASTM C 719 - Standard Test Method for Adhesion and Cohesion of Elastomeric Joint Sealants Under Cyclic Movement (Hockman Cycle).
      5. ASTM C 794 - Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants.
      6. ASTM C 834 - Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants.
      7. ASTM C 920 - Standard Specification for Elastomeric Joint Sealants.
      8. ASTM C1382 - Standard Test Method for Determining Tensile Adhesion Properties of Sealants When Used in Exterior Insulation and Finish Systems (EIFS) Joints.
      9. ASTM D 412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic ElastomersTension.
      10. ASTM D 6511 - Standard Test Methods for Solvent Bearing Bituminous Compounds.
      11. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
      12. ASTM E 90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
      13. ASTM E 162 - Standard Test Method for Surface Flammability of Materials Using a Radiant Heat Energy Source.
      14. ASTM E 662 - Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
      15. ASTM G 155 - Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.

   C. CAN/CGSB-19. 13-M87 - Sealing Compound, One-Component, Elastomeric, Chemical Curing.

D. FDA regulation 21-CFR-177.2600 - Rubber Articles Intended For Repeated Use.

E. Federal specification TT-S-00230C - Sealing Compound: Elastomeric Type, Single Component (For Calking, Sealing, And Glazing In Buildings And Other Structures).

F. GreenSeal GS-36 Specifications - Standard For Adhesives For Commercial Use.

G. National Science Foundation (NSF) 51 - Food Equipment Materials.

H. South Coast Air Quality Management District (SCAQMD) Rule #1168 - Adhesive And Sealant Applications.

I. Underwriters Laboratory (UL) 723 - Test for Surface Burning Characteristics of Building Materials.

4. SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

5. QUALITY ASSURANCE

A. Manufacturer Qualifications: Firm engaged in manufacture of construction sealants, with minimum 10 years experience.

B. Installer Qualifications: Experienced installer with a successful track record of five years or more, or a member of Sealant Waterproofing and Restoration Institute.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Finish areas designated by Architect.
   2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
   3. Refinish mock-up area as required to produce acceptable work.

6. DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

7. PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

2. PRODUCTS

2.1. MANUFACTURERS

A. Acceptable Manufacturer: Franklin International Inc. - Titebond, which is located at: 2020 Bruck St.; Columbus, OH 43207; Toll Free Tel: 800-877-4583; Tel: 614-443-0241; Fax: 614-445-1813; Email: request info (BeeMiller@franklininternational.com); Web: www.titebond.com

B. Requests for substitutions will be considered in accordance with provisions of Section 016000 - Product Requirements.

2.2. SEALANTS

A. Multi-Purpose Sealant:
1. Product: Titebond WeatherMaster Sealant as manufactured by Franklin International Inc.
   a. Type: A one-component, moisture cure, non-priming, premium grade, low VOC advanced MS polymer sealant.
      1. Titebond WeatherMaster Translucent is an advanced neutral cure silicone and is not paintable.
   b. Class: ASTM C920 Type S Grade NS Class 25 Use NT, M (when primed), G and A.
   c. Class: CAN/CGSB-19. 13-M87 Classification MCG-2-25-A-N (white, colors and crystal clear).
   d. Exceeds the requirements of ASTM D412, ASTM C510, ASTM C661, ASTM C679 and ASTM C719.
   e. Exceeds requirements of Federal specification TT-S-00230C Type II Class A (white, colors and crystal clear).
   f. USDA approved for use in meat and poultry areas (white, colors and crystal clear).
   g. Reactive VOC: 9 g/L (less than 2 percent wt) white and colors, 11 g/L (less than 2 percent wt) crystal clear, 3 g/L (less than 0.3 percent wt) translucent.
   h. Solids 98 percent.
2. Product: Titebond WeatherMaster ULTIMATE MP Sealant as manufactured by Franklin International Inc.
   a. Type: A one-component, moisture cure, non-priming, premium grade, low VOC advanced MS polymer sealant.
      1. Titebond WeatherMaster ULTIMATE MP Translucent is an advanced neutral cure silicone and is not paintable.
   b. Exceeds the requirements of ASTM C920 Type S Grade NS Class 50. Use NT, T, G, A and M.
      1. Titebond WeatherMaster ULTIMATE MP Translucent is Class 25.
   c. Federal Specification TT-S-00230C, Type II, Class A.
   d. Tested in accordance with ASTM C1382 for use in EIFS systems (white & colors).
   e. Meets the requirements of AAMA 808.3-92 (translucent).
   f. Reactive VOC: 9 g/L (less than 2 percent wt) white and colors, 11 g/L (less than 2 percent wt) crystal clear, 3 g/L (less than 0.3 percent wt) translucent.
3. Product: Titebond 100 percent Silicone Sealant as manufactured

by Franklin International Inc.
a. Type: Silicone.
b. Solids 85 percent.
c. Non-reactive VOC 30 g/L (less than3 percent wt.).
d. Meets the performance requirements of Federal Specification TT-S-001543A and TT-S-00230C.
e. Meets the performance requirements of ASTM C920.
f. Meets requirements of FDA regulation 21-CFR-177.2600 for indirect food contact.
g. NSF 51 Certified for direct food contact.

4. Product: Titebond UA 920 as manufactured by Franklin International Inc.
a. Type: Urethane / Modified Acrylic Blend (Siliconized).
b. Exceeds requirements of ASTM C920 Grade NS Class 25 and ASTM C834 Type OP for white and colors (Type C for Clear) Grade -18 degrees CC
c. Exceeds requirements of Federal specification TT-S-00230C Type II Class A
d. No failures when tested in accordance with ASTM C1382 when used per ASTM C920 Class 25
e. Meets the performance requirements of AAMA 808.3
f. Solids 70 percent white & colors, 65 percent clear.
g. Non-reactive VOC 18g/L (less than1.5 percent) white & colors, 11 g/L (less than1.5 percent) clear.

B. Acoustical Smoke & Sound Sealant:
1. Product: Titebond GREENchoice Acoustical Smoke & Sound Sealant as manufactured by Franklin International Inc.
a. Type: Acrylic polymer (non-reactive) Medium-viscosity caulk.
b. Mold & mildew resistant.
c. Exceeds the requirements of ASTM C661, ASTM C834, ASTM D217 and ASTM D412.
d. UL Tested and classified. Tested in accordance with ASTM E84 and ASTM E90.
e. Complies with UL 723.
f. Meets NFPA Class A fire rating.
g. Meets GreenSeal GS-36 specifications.

C. Siding Sealant:
1. Product: Titebond All Siding Sealant as manufactured by Franklin International Inc.
a. Type: Acrylic.
b. Meets ASTM C920 Type S Grade NS Class 25, ASTM C834 Type OP Grade -18 degrees CC.
c. Meets Federal Specification TT-S-00230C Type II Class A.
d. ASTM C661: Indentation Hardness (Shore A): 16.
e. ASTM C794: Adhesion in Peel:
1. Glass - 16.7 pli 100 percent cohesive failure.
2. Aluminum - 16.5 pli 100 percent cohesive failure.
3. Cement- 9pli 50 percent cohesive failure 50 percent Substrate failure.
f. Solids 78 percent.
g. Non-reactive VOC 25 g/L (less than1.5 percent wt.).

D. Kitchen & Bath Sealant:
   1. Product: Titebond Kitchen & Bath Sealant as manufactured by Franklin International Inc.
      a. Type: Modified acrylic.
      b. Color White, almond and clear.
      c. Meets ASTM C834 Type OP Grade 0 degrees CC (Type C Grade NF for clear).
      d. Complies with FDA 21-CFR-177.2600.

E. Painters Caulk:
   1. Product: Titebond Painters Caulk as manufactured by Franklin International Inc.
      a. Type: Latex, White.
      b. Solids 82 percent.
      c. Non-reactive VOC 23 g/L (less than1.5 percent).
      d. Meets ASTM C-834 Type OP Grade -18 degrees CC.
   2. Product: Titebond Painters Plus Caulk as manufactured by Franklin International Inc.
      a. Type: Siliconized acrylic.
      b. White and colors exceed the requirements of ASTM C834 Type OP Grade -18 degrees CC.
      c. Clear exceeds the requirements of ASTM C834 Type C Grade 0 degrees CC.
      d. Solids 82 percent white, 60 percent clear, 87 percent colors,
      e. Non-reactive VOC 23 g/L (less than1.5 percent) white, 5 g/L (less than1.5 percent) clear, 21 g/L (less than1.5 percent) colors.

F. Roof Cement Sealant:
   1. Product: Titebond Roof Cement Sealant as manufactured by Franklin International Inc.
      a. Type: Asphalt (reactive) based patching compound.
      b. Formulated to meet Federal Specification SS-C-153C Type I.
      c. Complies to ASTM D6511, SCAQMD Rule #1168.
      d. Solids 73 percent.
      e. Non-reactive VOC 300 g/L.

3.EXECUTION

3.1. EXAMINATION

A. Clean surfaces thoroughly prior to installation. Surfaces must be cleaned down to the original substrate and free of any material or contaminant that may prevent or deter Examine joints to receive sealants. Notify Project Manager or Architect if conditions are not acceptable. Do not begin surface preparation or application until unacceptable conditions have been corrected.

3.2. PREPARATION

A. Clean surfaces thoroughly prior to installation. Surfaces must be cleaned down to the original substrate and free of any material or contaminant that may prevent or deter adhesion. Such contaminates include, but are not limited to: dirt, frost, loose particles,

existing sealants, grease, oils, rust, and similar items.

3.3. INSTALLATION

A. Backer rod or bond breaker tape - The depth of the sealant must be controlled by using a suitable sealant backing material. The backing material must also function as a bond breaker to eliminate three sided adhesion and allow the sealant to expand and contract properly as designed.

B. Application: For best results, sealant should be applied when joint is at midpoint of its designed dynamic expansion and contraction. Always apply sealant in bead form. After joints have been completely filled, they should be neatly tooled to eliminate air pockets or voids, and to ensure good substrate wetting for optimum adhesion. Dry tooling is recommended and use of solvents or soapy water as tooling agents is discouraged. Do not smear, feather or wipe sealant to a thin consistency or film outside of joint area unless the area has been masked with tape or if it will be painted. Once sealant is dry to touch and does not transfer, remove masking tape.

C. Cleanup: Uncured sealant may be cleaned with isopropyl alcohol. After curing, excess sealant must be cut or scraped away. Follow solvent vendor's precautions when using solvents.
   1. Titebond WeatherMaster Translucent (#44011), Titebond WeatherMaster Metal Roof Translucent (#61111) and Titebond WeatherMaster Ultimate MP Translucent (#71111) can be cleaned with mineral spirits or similar solvent before cured.

3.4. PROTECTION

A. Protect sealants in joints from damage until fully cured.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 08 - WOOD COMPOSITE DOORS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Passage Doors

1.02 REFERENCES

A. National Fire Protection Association (NFPA)

1. NFPA 252: Standard Methods of Fire Tests of Door Assemblies.

B. Underwriters Laboratories, Inc. (UL)

1. UL 10B: Standard for Fire Tests of Door Assemblies (Note: Neutral pressure standard)
2. UL 10C: Standard for Positive Pressure Fire Tests of Door Assemblies.

1.03 DESIGN REQUIREMENTS

A. Fire-Rated Door Assemblies: Fire door assemblies shall meet or exceed fire-protection ratings indicated when tested in accordance with NFPA 252, UL 10B and UL 10C .

1.04 SUBMITTALS

A. Refer to Section 01 3000 Submittal Procedures.

B. Product Data: Submit door manufacturer current product literature, including installation instruction.

C. Samples: Provide finish samples for all products.

D. Quality Assurance Submittals

1. Manufacturer Instructions: Provide manufacturer’s written installation instructions.

E. Closeout Submittals

Refer to Section 01 7800 Closeout Submittals.

1.05 DELIVERY, STORAGE AND HANDLING

A. Refer to Section 01 6000 Product Requirements.

B. Deliver doors, materials and components in manufacturer's original, unopened, undamaged containers with identification labels intact.

C. Store doors as recommended by manufacturer.

1.06 WARRANTY

A. Refer to Section 01 7800 CloseOut Submittals.

B. Manufacturer standard warranty indicating that the door will be free from material and workmanship defects from the date of substantial completion for the time periods indicated below:

1. Door Unit: 5 years

PART 2 PRODUCTS

2.01 MANUFACTURER

A. JELD-WEN® Interior Doors; 3305 Lakeport Blvd; Klamath Falls, OR 97601, USA; Phone 877.535.3462, fax 541.882.3455; website www.jeld-wen.com.

B. Basis of Design: Doors are based on JELD-WEN's Flush Interior Doors.

2.02 PASSAGE DOORS

A. Core and Frame

1. Solid core with all-wood frame.

a. Thickness: 1-3/4 inch with 20-minute fire rating.

2. Jambs

a. Jamb Width: 4-9/16 inch
b. Jamb Type: Split
c. Jamb Species: Stainable Pine

B. Finish:

1. Unfinished Hardwood: Sliced Red Oak.

PART 3 EXECUTION

3.01 GENERAL

A. Install doors in accordance with manufacturer's installation guidelines and recommendations.

3.02 EXAMINATION

A. Inspect door prior to installation.

B. Inspect rough opening for compliance with door manufacturer recommendations. Verify rough opening conditions are within recommended tolerances.

3.03 PREPARATION

A. Prepare door for installation in accordance with manufacturer's recommendations.

B. Trim bottom of jamb sides to achieve desired distance between door bottom and finished floor height.

3.04 INSTALLATION

A. Place door unit into opening and level hinge side of jamb. Use shims fastened through jamb and stop to level and temporarily secure in place.

B. Level latch side of jamb. Use shims fastened through jamb and stop to level and temporarily secure in place.

C. Verify spacing between jamb and door is uniform on all sides. Adjust as necessary.

D. Shim top of jamb in center of opening and fasten with nail.

E. Re-check for square, level and even spacing around door. Nail securely in place through stop, jamb, shims and into studs every 12 inches.

F. Set nails.

G. Install trim on both sides using nails every 12 to 16 inch

H. Stain door and frame to match existing doors.

END OF SECTION

SECTION 08 7120

DOOR HARDWARE

PART 1 - GENERAL

1.1 DESCRIPTION

A. Work included:
   1. Furnish door hardware required to complete the Work as shown on the Drawings and as specified herein.
   2. Finish trim attachments and fastenings, specified or otherwise required, for proper and complete installation.
   3. Deliver to the job site those items of door hardware scheduled to be installed at the job site, and deliver to other points of installation those items of door hardware scheduled to be factory installed.

B. Related documents:
   1. Documents affecting work of this section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.

1.2 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.

1.3 SUBMITTALS

A. Comply with pertinent provisions of Section 01340.

B. Product data:
   1. Materials list of items proposed to be provided under this Section in hardware groups based on hardware schedules included in this section. Approval of this list by the Architect will not relieve the Contractor of the responsibility to provide all door hardware items required for the Work even though such required items may not have been shown on the approved list.
   2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements.
   3. Manufacturer's recommended installation procedures which, when approved by the Architect, will become the basis for accepting or rejecting actual installation procedures used on the Work.

C. Shop drawings in sufficient detail to show fabrication, installation, anchorage, and interface of the work of this Section with the work of adjacent trades.

D. Samples:
   1. Within 15 calendar days after being so requested by the Architect, deliver to the Architect Samples of each door hardware item.
   2. All Samples will be returned to the Contractor; provide those Samples which are approved by the Architect are positively

identified and are installed in the Work at locations agreed to by the Architect.

E. Templates: In a timely manner to assure orderly progress of the Work, deliver templates or physical samples of the approved door hardware items to pertinent manufacturers of interfacing items such as doors and frames.

1.4 PRODUCT HANDLING

A. Individually package each unit of door hardware, complete with proper fastenings and appurtenances, clearly marked on the outside to indicate contents and specific locations in the Work.

PART 2 - PRODUCTS

2.1 GENERAL

A. Fasteners:
   1. Furnish necessary screws, bolts, and other fasteners of suitable size and type to anchor the hardware in position for long life under hard use.
   2. Where necessary, furnish fastener with toggle bolts, expansion shields, hex bolts, and other anchors approved by the Architect, according to the material to which the hardware is to be applied and according to the recommendations of the hardware manufacturer.
   3. Provide fasteners which harmonize with the hardware as to door and material.

B. Where butts are required to swing 180 degrees, furnish butts of sufficient throw to clear the trim.

C. Furnish silencers for door frames at the rate of three for each single door and two for each door or pair of doors; except weatherstripped doors and doors with light seals or smoke seals.

2.2 FINISH

A. All hardware shall be finished "Satin Chromium Plated," US26D, except as indicated otherwise.

2.3 KEYING

A. Factory key and masterkey locks and cylinders as directed by the Architect.

B. Furnish three keys for each lock.

C. Construction keying:
   1. Furnish a construction masterkey system with 10 keys for locks and cylinders.
   2. Use only the construction keys during construction.
   3. Upon substantial completion of the Work, as that Date is established by the Architect, void the construction key system and, in the presence of the Architect, demonstrate that the specified keying system is operating properly.

D. Identification and delivery: Identify permanent keys with tags, and send direct to the Owner by registered mail or receipted personal delivery.

2.4 TOOLS AND MANUALS

A. With the delivery of permanent keys, deliver to the Owner one complete set of adjustment tools and one set of maintenance manuals for locksets, latchsets, closers, and panic devices.

2.5 ACCEPTABLE PRODUCTS

A. Hinges
   1. Full mortise, butt hinges
      a. Provide five knuckle, standard weight hinges:
         1) Plain bearing (PB) or ball bearing (BB) type as schedule. Ball bearing hinges shall have hardened steel raceways with chrome alloy steel balls.
         2) Size: 4-1/2" x 4-1/2" with square corners.
         3) Steel base metal, polished and plated, except provide stainless steel for exterior application.
         4) Non-rising S/S pins with button tips, provide non-removable pin for exterior applications.
      b. Provide 1-1/2 pair hinges for each door leaf 3'-0" wide x 7'-0" high or smaller; for larger door leafs, provide 2 pair of hinges.
      c. Where spring hinges are scheduled, coil spring shall have positive adjustment. Install spring hinges at middle and lower locations. Always install ball-bearing type hinge at upper location.

B. Heavy duty cylindrical locksets with lever handles
   1. Manufacturer: Yale Security Inc.
   2. 5300LN Series (ANSI A156.2 Series 3000, Grade 2)
      a. Backset: 2-3/4"
      b. Dead locking latchbolt with 1/2" throw.
      c. Standard strike with curved lip and wrought box.
      d. Function:
         1. Privacy: F76B
         2. Passage: F75
      e. Lever design: Monroe

C. Bumpers
   1. Manufacturer: Bobrick
      a. Type: Wall mounted.
      b. Model: B-687

D. Closers
   1. Manufacturer: LCN closers
   2. Exterior doors: 4040-cush
      a. Non-handed, heavy duty, cast iron closer with adjustable spring power.
      b. Provide "Cush-N-Stop" arm.

E. Weatherstripping
   1. Manufacturer: Reese
      a. Head and jamb: "Polyprene" self adhesive gasket, #797.
      b. Bottom door sweep: Nylon brush type #967 DUR.

F. Aluminum thresholds
   1. Saddle type
   2. Material: Extruded aluminum with duranodic finish.

G. Pulls
   1. Type: Tubular
   2. Manufacturer: Rockwood Manufacturing
      a. Model: RM-201

PART 3 - EXECUTION

3.1 DELIVERIES

A. Stockpile items sufficiently in advance to assure their availability, and make necessary deliveries in a timely manner to assure orderly progress of the total Work.

3.2 COORDINATION

A. Coordinate as required with other trades to assure proper and adequate provision in the work of those trades for interface with the work of this Section.
B. Upon completion of the Work, and as a condition of its acceptance, provide the inspection, adjustment, and report described in Article 1.2 above.

3.3 INSTALLATION OF DOOR HARDWARE

A. Install only specified finish hardware, with the proper equipment, in accordance with the hardware manufacturer's templates and instruction.
B. Hardware locations shall be as follows unless otherwise indicated in Contract Documents.
C. Firmly anchor all components into position for long life under hard use, using only the anchoring devices furnished with the hardware item, or fasteners provided by this Contractor and approved by Architect.
D. Hardware Removal: Immediately before finish painting commences, remove hardware, with the exception of prime coated items, tag, box, and reinstall after finish painting is completed.

3.4 INSPECTION AND ADJUSTMENT

A. Inspect each installed door and finish hardware item and verify that each has been installed in strict accordance with this specification, is in proper condition and functions in its intended manner.
B. Adjust all operable devices for proper operation. Communicate questions regarding adjustment and installation of devices directly to supplier or manufacturer.
C. Adjust doors to operate freely and swing as designed.

3.5 DOOR HARDWARE SCHEDULE

A.	Set	Hardware
	#1	Hinges Cylindrical Lockset, Passage function. Weatherstripping Closer
	#2	Hinges Cylindrical Lockset, Privacy function Bumper

END OF SECTION

SECTION 09 2116 - GYPSUM BOARD ASSEMBLIES

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Level 5 finish system.

B. Gypsum wallboard.

C. Joint treatment and accessories.

1.02 RELATED SECTIONS

A. Section 06 1000 - Rough Carpentry: Building framing and sheathing.

B. Section 07 9005 - Joint Sealers: Acoustic sealant.

1.03 REFERENCES

A. ANSI A108.11 - American National Standard for Interior Installation of Cementitious Backer Units.

B. ANSI A118.9 - American National Standard Specifications for Cementitious Backer Units.

C. ASTM C 36 - Standard Specification for Gypsum Wallboard.

D. ASTM C 442 - Standard Specification for Gypsum Backing Board, Gypsum Coreboard, and Gypsum Shaftliner Board.

E. ASTM C 475 - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.

F. ASTM C 514 - Standard Specification for Nails for the Application of Gypsum Board.

G. ASTM C 557 - Standard Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing.

H. ASTM C 665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.

I. ASTM C 840 - Standard Specification for Application and Finishing of Gypsum Board.

J. ASTM C 1002 - Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs.

K. ASTM C 1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base.

L. ASTM C1396 - Standard Specification for Gypsum Board.

M. GA-600-12 - Fire Resistance Design Manual; Gypsum Association.

1.04 QUALITY ASSURANCE

A. Perform in accordance with ASTM C 840. Comply with requirements of GA-600 for fire-rated assemblies.

B. Applicator Qualifications: Company specializing in performing gypsum board application and finishing with minimum five years of experience.

PART 2 - PRODUCTS

2.01 GYPSUM BOARD MATERIALS

A. Gypsum Wallboard: ASTM C1396. Sizes to minimize joints in place; ends square cut.
   1. Type X: Fire resistant, UL or WH rated.
      a. Application: Walls.
      b. Thickness: 5/8 inch.
      c. Edges: Tapered.

2.02 LEVEL 5 FINISH SYSTEM

A. High Build Drywall Surfacer: Vinyl acrylic latex-based coating for spray application, designed to take the place of skim coating and separate paint primer in achieving Level 5 finish.

B. Acceptable Products:
   1. "Level Coat" manufactured by Magnum Products: www.levelcoat.com.
   2. "SHEETROCK Brand Primer-Surfaceer, TUFF-HIDE" manufactured by US Gypsum Company.
   3. "ProForm Brand Surfacer/Primer" manufacturered by National Gypsum Company.

2.03 ACCESSORIES

A. Acoustic Insulation: ASTM C 665; preformed glass fiber, friction fit type, thickness matching depth of wall framing, unfaced.

B. Acoustic Sealant: As specified in Section 07 9005 - Joint Sealers.

C. Finishing Accessories: ASTM C 1047, galvanized steel or rolled zinc, unless otherwise indicated.
   1. Types: As detailed or required for finished appearance.
   2. Special Shapes: In addition to conventional cornerbead and control joints, provide U-bead at exposed panel edges.

D. Joint Materials: ASTM C 475 and as recommended by gypsum board manufacturer for project conditions.
   1. Tape: 2 inch wide, coated glass fiber tape for joints and corners, except as otherwise indicated.
   2. Ready-mixed vinyl-based joint compound.

E. Screws: ASTM C 1002; self-piercing tapping type.

F. Nails: ASTM C 514.

G. Anchorage to Substrate: Tie wire, nails, screws, and other metal supports, of type and size to suit application; to rigidly secure materials in place.

H. Adhesive for Attachment to Wood: ASTM C 557.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that project conditions are appropriate for work of this section to commence.

3.02 ACOUSTIC ACCESSORIES INSTALLATION

A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.

B. Acoustic Sealant: Install as follows:
   1. Place one bead continuously on substrate before installation of perimeter framing members.
   2. Place continuous bead at perimeter of each layer of gypsum board.
   3. In non-fire-rated construction, seal around all penetrations by conduit, pipe, ducts, and rough-in boxes.

3.03 GYPSUM WALLBOARD INSTALLATION

A. Comply with ASTM C 840 and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.

B. Single-Layer Non-Rated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
   1. Exception: Tapered edges to receive joint treatment at right angles to framing.

C. Double-Layer Non-Rated: Use gypsum board for first layer, placed parallel to framing or furring members, with ends and edges occurring over firm bearing. Place second layer perpendicular to framing or furring members. Offset joints of second layer from joints of first layer.

D. Gypsum Soffit Board: Install perpendicular to framing, with staggered end joints over framing members or other solid backing.

E. Installation on Wood Framing: For rated assemblies, comply with requirements of listing authority.

3.04 INSTALLATION OF TRIM AND ACCESSORIES

A. Control Joints: Place control joints consistent with lines of building spaces and as follows:
   1. Not more than 30 feet apart on walls and ceilings over 25 feet long.
   2. Locate over doors aligned along each jamb.

B. Corner Beads: Install at external corners, using longest practical lengths.

C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials.

3.05 JOINT TREATMENT

A. Finish gypsum board in scheduled areas in accordance with levels defined in ASTM C 840 and as scheduled below.

B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
   1. Feather coats of joint compound so that camber is maximum 1/32 inch.
   2. Taping, filling, and sanding is not required at surfaces behind adhesive applied ceramic tile and fixed cabinetry.
   3. Taping, filling and sanding is not required at base layer of double layer applications.

C. Apply skim coat of topping compound over entire surface after joints have been properly treated to achieve Level 5 finish.

D. Fill and finish joints and corners of cementitious backing board as recommended by manufacturer.

3.06 TOLERANCES

A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.

3.07 FINISH LEVEL SCHEDULE

A. Level 5: Walls and ceilings exposed to view.

END OF SECTION

SECTION 09 28 16 - GLASS MAT GYPSUM TILE BACKER

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes the following:
   1. Moisture-resistant Embedded Glass Reinforced Gypsum Tile Backer.

1.3 REFERENCES

A. ASTM C 473: Standard Test Methods for Physical Testing of Gypsum Panel Products
B. ASTM C 840: Standard Specification for the Application and Finishing of Gypsum Board
C. ASTM C 954: Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in (0.84 mm) to .112 in (2.84 mm) in Thickness
D. ASTM C 1002: Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs
E. ASTM C 1178: Standard Specification for Glass Mat Water-Resistant Gypsum Backing Panel
F. ASTM D 3273: Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber
G. ASTM E 96: Standard Test Methods for Water Vapor Transmission of Materials
H. ASTM E 84 — Test Method for Surface Burning Characteristics of Building Materials
I. ASTM E 119: Standard Test Methods for Fire Tests of Building Construction and Materials
J. ASTM G 21 — Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi
K. California Department of Public Health CDPH/EHLB/Standard Method Version 1.1, 2010
L. GA-214 - Recommended Levels of Gypsum Board Finish
M. GA-216 - Application and Finishing of Gypsum Board
N. GA-231 - Assessing Water damage to Gypsum Board
O. GA-238 - Guidelines for the Prevention of Mold Growth on Gypsum Board
P. Health Product Declaration Standard v2.0 — hpdcollaborative.org
Q. ISO 14024 — Environmental Labels and Declarations — Type I Environmental Labeling — Principles and Procedures
R. Tile Council of North America: TCA Handbook for Ceramic Tile Installation
S. ANSI: American National Standard Specifications for the Installation of Ceramic Tile

1.4 SUBMITTALS

A. Submit in accordance with Section 01 30 00.
B. Product Data: For each type of product indicated.
C. Informational Submittals: Submit manufacturer's instructions, special procedures, and perimeter conditions requiring special attention.

1.5 QUALITY ASSURANCE

A. Fire-Test-Response Characteristics: For assemblies with fire-resistance ratings, provide materials and construction identical to those of assemblies tested for fire resistance per ASTM E 119.
B. Single Source Responsibility: Except where specified otherwise, obtain gypsum board products, joint treatment, and accessories from single manufacturer or from manufacturers recommended by prime manufacturer of gypsum board products.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store materials protected against damage from weather, direct sunlight, surface contamination, construction traffic, or other causes. Stack flat on leveled supports off the ground, under cover, and fully protected from weather.
   1. Store and support Tile Backer board in flat stacks to prevent sagging.
   2. Protect materials to keep them dry.
   3. Protect panels to prevent damage to edges, ends, and surfaces.

Part 2 – PRODUCT

2.1 GLASS MAT GYPSUM TILE BACKER

A. Fully embedded glass mat gypsum tile backer meeting the requirements of ASTM C 1178.
   1. CertainTeed Gypsum, Inc.
      a. Basis of Design: "Diamondback GlasRoc Tile Backer" with EGRG technology
      b. Substitutions: Submit in accordance with Section 016000.
   2. Type and Thickness: Type X, 5/8 inch.
      a. Flame spread: ASTM E 84: Class A.
      b. Smoke developed: ASTM E 84: Class A.
   3. Standard Size: 4 feet by 8 feet.

2.2 GLASS MAT GYPSUM TILE BACKER JOINT TREATMENT MATERIALS

A. Glass-Fiber Mesh Tape: Alkali-resistant self-adhering glass-fiber tape, minimum 2 inches wide, 10 by 10 or 10 by 20 threads/inch.

2.3 ACCESSORY MATERIALS

A. Fasteners: Steel galvanized roofing nails or corrosion resistant backer board screws of type, length and spacing as recommended by tile backer manufacturer.

Part 3 – EXECUTION

3.1 GLASS MAT GYPSUM TILE BACKER INSTALLATION

A. Comply with GA-216, ASTM C 840, TCA Handbook for Ceramic Tile Installation and manufacturer's written instructions.
B. Install CertainTeed Diamondback GlasRoc Tile Backer with diamond textured side facing inwards to receive tile.
C. Cut boards at penetrations, edges, and other obstructions of work; fit tightly against abutting construction, unless otherwise indicated.
D. Install boards with a 1/4 inch setback where they abut bathtub or shower receptors to prevent wicking.
E. Allow no joints greater than 1/8 inch.
F. Apply fasteners so screw heads bear tightly against gray acrylic coated face of tile backer boards; do not countersink fasteners.
G. Do not install an additional vapor barrier in conjunction with tile backer boards.
H. Space wall framing members a maximum of 16 inches o.c.
I. Horizontal Installation: Install tile backer with long edges in contact with edges of adjacent boards without forcing. Abut ends of boards over centers of stud, and stagger end joints of adjacent boards not less than one stud spacing.
J. Space fasteners approximately 6 inches o.c. and set back a minimum of 3/8 inch from edges and ends of boards.
K. Limitations:
    A. Do not use as a base for nailing and mechanical fastening.
    B. Do not install on shower floors or in shower curbs.

3.2 TILE BACKER JOINT TREATMENT

A. Seal tile backer joints, as required, according to tile backer manufacturer's written recommendations.
    1. Apply bead of sealant in 1/4 inch setback between tile backer boards and tub or shower receptor.
    2. Apply alkali-resistant glass-fiber mesh tape to tile backer board joints, apply and trowel latex-modified thinset mortar in entire face of tape.

END OF SECTION

SECTION 09 3000 - TILING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Tile for floor applications.

B. Non-ceramic trim.

1.2 RELATED SECTIONS

A. Section 07 90 05 - Joint Sealant

B. Section 09 28 16 - Glass Mat Gypsum Tile Backer

1.3 REFERENCES

A. American National Standards Institute (ANSI):
   1. ANSI A108/A118/A136.1 - Specifications for the Installation of Ceramic Tile.
   2. ANSI A137.1 - Specifications for Ceramic Tile.

B. American International (ASTM):
   1. ASTM C 144 - Standard Specification for Aggregate for Masonry Mortar.
   2. ASTM C 150 - Standard Specification for Portland Cement.
   3. ASTM C 207 - Standard Specification for Hydrated Lime for Masonry Purposes.
   4. ASTM C 503 - Specification for Marble Building Stone (Exterior).
   5. ASTM C 615 - Specification for Granite Dimension Stone.
   6. ASTM C 629 - Specification for Slate Dimension Stone.
   7. ASTM C 847 - Standard Specification for Metal Lath.
   8. ASTM C 1028 - Standard Test Method for Determining the Static Coefficient of Friction or Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method.
   9. ASTM D 4397 - Specification for Polyethylene Sheeting for Construction, Industrial, and Agricultural Applications.

C. Tile Council of North America (TCNA): TCA Handbook for Ceramic Tile Installation, 2007.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide manufacturers' data sheets on tile, mortar, grout, and accessories. Include instructions for using grouts and adhesives.

C. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

D. Maintenance Data: Include recommended cleaning methods, cleaning materials, stain removal methods, and polishes and waxes.

E. Maintain one copy of TCA Handbook and ANSI A108 Series/A118 Series on site.

F. Installer Qualifications: Company specializing in performing tile installation, with minimum of 5 years of documented experience.

1.5 PRE-INSTALLATION MEETING

A. Convene one week before starting work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.

1.7 ENVIRONMENTAL REQUIREMENTS

A. Do not install adhesives in an unventilated environment.

B. Maintain ambient and substrate temperature of 50 degrees F during installation of mortar materials.

1.8 EXTRA MATERIALS

A. Provide 4 sq. ft of each size, color, and surface finish of tile specified.

PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. American Olean Tile Co., which is located at: 7834 C. F. Hawn Fwy. P. O. Box 17130; Dallas, TX 75217; Toll Free Tel: 888-AOT TILE; Tel: 214-398-1411; Fax: 215-822-1353; Email: request info (suzi.rodriguez@daltile.com) or (gina_garza@americanolean.com); Web: www.americanolean.com

B. Requests for substitutions will be considered in accordance with provisions of Section 016000 - Product Requirements.

2.2 MOSAIC TILE

A. Homogeneous porcelain tile; ANSI A137.1, and as follows:
   1. Basis of Design: Unglazed Colorbody Porcelain Mosaics
      a. Mosaic Field Tile Size: 1 by 1 inches.
      b. Moisture Absorption: Less than 0.5 percent.
      c. Surface Finishes: Plain, Abrasive.
      d. Trim Name: Built-up Base, Bullnose, Bullnose Corner, Cove Base, Cove Base Corner, Cove Base In-Corner, Pool Nosing Corner, Round Cap Corner, Round Cap In-Corner, Stretcher, Universal Cove Base Outcorner

2.3 NON-CERAMIC TRIM

A. Non-Ceramic Trim: Satin-finished anodized aluminum, style and dimensions to suit application, for setting using tile mortar or adhesive.
B. Manufacturer: Schluter Systems, L.P., 194 Pleasant Ridge Road, Plattsburgh, NY 12901- 5841. Tel.: (800) 472-4588. Fax: (800) 477-9783. E-mail: specassist@schluter.com. Internet: www.schluter.com.
C. Use in the following locations:
    1. Transition between floor finishes: "RENO-TK".
    2. Transition between tub and wall: "DILEX-AS".

2.4 MORTAR MATERIALS

A. Mortar Bond Coat Materials:
    1. Portland Cement type: thin-set, latex modified mortar complying with ANSI A118.4 and A118.11.
        a. Acceptable product: LATICRETE 254 Platinum as manufactured by LATICRETE International
        1 LATICRETE Park North
        Bethany, CT 06524-3423 USA
        Telephone: +1.203.393.0010, ext. 235
        Toll Free: 1.800.243.4788, ext. 235
        Fax: +1.203.393.1684
        Website: www.laticrete.com

2.5 GROUT MATERIALS

A. Grout: Polymer modified cement grout, unsanded, complying with ANSI A118.7.

    1. Color: gray.

2.6 ACCESSORY MATERIALS

A. Uncoupling Membrane: 1/8 inch thick polyurethane matting with three-dimensional grid structure with dovetail shaped cavities and fleece webbing laminated to the underside to provide a mechanical bond to the substrate adhesive.
    1. Acceptable Product: "DITRA" by Schluter Systems.
    2. Use in the following locations: horizontal surfaces receiving tile.

B. Waterproof Membrane and Vapor Retarder:
    1. Use in the following locations: vertical surfaces receiving tile.
        a. Pliable, sheet-applied, bonded waterproof membrane and vapor retarder:
            i. Acceptable Product: "KERDI" by Schluter Systems.
            ii. Acceptable Product "HYDRO BAN® Sheet Membrane" by LATICRETE International

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that sub-floor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive tile.
   1. Walls: 1/8 inch in 8 feet.
   2. Floors: 1/8 inch in 10 feet.

B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive tile.

C. Verify that concrete sub-floor surfaces are ready for tile installation by testing for moisture emission rate and alkalinity; obtain instructions if test results are not within limits recommended by tile manufacturer and setting materials manufacturer.

D. Verify that required floor-mounted utilities are in correct location.

E. Acceptability of Surfaces: Inspect surfaces to be tiled to ensure proper bonding can be achieved, and to verify that surfaces are free of curing membranes, oil, grease, wax and dust.

3.2 PREPARATION

A. Protect surrounding work from damage.

B. Vacuum clean surfaces and damp clean.

C. Seal substrate surface cracks with filler. Level existing substrate surfaces to acceptable flatness tolerances.

3.3 INSTALLATION - GENERAL

A. Install tile and grout in accordance with applicable requirements of ANSI A108.1 through A108.13, manufacturer's instructions, and TCA Handbook recommendations.

B. Lay tile to pattern indicated. Do not interrupt tile pattern through openings.

C. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners neatly. Align floor joints.

D. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make joints watertight, without voids, cracks, excess mortar, or excess grout.

E. Form internal angles square and external angles bullnosed.

F. Install non-ceramic trim in accordance with manufacturer's instructions.

G. Sound tile after setting. Replace hollow sounding units.

H. Keep expansion joints free of adhesive or grout. Apply sealant to joints.

I. Allow tile to set for a minimum of 48 hours prior to grouting.

J. Grout tile joints. Use standard grout unless otherwise indicated.

K. Apply sealant to junction of tile and dissimilar materials and junction of dissimilar planes.

3.4 INSTALLATION - FLOORS - THIN-SET METHODS

A. Over interior wood substrates, install in accordance with TCA Handbook Method F113, dry-set or latex-portland cement bond coat, with standard grout, unless otherwise indicated.

B. Use uncoupling membrane under all floor tile.

3.5 INSTALLATION - WALL TILE

A. Over cementitious backer units install in accordance with TCA Handbook Method W223, organic adhesive.

B. Provide waterproofing membrane and vapor barrier under all wall tile.

3.6 CLEANING

A. Clean tile and grout surfaces.

3.7 PROTECTION OF FINISHED WORK

A. Do not permit traffic over finished floor surface for 4 days after installation.

END OF SECTION

SECTION 09 9000 - PAINTING AND COATINGS

PART 1 - GENERAL

1. REFERENCE STANDARDS

A. The latest published edition of a reference shall be applicable to this Project unless identified by a specific edition date.

B. All reference amendments adopted prior to the effective date of this Contract shall be applicable to this Project.

C. All materials, installation and workmanship shall comply with the applicable requirements and standards.

2. DEFINITIONS

A. "Paint" includes coating systems materials, primers, emulsions, enamels, stains, sealers and fillers, and other applied materials whether used as prime, intermediate, or finish coats.

B. “Substrate" as used herein means the surface to which paint is to be applied. In the case of previously painted existing surfaces, substrate means the surface to which the existing paint was applied.

3. QUALITY ASSURANCE

A. Single Source Responsibility: Provide primers and undercoat paint produced by the same manufacturer as the finish coats.

B. Coordination of Work: Review other sections in which primers are provided to ensure compatibility of the total systems for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.

C. Notify the Architect of problems anticipated using the materials specified.

D. Material Quality: Provide the manufacturer's best quality trade sale paint material of the various coating types specified. Paint material containers not displaying manufacturer's product identification will not be acceptable.

E. Odor Eliminating Additive: At all locations scheduled to receive solvent or alkyd-based coatings, provide an odor-eliminating additive to minimize the presence of odor from wet and drying paint films.

1. Provide additive recommended and approved by the primer/finish coat manufacturer for use with their paint. Benjamin Moore does not recommend an “odor eliminator additive” for Benjamin Moore Paints.

2. Subject to compliance with above requirements, "Bio Zapp Paint Odor Eliminator" by Bio Zapp Laboratories, (941/922-9199) is acceptable.

4. SUBMITTALS

A. Samples:

1. Samples for initial color selection in the form of manufacturer's color charts.

a. After color selection, the Architect will furnish color chips for surfaces to be coated.

2. Samples for verification purposes:

a. Provide samples of each color and material to be applied, with texture to simulate actual conditions, on representative samples of the actual substrate.

b. Define each separate coat, including block fillers and primers.

c. Use representative colors when preparing samples for review.

d. Resubmit until required sheen, color, and texture are achieved.

e. Provide a list of material and application for each coat of each sample. Label each sample as to location and application.

f. Submit samples on the following substrates for the Architect's review of color and texture only:

1. Ferrous Metal: Provide two 4 inch square samples of flat metal and two 8 inch long samples of solid metal for each color and finish.

2. Drywall: Provide two 12 by 12-inch samples of each color and finish.

B. Product Data:

1. Submit manufacturer’s catalog cuts and descriptive information on each product used. Include preparation requirements and application instructions.

C. Record Documents: Provide record approved samples and product data.

5. DELIVERY, STORAGE and HANDLING

A. Deliver materials to the job site in the manufacturer's original, unopened packages and containers bearing manufacturer's name and label and the following information:

1. Product name or title of material.

2. Product description (generic classification or binder type).

3. Manufacturer's stock number and date of manufacture.

4. Contents by volume, for pigment and vehicle constituents.

5. Thinning instructions.

6. Application instructions.

7. Color name and number.

B. Store materials not in use in tightly covered containers in a well ventilated area at a minimum ambient temperature of 45 deg F (7 degrees C). Maintain containers used in storage in a clean condition, free of foreign materials and residue.

1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing, and application.

6. PROJECT CONDITIONS

A. Apply water-based paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 degrees F (10 degrees C) and 90 degrees F (32 degrees C).

B. Apply solvent thinned paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 45 degrees F (7 degrees C) and 95 degrees F (35 degrees C).

C. Do not apply paint in snow, rain, fog, or mist, when the relative humidity exceeds 85 percent, at temperatures less than 5 degrees F (3 degrees C) above the dew point, or to damp or wet surfaces.

1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by the manufacturer during application and drying periods.

PART 2 PRODUCTS

1. MANUFACTURES

PPG Industries, Inc. www.ppg.com	One PPG Place Pittsburgh, PA 15272
Benjamin Moore Paints www.benjaminmoore.com	101Paragon Drive Montvale, NJ 07645
Glidden Professional www.gliddenprofessional.com	15885 West Sprague Road, Strongsville, OH 44136
The Sherwin-Williams Company www.Sherwin-Williams.com	101 Prospect Ave. Cleveland, OH 44115

2. PAINT SCHEDULE

A. Provide the following paint systems for the various substrates, as indicated. Provide only the listed prime and finish coat materials unless otherwise recommended in writing by the paint manufacturer for each specific substrate.

B. Where specific finish paint material is not indicated, refer to notes and finish schedules for finish paint material and gloss levels for each surface to be painted.

3. INTERIOR PAINTING SCHEDULE

A. Gypsum Drywall; 2 finish coats over primer:

1. Primer:

a. PPG: Pure Performance Interior Latex Primer 9-900.

b. Benjamin Moore: N372 Eco Spec WB interior latex primer.

c. Glidden Professional: LM 9116 Lifemaster 0 VOC Primer.

d. S-W: ProMar 200 Zero VOC Interior Latex Primer B28-2600 Series.

2. Finish Coat:

a. PPG: Pure Performance Interior Latex Eggshell 9-300.

b. Benjamin Moore: N374 Eco Spec WB Eggshell Finish.

c. Glidden Professional: LM 9300 Lifemaster 0 VOC Interior Eggshell.

d. S-W: ProMar 200 Zero VOC Interior Latex Eg-shel B20-2600 Series.

B. Ferrous Metal; 2 finish coats of water borne semi-gloss acrylic latex enamel over primer:

1. Waterborne Acrylic Primer:

a. PPG: Pitt-Tech 100 percent Acrylic Primer 90-712.

b. Benjamin Moore: P29 Super Spec HP Direct to Metal Acrylic Semi-gloss.

c. Glidden Professional: Devflex 4020 PF Direct to Metal Primer and Flat Finish.

d. S-W: Pro Industrial Pro-Cryl Universal Primer B66 Series.

2. Finish Coat:

a. PPG: Pitt-Tech 100 percent Acrylic Satin Direct to Metal 90-474.

b. Benjamin Moore: P29 Super Spec HP Direct to Metal Acrylic Semi-gloss.

c. Glidden Professional: Lifemaster Oil Interior/Exterior Semi-Gloss Paint 1506 Series.

d. S-W: Pro-Industrial Semi-Gloss Acrylic B66-600 Series.

C. Galvanized Metal; 2 finish coats of water borne semi-gloss acrylic latex enamel over primer:

1. Waterborne Acrylic Galvanized Metal Primer:

a. PPG: Pitt-Tech 100 percent Acrylic Primer 90-712.

b. Benjamin Moore: P29 Super Spec HP Direct to Metal Acrylic Semi-gloss.

c. Glidden Professional: Devflex 4020 PF Direct to Metal Primer and Flat Finish.

d. S-W: Pro Industrial Pro-Cryl Universal Primer B66 Series.

2. Finish Coat:

a. PPG: Pitt-Tech 100 percent Acrylic Satin Direct to Metal 90-474.

b. Benjamin Moore: P29 Super Spec HP Direct to Metal Acrylic Semi-gloss.

c. Glidden Professional: Lifemaster Oil Interior/Exterior Semi-Gloss Paint 1506 Series.

d. S-W: Pro-Industrial Semi-Gloss Acrylic B66-600 Series.

D. Aluminum: 2 finish coats of water borne acrylic latex enamel over primer:

1. Waterborne Acrylic Galvanized Metal Primer:

a. PPG: Pitt-Tech 100 percent Acrylic Primer 90-712.

b. Benjamin Moore: P29 Super Spec HP Direct to Metal Acrylic Semi-gloss.

c. Glidden Professional: Devflex 4020 PF Direct to Metal Primer and Flat Finish.

d. S-W: Pro Industrial Pro-Cryl Universal Primer B66 Series.

2. Finish Coat:

a. PPG: Pitt-Tech 100 percent Acrylic Satin Direct to Metal 90-474.

b. Benjamin Moore: P29 Super Spec HP Direct to Metal Acrylic Semi-gloss.

c. Glidden Professional: Lifemaster Oil Interior/Exterior Semi-Gloss Paint 1506 Series.

d. S-W: Pro-Industrial Semi-Gloss Acrylic B66-600 Series.

PART 3 EXECUTION

1. PREPARATION

A. Examine substrates and conditions under which painting will be performed for compliance with requirements for application of paint. Do not begin paint application until unsatisfactory conditions have been corrected.

1. Start of painting will be construed as the Applicator's acceptance of surfaces and conditions within a particular area.

B. General Procedures: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items in place that are not to be painted, or provide surface applied protection prior to surface preparation and painting. Remove these items if necessary for complete painting of the items and adjacent surfaces. Following completion of painting operations in each space or area, have items reinstalled by workers skilled in the trades involved.

1. Clean surfaces before applying paint or surface treatments. Remove oil and grease prior to cleaning. Schedule cleaning and painting so that dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.

C. Surface Preparation: Clean and prepare surfaces to be painted in accordance with the manufacturer's instructions for each particular substrate condition and as specified.

1. Provide barrier coats over incompatible primers and existing surfaces, or remove and reprime. Notify Architect in writing of problems anticipated with using the specified finish coat material with substrates primed by others.

2. Ferrous Metals: Clean non-galvanized ferrous metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with recommendations of the Steel Structures Painting Council.

a. Blast steel surfaces clean as recommended by the paint system manufacturer and in accordance with requirements of SSPC specification SSPCSP 10.

a. Treat bare and sandblasted or pickled clean metal with a metal treatment wash coat before priming.

a. Touch up bare areas and shop applied prime coats that have been damaged. Wire brush, clean with solvents recommended by the paint manufacturer, and touch up with the same primer as the shop coat.

3. Galvanized Surfaces: Clean galvanized surfaces with nonpetroleum based solvents so that the surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.

D. Materials Preparation: Carefully mix and prepare paint materials in accordance with manufacturer's directions.

1. Maintain containers used in mixing and application of paint in a clean condition, free of foreign materials and residue.

2. Stir material before application to produce a mixture of uniform density; stir as required during application. Do not stir surface film into material. Remove film and, if necessary, strain material before using.

3. Use only thinners approved by the paint manufacturer, and only within recommended limits.

2. INSTALLATION

A. Installation shall meet or exceed all applicable federal, state and local requirements, referenced standards and conform to codes and ordinances of authorities having jurisdiction.

B. All installation shall be in accordance with manufacturer’s published recommendations

3. APPLICATION

A. Apply paint in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied.

B. Paint exposed surfaces whether or not colors are designated in "schedules," except where a surface or material is specifically indicated not to be painted or is to remain natural. Where an item or surface is not specifically mentioned, paint the same as similar adjacent materials or surfaces. If color or finish is not designated, the Architect will select from standard colors or finishes available.

1. Painting of mechanical, electrical, and plumbing items is limited to exposed natural gas piping, exposed fire sprinkler piping, and roof top exhaust fan hoods. Items in mechanical and electrical rooms shall not be field painted unless otherwise scheduled on Drawings.

C. At "unoccupied" interior areas, painting is not required on prefinished items or finished metal surfaces.

1. Do not paint over Underwriter's Laboratories, Factory Mutual or other code required labels or equipment name, identification, performance rating, or nomenclature plates.

D. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.

1. Provide finish coats that are compatible with primers used.

a. The number of coats and film thickness required is the same regardless of the application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. Sand between applications where sanding is required to produce an even smooth surface in accordance with the manufacturer's directions.

b. Apply additional coats when undercoats, stains, or other conditions show through final coat of paint until paint film is of uniform finish, color, and appearance. Give special attention to ensure that surfaces, including edges, corners, crevices, welds, and exposed fasteners, receive a dry film thickness equivalent to that of flat surfaces.

2. The term "exposed surfaces" includes areas visible when permanent or builtin fixtures, convector covers, covers for finned tube radiation, grilles, and similar components are in place. Extend coatings in these areas as required to maintain the system integrity and provide desired protection.

a. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Paint surfaces behind permanently fixed equipment or furniture with prime coat only before final installation of equipment.

b. Paint interior surfaces of ducts, where visible through registers or grilles, with a flat, nonspecular black paint.

E. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.

1. Allow sufficient time between successive coats to permit proper drying. Do not recoat until paint has dried to where it feels firm, and does not deform or feel sticky under moderate thumb pressure and where application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

F. Minimum Coating Thickness: Apply materials at not less than the manufacturer's recommended spreading rate. Provide a total dry film thickness of the entire system as recommended by the manufacturer.

G. Prime Coats: Before application of finish coats, apply a prime coat of material as recommended by the manufacturer to material that is required to be painted or finished and has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to assure a finish coat with no burn through or other defects due to insufficient sealing.

4. CLEANING

A. At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from the site.

B. Upon completion of painting, clean glass and paint spattered surfaces. Remove spattered paint by washing and scraping, using care not to scratch or damage adjacent finished surfaces.

5. PROTECTION

A. Protect work of other trades, whether to be painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as acceptable to Architect.

B. Provide "wet paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others for protection of their work after completion of painting operations.

1. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

END OF SECTION

SECTION 10810 - TOILET ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Toilet Room Accessories.

1.02 RELATED SECTIONS

A. Section 09 2621 - Gypsum Board Assemblies.

1.03 REFERENCES

A. ATBCB ADAAG - Americans with Disabilities Act Accessibility Guidelines; US Architectural and Transportation Barriers Compliance Board.

B. ASTM A 240/A 240M - Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.

C. ASTM A 554 - Standard Specification for Welded Stainless Steel Mechanical Tubing.

D. ASTM F 446 - Standard Consumer Safety Specification for Grab Bars and Accessories Installed in the Bathing Area.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements, for submittal procedures.

B. Product Data: Manufacturer's product data for products specified, indicating selected options and accessories.

C. Shop Drawings:

1. Plans: Locate each specified unit in project.

2. Elevations: Indicate mounting height of each specified unit in project.

3. Details: Indicate anchoring and fastening details, required locations and types of anchors and reinforcement, and materials required for correct installation of specified products not supplied by manufacturer of products of this section.

D. Manufacturer's printed installation instructions for each specified product.

E. Closeout Submittals: Warranty documents, issued and executed by manufacturer of products of this section, and countersigned by Contractor.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum five (5) years of documented experience producing products of the types specified in this section.

B. Regulatory Requirements: Conform to ADAAG requirements.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Factory-apply strippable protective vinyl coating to sight-exposed surfaces after finishing of products; ship products in manufacturer's standard protective packaging.

B. Storage and Protection: Store products in manufacturer's protective packaging until installation.

1.07 WARRANTY

A. See Section 017800 - Closeout Submittals, for additional warranty requirements.

B. Manufacturer's standard warranty against defects in product workmanship and materials.

C. Manufacturer's 15-year warranty against silver spoilage of mirrors.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Basis of design: Bobrick Washroom Equipment, Inc.: www.bobrick.com.

B. Other Acceptable Manufacturers:

1. Bobrick Washroom Equipment, Inc.: www.bobrick.com.

2. Bradley Corporation, Washroom Accessories Division: www.bradleycorp.com.

3. Substitutions: Section 016000 - Product Requirements.

C. Supply all products of this section from a single manufacturer.

2.02 MATERIALS

A. Stainless Steel Sheet: ASTM A 240/A 240M, Type 304, 18-8 alloy. No.4 satin finish.

2.03 TOILET ACCESSORIES

A. Basic Construction Requirements:

1. Doors: Fabricated from minimum 0.0313 inch stainless steel sheet, formed hems at sight-exposed edges; welded corners, finished to match sheet finish.

2. Cabinets: Fabricated from minimum 0.0313 inch stainless steel sheet, formed hems at sight-exposed edges; all joints welded, sight-exposed welds finished to match sheet finish.

3. Hinges: Stainless steel piano hinge, 3/16 inch diameter barrel, full length of cabinet; hinge leaves spot-welded to door and cabinet body.

4. Locks: Tumbler locks, keyed alike other toilet accessory locks, with two keys for each lock.

5. Stainless Steel Finish: No.4 satin.

B. Soap Dish: Model B-4380, provide one at each tub on wall with controls and as indicated on drawings.

C. Paper Towel Dispenser and Waste Receptacle: Model B-3942.

D. Toilet Paper Holder: Model B-3888, provide one at each toilet.

E. Heavy Duty Wall Hook (WH): Model B-2116, as indicated on drawings.

F. Curtain Rod: Model B-6047, as indicated on drawings.

G. Mirror: Model B-165 1836, provide one at each hand sink.

H. Soap Dispenser: Model B-2111, provide one at each hand sink.

I. Baby Changing Station: Model KB110-SSRE, provide one in each restroom with bath tub.

2.05 GRAB BARS

A. Grab Bars - Basic Requirements: Fabricated to comply with ASTM F 446 and to withstand a 900 pound force, from ASTM A 554 stainless steel tubing, 0.050 inch, Type 304, 18-8 alloy; formed 1-1/2 inch radius return to wall at each end; each end heliarc-welded to minimum 11 gage stainless steel circular flange; welds finished to match tube finish.

B. Grab Bars (GB): Series B-6806.

C. Grab Bar Snap-on Mounting Flanges: Snap-on stainless steel cover, 3-1/4 inch diameter by 1/2 inch deep, for concealing grab bar mounting flange.

D. Sizes and configurations:

1. Provide a 18" long vertical, 36" long back and 42" long side grab bars at each toilet.

2. Provide one 18" long vertical, one 24" horizontal and two 48" long horizontal grab bars at each tub.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verification of Conditions:

1. Prepared openings are sized and located in accordance with shop drawings.

2. Reinforcement and anchoring devices are correct type and are located in accordance with shop drawings.

B. Installer's Examination:

1. Examine conditions under which construction activities of this section are to be performed, then submit written notification if such conditions are unacceptable.

2. Transmit two copies of installer's report to Architect within 24 hours of receipt.

3. Beginning construction activities of this section before unacceptable conditions have been corrected is prohibited.

4. Beginning construction activities of this section indicates installer's acceptance of conditions.

3.02 INSTALLATION

A. Install toilet accessories plumb and level in accordance with shop drawings and manufacturer's printed installation instructions.

B. Locate toilet accessories at heights specified by Americans with Disabilities Act (ADA).

3.03 CLEANING

A. Remove manufacturer's protective vinyl coating from sight-exposed surfaces 24 hours before final inspection.

B. Clean surfaces in accordance with manufacturer's recommendations.

3.04 PROTECTION OF INSTALLED PRODUCTS

A. Protect products from damage caused by subsequent construction activities.

B. Field repair of damaged product finishes is prohibited; replace products having damaged finishes caused by subsequent construction activities.

END OF SECTION

SECTION 10 4410 - PLASTIC SIGNS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Engraved plastic signs.

1.02 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Shop drawings in sufficient detail to show fabrication, installation, anchorage, and interface of the work of this Section with the work of adjacent trades.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Plastic Signs:

1. Best Sign Systems, Inc: www.bestsigns.com.

2. Substitutions: See Section 01 6000 - Product Requirements.

2.02 ENGRAVED SIGNS

A. Engraved Signs: Laminated colored plastic; lettering engraved through face to expose core color:

1. Comply with applicable provisions of ANSI/ICC A117.1, including Braille.

2. Total Thickness: 1/16 inch.

3. Edges: Filleted.

4. Character Font: Helvetica.

5. Color: Black with white colored core.

2.03 ACCESSORIES

A. Mounting Hardware: Chrome screws.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate surfaces are ready to receive work.

3.02 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Install signs after surfaces are finished, in locations indicated.

C. Position sign on the wall adjacent to the strike side of the door, 60" above the floor.

3.03 SCHEDULE

A. Restroom Door Graphic: "male", "child", "female" and "wheelchair" graphic image and "FAMILY RESTROOM" in capital letters with Braille; 8 required. See detail A4 on sheet A-501.

B. Laundry Door Graphic: "LAUNDRY" in capital letters with Braille; 2 required. See detail C4 on sheet A-501.

END OF SECTION

SECTION 22 05 00
COMMON WORK RESULTS FOR PLUMBING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Work to be performed under this Division shall include all labor, materials, equipment, transportation, construction plant and facilities necessary to provide a complete and satisfactory system ready to use. Examine all drawings and all sections of specifications to ascertain to what extent other contracts affect work.

1.02 QUALITY ASSURANCE

A. Qualifications of contractor: All materials and equipment shall be new and all work shall be executed with maximum speed consistent with current accepted trade practices. Furnish materials and equipment promptly after authorization to proceed, and proceed with work in progress with contractor on project. Perform all work included in contract in a manner that will not cause interferences or delays to, or interfere with, progress of contractor.

B. Requirements of regulatory agencies:
   1. Permits: Arrange and pay for all permits, inspections and utility connections required.
   2. Referenced standards:
      a. Comply with specified codes and standards. If conflict exists between codes or standards and drawings, project manual or addenda requirements, request clarification from Architect/Engineer.
      b. Conform to installation rules and regulations of standards listed including all subsequently published amendments thereto issued prior to date of bidding documents.
      c. Conform to requirements of all local, state and federal agencies, which have authority over this project. Include all items of labor and material required to meet such requirements regardless of failure to specify in project manual or indicate on drawings each individual item.
      d. All equipment, apparatus and systems shall be rated, tested, fabricated and installed with applicable industry standards.
      e. Applicable portions of latest editions of following standards form a part of this project manual to same force and effect as if repeated herein.
         1) American Society for Testing Materials (ASTM)
         2) American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE)
         3) American Society of Mechanical Engineers (ASME)
         4) American Water Works Association (AWWA)
         5) National Electrical Code (NEC)
         6) National Electric Manufacturers Association (NEMA)
         7) National Fire Protection Association (NFPA)
         8) Underwriters Laboratories, Inc. (UL)
         9) Environmental Protection Agency (EPA)
         10) Department of Public Health (DPH)
         11) Iowa Plumbing Code, Current Edition

1.03 COORDINATION & SUBMITTALS

A. Contractor shall resolve all conflicts before actual installation begins. Order of space preference throughout building shall be:
   1. Recessed light fixtures
   2. Duct work
   3. Soil, waste, vent and storm piping
   4. Domestic water piping
   5. Sprinkler piping
   6. Electrical conduit
   7. Exception: Plumbing lines below or behind plumbing fixtures shall have precedence over all other work. Electrical conduit above or below switchgear, panel boards and control panels shall have precedence over all other work. Do not install any fluid conveying piping over electrical or elevator equipment.
   8. Submit following Certifications:
      a. Medical Air and Vacuum (Brazing).

1.04 WARRANTY

A. Guarantee all work including labor, material and equipment for this project for a period of one (1) year from date of acceptance by Owner.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.01 EXISTING CONDITIONS

A. In order to become familiar with scope of work involved, visit existing site, before submitting bid, and carefully examine existing condition in order to have full knowledge and understanding of conditions and restrictions affecting performance of work required. Include in bid all work which is reasonably inferred by contract drawings and specifications, whether specifically shown or not, as a result of existing conditions, construction, irregularities and interferences which may affect work. No additional compensation will be considered for misunderstanding conditions to be met.

B. Layout shown on drawings is necessarily diagrammatic but shall be followed as closely as other work will permit. Changes from these drawings required to make this work conform to building construction shall be made only with prior written approval of Architect/Engineer. All proposed changes shall be shown on shop drawings. All measurements shall be verified by actual observation and all work shall fit in place meeting approval of Architect/Engineer.

C. Contractor shall provide openings required in new and existing construction that may be necessary for installation of mechanical work and all patching and workmen competent in trade required, at expense of contractor shall do repairing. Contractor shall be responsible for arranging work so that minimum cutting will be required. All rubbish and excess materials involved in such cutting shall be promptly removed from site and disposed of by contractor. Cutting through floor or roof systems or load bearing walls shall be done only with prior written approval of Architect/Engineer so as to avoid damaging structural system.

D. Sequencing, scheduling:
   1. Confer with contractor regarding location and size of pipes, equipment, ducts, openings and special architectural treatments in order that there may be no interferences between installation or progress of work of contractor on project. Order of space preference shall be as listed above.

2. In case of interconnection of work of two or more contractors, verify at site or on shop drawings all dimensions relating to such work. All errors due to failure to so verify any such dimensions shall be promptly rectified.
3. All line voltage wiring and final connections to complete mechanical systems shall be provided by Electrical Contractor. All electrical conduit, wire, and connections relating to mechanical equipment controls and all wiring associated with starter holding coils, shall be responsibility of contractor installing mechanical equipment unless otherwise indicated on drawings. Contractor installing mechanical equipment shall be responsible for magnetic motor starters where such starters are part of control package of equipment supplied. All other starters shall be furnished and installed by Electrical Contractor. Contractor installing starters that are part of a control package shall coordinate starter requirements with Division 26 of specifications.
4. Access panels, in walls or ceilings, required for access and maintenance (i.e., valve or control instrument mounted in a pipe) shall be provided by respective contractor. Access panels are not required in areas where ceiling system is lay-in tile; however, sufficient space must be available in and through ceiling system to allow maintenance and adjustment of dampers, and cleaning of coils as necessary, or a suitable access panel shall be provided for that purpose. Access panels shall be approximately 15 inches by 18 inches wherever possible and shall be provided with flush trim and an allenkey operated camlock fastener. Karp, Milcor, or Bilco shall manufacture panels.
5. Items of equipment may be specified in singular however, provide and install number of items of equipment as indicated on drawings and as required for a complete system.
6. Equipment and devices furnished and installed by contractors, which have factory prime coat, or final surface finish shall be replaced, repaired or refinished if defective or damaged during installation.
7. Arrange all work so a minimum period of interruption or outages will occur in temporary or permanent transfer of services as required for all mechanical revisions. Not less than 48 hours notification to Owner shall be required before approval will be granted for any disruption of gas, water, or sanitary services. Outage request shall include extent of work to be done, length of outage time required, and time at which outage is to begin. No allowance will be made for extra payment as a result of scheduling “overtime” work necessary to perform before or after normal or regular working hours to accomplish work intended.
8. Submit a “Sequence of Work Schedule” in respect to all temporary and permanent utility and service cutovers after final determination. This schedule shall be submitted for approval to Architect/Engineer. Submittal shall designate priority order, service or utility affected, date of cutover, and time of day to start and finish.

3.02 CLEANING

A. Upon completion of contract all remaining materials and rubbish shall be removed from building and premises and work areas shall be left clean and free from stains, mortar, paint spots, etc.

B. All switches, controls, and safety devices shall be clearly and permanently marked with embossed or printed plates as to purpose and as to operation and shall be tested in presence of Owner's designated representative to insure that their function and purpose is understood.

C. Upon completion of work, put systems into service maintaining responsibility for equipment during all testing operations including lubricating and turning on and off of such apparatus.

END OF SECTION

THIS PAGE

INTENTIONALLY

LEFT BLANK

SECTION 22 05 53
IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Tags.

B. Pipe Markers.

1.02 REFERENCE STANDARDS

A. ASME A13.1 - Scheme for the Identification of Piping Systems; The American Society of Mechanical Engineers; 2007.

1.03 SUBMITTALS

A. Product Data: Valve tags.

B. Product Data (Pipe Markers): Provide manufacturers catalog literature.
1. Domestic Cold Water.
2. Domestic Hot Water.
3. Drains.

PART 2 PRODUCTS

2.01 TAGS

A. Acceptable Products:
1. Advanced Graphic Engraving: www.advancedgraphicengraving.com.
2. Brady Corporation: www.bradycorp.com.
3. Kolbi Pipe Marker Co.: www.kolbipipemarkers.com.
4. Seton Identification Products: www.seton.com.

B. Plastic Tags: Laminated three-layer plastic with engraved black letters on light contrasting background color.
1. Tag Size: 1½" square, minimum.

C. Metal Tags: 304 Stainless Steel with smooth edges.
1. Tag size: 2-1/8 inch x 3-3/8 inch.
2. Embossed letters: 3/16 inch.
3. Justified text.

2.02 PIPE MARKERS

A. Acceptable Products:
1. Brady Corporation: www.bradycorp.com.
2. Kolbi Pipe Marker Co.: www.kolbipipemarkers.com.
3. MIFAB, Inc.: www.mifab.com.
4. Seton Identification Products: www.seton.com.

B. Plastic Tape Pipe Markers: Flexible, vinyl film tape with pressure sensitive adhesive backing and printed markings.

C. Color: Conform to ASME A13.1.

PART 3 EXECUTION

3.01 PREPARATION

A. Degrease and clean surfaces to receive adhesive for identification materials.

3.02 INSTALLATION

A. Install nameplates with corrosive-resistant mechanical fasteners, or adhesive. Apply with sufficient adhesive to ensure permanent adhesion and seal with clear lacquer.

B. Install tags with 0.032 inch diameter stainless steel aircraft lockwire.
   1. Cut length of lockwire and fold in half.
   2. Thread wire through label and form small loop capturing label at center of wire.
   3. 3Thread wire ends around component so label can be easily read from walkway.
   4. Mate tag ends of wire and clamp with pliers.
   5. Twist lockwire, cut off excess wire, and bend wire end over to prevent exposed sharp edges.

C. Use tags on piping 3/4 inch (20 mm) diameter and smaller.
   1. Identify service, flow direction, and pressure.
   2. Install in clear view and align with axis of piping.
   3. Locate identification not to exceed 20 feet (6 m) on straight runs including risers and drops, adjacent to each valve and Tee, at each side of penetration of structure or enclosure, and at each obstruction.

D. Install plastic pipe markers in accordance with manufacturer's instructions. At a minimum: install adjacent to valves and major pieces of equipment and once every 50 ft of pipe runs.

3.03 IDENTIFICATION

A. Valve Tags: Provide valve tags for all valves.

B. Pipe Markers: Provide pipe markers at access panels and above ceiling.
   1. Domestic Cold Water.
   2. Domestic Hot Water.
   3. Drains.

END OF SECTION

SECTION 22 07 19
PIPE INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Piping insulation.

1.02 REFERENCE STANDARDS

A. ASTM C 177 - Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded Hot Plate Apparatus; 2004.

B. ASTM C 518 - Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus; 2004.

C. ASTM C 533 - Standard Specification for Calcium Silicate Block and Pipe Thermal Insulation; 2009.

D. ASTM C 534/C 534M - Standard Specification for Preformed Flexible Elastomeric Cellular Thermal Insulation in Sheet and Tubular Form; 2008.

E. ASTM C 795 - Standard Specification for Thermal Insulation for Use in Contact with Austenitic Stainless Steel; 2008.

F. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2010.

G. ASTM E 96/E 96M - Standard Test Methods for Water Vapor Transmission of Materials; 2005.

H. NFPA 255 - Standard Method of Test of Surface Burning Characteristics of Building Materials; National Fire Protection Association; 2006.

I. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials; Underwriters Laboratories Inc.; Current Edition, Including All Revisions.

1.03 SUBMITTALS

A. Product Data: Provide product description including thermal characteristics.
   1. Insulation.

1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with not less than three years of documented experience.

B. Applicator Qualifications: Company specializing in performing the type of work specified in this section with minimum five years of experience.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver material to site in factory fabricated containers with manufacturer's stamp or label, showing fire and smoke hazard ratings of products.

B. Accept materials on site, labeled with manufacturer's identification, product density, and thickness.

C. Store material in original wrappings and protect from weather and construction traffic.

D. Protect against sun, dirt, water, chemical and mechanical damage.

E. Remove damaged insulation from project site. Do not install.

PART 2 PRODUCTS

2.01 REQUIREMENTS FOR ALL PRODUCTS OF THIS SECTION

A. Surface Burning Characteristics: Flame spread/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E 84, NFPA 255, or UL 723.

2.02 FLEXIBLE ELASTOMERIC CELLULAR INSULATION

A. Manufacturer:
   1. Armacell International: www.armacell.com.

B. Insulation: Preformed flexible elastomeric cellular rubber insulation complying with ASTM C 534 Grade 1; use molded tubular material wherever possible.
   1. 'K' value: 0.25 at 75 °F.
   2. Minimum Service Temperature: -40°F.
   3. Maximum Service Temperature: 220°F.
   4. Connection: Waterproof vapor barrier adhesive.

C. Elastomeric Foam Adhesive: Air dried, contact adhesive, compatible with insulation.

PART 3 EXECUTION

3.01 EXAMINATION

A. Remove existing damaged insulation as required to install new insulation.

B. Verify that surfaces are clean and dry, with foreign material removed

3.02 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Install in accordance with NAIMA National Insulation Standards.

C. Exposed Piping: Locate insulation and cover seams in least visible locations.

D. For hot piping conveying fluids 140°F or less, do not insulate flanges and unions at equipment, but bevel and seal ends of insulation.

E. Inserts and Shields:
   1. Application: Piping 1-1/2 inches diameter or larger.
   2. Shields: Galvanized steel between pipe hangers or pipe hanger rolls and inserts.
   3. Insert location: Between support shield and piping and under the finish jacket.

4. Insert configuration: Minimum 6 inches long, of same thickness and contour as adjoining insulation; may be factory fabricated.
5. Insert material: Hydrous calcium silicate insulation or phenolic, rigid premolded insulating material (ASTM C1126 Type III) suitable for the planned temperature range.

F. Continue insulation through walls, sleeves, pipe hangers, and other pipe penetrations. Finish at supports, protrusions, and interruptions.

3.03 INSULATION THICKNESSES

A. Domestic Cold and Hot Water: 1".

END OF SECTION

THIS PAGE

INTENTIONALLY

LEFT BLANK

SECTION 22 10 05
PLUMBING PIPING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Pipe, pipe fittings, valves, and connections for piping systems.
   1. Sanitary sewer.
   2. Domestic water.

1.02 REFERENCE STANDARDS

A. ASME B16.1 - Gray Iron Pipe Flanges and Flanged Fittings: Classes 25, 125, and 250; The American Society of Mechanical Engineers; 2005.

B. ASME B16.3 - Malleable Iron Threaded Fittings; The American Society of Mechanical Engineers; 1998 (R2006).

C. ASME B16.4 - Gray Iron Threaded Fittings; The American Society of Mechanical Engineers; 1998 (R2006).

D. ASME B16.18 - Cast Copper Alloy Solder Joint Pressure Fittings; The American Society of Mechanical Engineers; 2001 (R2005) (ANSI B16.18).

E. ASME B16.22 - Wrought Copper and Copper Alloy Solder Joint Pressure Fittings; The American Society of Mechanical Engineers; 2001 (R2005).

F. ASME B16.26 - Cast Copper Alloy Fittings for Flared Copper Tubes; The American Society of Mechanical Engineers; 2006.

G. ASME B16.29 - Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings - DWV; The American Society of Mechanical Engineers; 2001.

H. ASME B31.9 - Building Services Piping; The American Society of Mechanical Engineers; 2004 (ANSI/ASME B31.9).

I. ASTM A 53/A 53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2007.

J. ASTM A 234/A 234M - Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service; 2007.

K. ASTM B 32 - Standard Specification for Solder Metal; 2004.

L. ASTM B 42 - Standard Specification for Seamless Copper Pipe, Standard Sizes; 2002.

M. ASTM B 88 - Standard Specification for Seamless Copper Water Tube; 2003.

N. ASTM B 306 - Standard Specification for Copper Drainage Tube (DWV); 2002.

O. ASTM C 564 - Standard Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings; 2003a.

P. AWS A5.8/A5.8M - Specification for Filler Metals for Brazing and Braze Welding; American Welding Society; 2004 and errata.

Q. AWWA C111/A21.11 - Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings; American Water Works Association; 2007 (ANSI/AWWA C111/A21.11).

R. AWWA C151/A21.51 - Ductile-Iron Pipe, Centrifugally Cast, for Water; American Water Works Association; 2002 (ANSI/AWWA C151/A21.51).

S. AWWA C651 - Disinfecting Water Mains; American Water Works Association; 2005 (ANSI/AWWA C651).

T. CISPI 301 - Standard Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste and Vent Piping Applications; Cast Iron Soil Pipe Institute; 2005.

U. CISPI 310 - Specification for Coupling for Use in Connection with Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications; Cast Iron Soil Pipe Institute; 2004.

V. MSS SP-71 - Cast Iron Swing Check Valves, Flanged and Threaded Ends; Manufacturers Standardization Society of the Valve and Fittings Industry, Inc.; 2005.

W. MSS SP-80 - Bronze Gate, Globe, Angle and Check Valves; Manufacturers Standardization Society of the Valve and Fittings Industry, Inc.; 2003.

X. MSS SP-110 - Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends; Manufacturers Standardization Society of the Valve and Fittings Industry, Inc.; 1996.

1.03 SUBMITTALS

A. Product Data: Provide data on pipe materials, pipe fittings, valves, and accessories. Provide manufacturers catalog information. Indicate valve data and ratings.

B. Project Record Documents: Record actual locations of valves.

1.04 QUALITY ASSURANCE

A. Valves: Manufacturer's name and pressure rating marked on valve body. Valves shall be manufactured in the United States of America

B. Welding Materials and Procedures: Conform to ASME (BPV IX) and applicable state labor regulations.

C. Identify pipe with marking including size, ASTM material classification, ASTM specification, potable water certification, water pressure rating.

1.05 REGULATORY REQUIREMENTS

A. Perform Work in accordance with State of Iowa plumbing code.

B. Conform to applicable code for installation of backflow prevention devices.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Accept valves on site in shipping containers with labeling in place. Inspect for damage.

B. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.

C. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

PART 2 PRODUCTS

2.01 SANITARY SEWER PIPING, ABOVE GRADE

Contractor Option – PVC is allowed

A. Cast Iron Pipe: ASTM A 74, service weight.
   1. Fittings: Cast iron.
   2. Joint Seals: ASTM C 564 neoprene gaskets, or lead and oakum.

B. Cast Iron Pipe: CISPI 301, hubless, service weight.
   1. Fittings: Cast iron.
   2. Joints: CISPI 310, neoprene gaskets and stainless steel clamp-and-shield assemblies.

C. Copper Tube: ASTM B 306, DWV.
   1. Fittings: ASME B16.29, wrought copper, or ASME B16.32, sovent.
   2. Joints: ASTM B 32, alloy Sn50 solder.

D. Steel Pipe: ASTM A 53/A 53M Schedule 40, galvanized.
   1. Cast Iron Fittings: ASME B16.1, flanges and fittings; ASME B16.4, threaded fittings.
   2. Malleable Iron Fittings: ASME B16.3, screwed type.
   3. Mechanical Grooved Couplings: Malleable iron, galvanized.

2.02 DOMESTIC WATER PIPING, ABOVE GRADE

Contractor Option – PEX is allowed

A. Copper Tube: ASTM B 88 (ASTM B 88M), Type L (B), Drawn (H).
   1. Fittings: ASME B16.18, cast copper alloy or ASME B16.22, wrought copper and bronze.
   2. Joints: ASTM B 32, alloy Sn95 solder.

2.03 FLANGES, UNIONS, AND COUPLINGS

A. Unions for Pipe Sizes 3" and Over:
   1. Ferrous pipe: Class 150 malleable iron threaded unions.
   2. Copper tube and pipe: Class 150 bronze unions with soldered joints.

B. Flanges for Pipe Size Over 1 Inch:
   1. Ferrous pipe: Class 150 malleable iron threaded or forged steel slip-on flanges; preformed neoprene gaskets.
   2. Copper tube and pipe: Class 150 slip-on bronze flanges; preformed neoprene gaskets.

C. Dielectric Connections: Union with galvanized or plated steel threaded end, copper solder end, water impervious isolation barrier.

2.04 VALVES IN WATER LINES

A. Check Valves (2.5 Inches Diameter and Smaller): Class 125 # SWP, 200 # WOG, horizontal swing check, body and cap shall be of ASTM B62 cast bronze, TFE disc, integral bronze seats, MSS SP-80.

PART 3 EXECUTION

3.01 PREPARATION

A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.

B. Remove scale and dirt, on inside and outside, before assembly.

C. Prepare piping connections to equipment with flanges or unions.

3.02 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Provide non-conducting dielectric connections wherever jointing dissimilar metals.

C. Route piping in orderly manner and maintain gradient. Route parallel and perpendicular to walls.

D. Install piping to maintain headroom, conserve space, and not interfere with use of space.

E. Group piping whenever practical at common elevations.

F. Provide clearance in hangers and from structure and other equipment for installation of insulation and access to valves and fittings.

G. Provide access where valves and fittings are not exposed. Coordinate size and location of access doors.

H. Install vent piping penetrating roofed areas to maintain integrity of roof assembly.

I. Provide support for utility meters in accordance with requirements of utility companies.

J. Prepare exposed, unfinished pipe, fittings, supports, and accessories ready for finish painting.

K. Install valves with stems upright or horizontal, not inverted.

L. Install water piping to ASME B31.9.

3.03 EXECUTION

A. Workmanship
1. Piping shown on Drawings shall be installed complete and shall be of size shown on Drawings. When a size is not indicated, request pipe size from Engineer.
2. All vertical offsets shall have a drip leg full size of pipe and a minimum of 6 inches long.
3. All piping shall be installed parallel or perpendicular to the building construction.
4. All piping shall be installed to allow for expansion.
5. Perform all work in accordance with State of Iowa Plumbing Code.

B. Joints
1. All pipe shall be reamed to full pipe diameter before joining.
2. Joints may be sweat or screwed.
3. Screwed joints shall be made with standard pipe thread and approved compound applied to male thread only.
4. Use only shaped nipples, welding laterals, or saddle fittings for intersection welding of branches to mains.
5. Valves and specialties shall have screwed or flanged joints.

C. Testing
1. Entire system shall be tested per international plumbing code.
2. Owner or Owner's representative to be present for all testing and provide final signature of acceptance.
3. See system startup.

D. Sectionalized
1. Pipe may be tested a section at a time in order to facilitate construction. Contractor will provide necessary fittings to accomplish testing.

E. Protection
1. Piping shall be protected at all times from dirt and moisture.
2. During storage on job site or construction, keep pipe ends plugged or capped to prevent dirt or moisture from entering the pipe.

3.04 APPLICATION

A. Install unions downstream of valves and at equipment or apparatus connections.

B. Install ball valves for shut-off and to isolate equipment, part of systems, or vertical risers.

3.05 DISINFECTION OF DOMESTIC WATER PIPING SYSTEM

A. Prior to starting work, verify system is complete, flushed and clean.

B. Ensure pH of water to be treated is between 7.4 and 7.6 by adding alkali (caustic soda or soda ash) or acid (hydrochloric).

C. Inject disinfectant, free chlorine in liquid, powder, tablet or gas form, throughout system to obtain 50 to 80 mg/L residual.

D. Bleed water from outlets to ensure distribution and test for disinfectant residual at minimum 15 percent of outlets.

E. Maintain disinfectant in system for 24 hours.

F. If final disinfectant residual tests less than 25 mg/L, repeat treatment.

G. Flush disinfectant from system until residual equal to that of incoming water or 1.0 mg/L.

H. Take samples no sooner than 24 hours after flushing, from 2 percent of outlets and from water entry, and analyze in accordance with AWWA C651.

END OF SECTION

THIS PAGE

INTENTIONALLY

LEFT BLANK

SECTION 22 40 00
PLUMBING FIXTURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Water Closets.

B. Floor Drains.

C. Lavatories.

D. Lavatory Faucets.

E. Bath Tubs.

F. Combination Bath/Shower Valves.

G. Prefabricated Fiberglass Shower Inserts

H. Shower Valves.

I. Water Hammer Arrestors.

1.02 REFERENCE STANDARDS

A. ASME A112.18.1 - Plumbing Supply Fittings; American Society of Mechanical Engineers; 2005.

1.03 SUBMITTALS

A. Product Data: Provide catalog illustrations of fixtures, sizes, rough-in dimensions, utility sizes, trim, and finishes.

B. Maintenance Data: Include fixture trim exploded view and replacement parts lists.

C. Warranty: Submit manufacturer warranty and ensure forms have been completed in the University of Iowa's name and registered with manufacturer.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Accept fixtures on site in factory packaging. Inspect for damage.

B. Protect installed fixtures from damage by securing areas and by leaving factory packaging in place to protect fixtures and prevent use.

PART 2 PRODUCTS

2.01 WATER CLOSET, ADA (WC-1)

A. Accessible, floor mounted, tank type, white vitreous china, siphon jet, elongated bowl, 12" rough-in, float valve with vacuum breaker, chrome-plated trip lever, insulated tank liner, 1.6 gallons per flush (maximum) in compliance with Energy Policy Act of 1992.

White, open front, injection molded, solid anti-microbial plastic, self-sustaining hinge with stainless steel mounting bolts and nuts.

Provide quarter-turn 3/8" chrome-plated heavy brass angle supply with loose-key stop and chrome-plated soft copper supply line.

B. Mount top of seat at 17"-19" above finished floor. Field verify equipment requirements and rough-in locations.

C. Acceptable water closet manufacturers:
   1. Zurn Model Z5550
   2. Kohler Model K-3979
   3. Crane Model 3814,
   4. Eljer Model 091-2175
   5. Gerber Model 21-718
   6. Toto Model CST744SL
   7. Approved equivalent.

D. Acceptable water closet seats:
   1. Bemis 3155C
   2. Church 3155C,
   3. Beneke 533PC,
   4. Olsonite 95
   5. Approved equivalent.

2.02 FLOOR DRAIN (FD-1)

A. Cast iron body, nickel bronze adjustable top, 6" Square, 2" bottom outlet, flashing collar, surface membrane clamp.

B. Acceptable manufacturers:
   1. Zurn Z-415
   2. Smith 2005
   3. Wade 1100
   4. Josam 30000
   5. Watts FD-100
   6. Mifab F1100
   7. Approved equivalent.

2.03 LAVATORY, WALL-MOUNT, ADA (L-1)

A. Accessible, wall mounted, white vitreous china, 20"x18", 4" high contoured backsplash, single faucet hole, drilled for concealed arm carrier.

B. Provide open grid strainer with tailpiece, 17 gauge chrome plated brass offset trap assembly (ADA compliant), P-trap and supplies with loose key stops. Provide closed cell insulation with vinyl cover on trap and stop valves and supply piping. Cover must be antimicrobial.

C. Provide white pipe wrap on all exposed piping under lavatories.
   1. Acceptable manufacturer:
      a. TrueBro Lav-Gard
      b. Approved equivalent.

D. Acceptable P-Traps:
   1. Eljer.
   2. American Standard
   3. Kohler: Model #K-8998, basis of design.
   4. Approved equivalent.

2.04 LAVATORY FAUCET (F-1)

A. Single handle mixing faucet, brass construction, chrome-plated finish, conventional spout with aerator, washerless push-pull lever handle with supplies for single hole, ceramic disc cartridge, perforated grid strainer with 1-1/4" 17 gauge tailpiece. Maximum flow to be 0.5 gpm in compliance with Energy Policy Act of 2005 and ASME/ANSI Standard A112.18.1.

B. Acceptable Manufacturers:

1. Delta 22C631
2. American Standard 6114.116.002
3. Chicago Faucet 2200-E2805ABCP
4. Moen 8417
5. Zurn Z822200-XL
6. Approved equivalent

C. Single master thermostatic mixing valve arrangement for tempered water control, all bronze/brass construction, rough brass finish, union inlets with strainers and check stops. Unit to mix 120 degree F hot water supply and 55 degree F cold water supply for 110 degree F outlet.

D. Recessed 18 gauge stainless steel cabinet with 16 gauge locking door to enclose valve, inlet stops, and outlet valves.

E. Provide field adjustment by factory authorized representative. Unit shall be ASSE 1017 listed and approved. Valve shall comply with Federal Act S.3874.

F. Acceptable mixing valve manufacturers:

1. Leonard XL-LF Series
2. Bradley TMV Series
3. Lawler 800 Series
4. Powers LFMM430 Series
5. Symmons Tempcontrol Series 7
6. Acceptable equivalent.

2.05 BATH TUB (T-1)

A. Acceptable Manufacturers:

1. AMERICAN STANDARD 2696
2. KOHLER K-505
3. Approved equal.

B. Bathtub - Cast iron construction, white enamel finish, 60"x32"x16" (nominal), slip-resistant bottom, left or right hand as shown on drawings.

C. Bath drain - Pop-up type, brass construction, polished chrome finish, integral overflow and operating lever, all operating parts removable for cleaning, 1-1/2" 17 gauge brass tailpiece and "P" trap.

2.06 COMBINATION TUB/SHOWER VALVE (TV-1)

A. Acceptable Manufacturers:
1. Moen Commercial 8343
2. Symmons 1-217-FS
3. American Standard 1662.223

4. Delta R10700-UNWS/T13H903/52667-15-BG
5. Leonard PAM-II
6. Powers PB417
7. Approved equal.

B. Accessible, single handle pressure balanced mixing faucet, brass or bronze construction, washerless design, off-cold-hot temperature range indicator dial, polished chrome cast metal lever handle, integral check stops, adjustable temperature limit stop, ASSE 1016 listed.

C. Accessories: Chrome-plated brass showerhead with swivel ball joint, chrome-plated brass arm and flange, hand held shower with 69" chrome-plated metal hose and quick disconnect, chrome-plated brass swivel connector, 36" chrome-plated mounting rail, chrome-plated brass supply elbow flange, chrome-plated vacuum breaker with chrome-plated piping and flanges.

D. Install D. Install controls between 26 inches and 29 inches above finish floor. Install bottom of shower head at 78 inches above finish floor. Maximum flow to be 2.5 GPM in compliance with Energy Policy Act of 2005. Set safety limits stop to 110°F discharge.

2.07 PREFABRICATED FIBERGLASS SHOWER INSERT (SH-1)

A. Manufacturers:

1. 1. Best Bath 3CS3838B17T
2. 2. Clarion MP3837LBF34 or MP3837RBF34
3. 3. Aquatic 1363BFS

B. One piece, reinforced fiberglass construction, white gelcoated finish, 36"x36" (nominal), right or left hand as shown on drawings, slip-resistant floor with 2" integral floor drain, 4" nickel bronze strainer, ASTM F-446, in compliance with latest ANSI A117.1 and ADA standards.

C. Fold down phenolic simulated teakwood seat, 1 1/2" 18 gauge type 304 stainless steel horizontal grab bar on back wall and valve wall, 1" diameter stainless steel curtain rod, commercial grade vinyl shower curtain.

D. Grab bar to be mounted with stainless steel nuts and bolts and fastened from the backside of the unit with minimum 3"x3" metal plates. Unit is to be recessed in sub-floor to allow for a maximum curb height of 1/2" or less above finished floor.

2.08 SHOWER VALVE (SV-1)

A. Acceptable manufacturers:

1. Moen Commercial 8342
2. Symmons 1-117-FS
3. American Standard 1662.223
4. Delta R10700-UNWS/T13H323-20
5. Leonard PAM-II
6. Powers PB413-9

B. Shower valve - accessible, single handle pressure balanced mixing faucet, brass or bronze construction, washerless design, off-cold-hot temperature range indicator dial, polished chrome cast metal lever handle, integral check stops, adjustable temperature limit stop. ASSE 1016 listed.

C. Chrome-plated brass showerhead with swivel ball joint, chrome-plated brass arm and flange, hand held shower with 69" chrome-plated metal hose and quick disconnec], chrome-plated brass swivel connector, 36" chrome-plated mounting rail, chrome-plated brass supply elbow flange, chrome-plated in-line vacuum breaker with chrome-plated piping and flanges.

D. Install all controls between 38" and 48" above finished floor in compliance with latest ada standards. Install bottom of showerhead at 72" above finished floor. Maximum flow to be 2.5 gpm in compliance with Energy Policy Act of 2005 and ASME/ANSI standard A112.18.1. Set safety limit stop to 110 degree F discharge.

2.09 WATER HAMMER ARRESTORS

A. Manufacturers:
   1. Watts Regulator Company; Model SG: www.wattsregulator.com.
   2. Zurn Industries, Inc: www.zurn.com.

B. Stainless steel construction, bellows type sized in accordance with PDI-WH 201, precharged suitable for operation in temperature range -100 to 300°F and maximum 250 psi working pressure.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install components level and plumb.

B. Install and secure fixtures in place with wall supports and bolts.

3.02 CLEANING AND ADJUSTING

A. After plumbing fixtures have been installed, fixtures and trimmings shall be thoroughly cleaned of all grease, oil, dirt, labels and stickers, and other foreign matter, and all packing materials shall be promptly removed from premises. All valves and faucets shall be adjusted to suit operating water pressure and all work maintained in clean and proper operating condition until accepted by Architect/Engineer.

B. All fixtures will be caulked at floor and walls using white flexible silicone caulk.

C. Following completion of installation, clean all construction dirt dust, and debris from all plumbing fixtures. Verify that all flow or temperature settings have been made where required and that all necessary electrical connections are powered up.

D. Protect installed products from damage due to subsequent construction operations.

END OF SECTION

THIS PAGE

INTENTIONALLY

LEFT BLANK

SECTION 23 37 00
AIR OUTLETS AND INLETS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Diffusers.

1.02 REFERENCE STANDARDS

A. AMCA 500-L - Laboratory Methods of Testing Louvers for Rating; Air Movement and Control Association International, Inc.; 2007.

B. ASHRAE Std 70 - Method of Testing for Rating Performance of Air Outlets and Inlets; American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc.; 2006.

C. SMACNA (DCS) - HVAC Duct Construction Standards - Metal and Flexible; Sheet Metal and Air Conditioning Contractors' National Association; 2005.

1.03 SUBMITTALS

A. Product Data: Provide data for equipment required for this project. Review outlets and inlets as to size, finish, and type of mounting prior to submission.

1.04 QUALITY ASSURANCE

A. Test and rate air outlet and inlet performance in accordance with ASHRAE Std 70.

B. Manufacturer Qualifications: Company specializing in manufacturing type of products specified in this section, with minimum three years of documented experience.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Diffusers, Registers, and Grilles:
1. Titus, basis of design: www.titus-hvac.com.
2. Carnes Company HVAC: www.carnes.com.
3. Krueger: www.krueger-hvac.com.
4. Price Industries: www.price-hvac.com.
5. Metal*aire www.metalaire.com
6. Nailor
7. Tuttle and Bailey.
8. Raymon-Donco.

2.02 RECTANGULAR CEILING DIFFUSERS

A. Basis of design, Titus OMNI.

B. Fabrication: Aluminum with factory off-white enamel finish.

C. Type: Square, panel ceiling diffuser to discharge air in 360 degree pattern with sectorizing baffles where indicated.

D. Frame: Hard ceiling type. In plaster ceilings, provide plaster frame and ceiling frame.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Check location of outlets and inlets and make necessary adjustments in position to conform with architectural features, symmetry, and lighting arrangement.

C. Install diffusers to ductwork with air tight connection.

D. Provide balancing dampers on duct take-off to diffusers, and grilles and registers, despite whether dampers are specified as part of diffuser, or grille and register assembly.

E. All screws and fastening hardware to be concealed where available. Fasteners exposed to chlorine environment, provide 316L stainless steel hardware.

3.02 SCHEDULES

A. See plan drawings for schedule.

B. Verify plan drawings for all duct connection sizes and ceiling types prior to final selection.

END OF SECTION

SECTION 26 05 00
COMMON WORK RESULTS FOR ELECTRICAL

PART 1 GENERAL

1.01 WORK INCLUDES

A. All labor, materials, equipment, tools and services required to perform all work and services for execution, installation and completion of all electrical work including all parts lists, operating instructions, wiring and control diagrams as shown on the drawings and as specified and completely coordinated with work of all other trades.

B. All supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure and complete electrical installation, although such work is not specifically indicated.

C. Complete, in operative condition and to approval of Architect/Engineer, materials contemplated herein and shown on drawings.

D. Equipment, materials and accessories for electrical systems as shown and noted on the drawings including but not limited to the following:
   1. A complete rough-in system including conduit, outlet boxes, pull boxes, junction boxes, sleeves and hangers.
   2. Complete wiring system.
   3. All cutting and patching.
   4. Wiring devices and coverplates.
      a. Interconnecting power raceway and wiring for specified heating and refrigeration equipment, unless otherwise shown.
      b. Interconnecting power raceway and wiring for specified ventilating equipment, unless otherwise shown.
      c. Starters, controllers and interconnecting power and control raceway and wiring for specified pumps unless otherwise shown.
      d. Flashing and sealing of all raceway roof penetration.

1.02 DELIVERY, STORAGE AND HANDLING

A. Manufacturer to prevent damage during shipment shall suitably package materials. Damaged materials will not be acceptable for use.

B. Store materials on site in clean, dry storage area; when outside, elevated above grade and enclosed with durable watertight wrapping.

C. Handle all materials carefully to prevent damage. Minor scratches, marks or blemishes to finish shall be repaired to satisfaction of Architect/Engineer.

1.03 QUALITY ASSURANCE

A. Regulatory Requirements:
   1. Permits: Arrange and pay for all permits, inspections and utility connections required.
   2. Comply with ANSI C1, National Electrical Code, 2011.
   3. Reference Publications:
      a. American National Standards Institute, ANSI
         1) C80.1 - Specification for Rigid Steel Conduit, zinc coated.
         2) C80.3 - Specification for Electrical Metallic Tubing, zinc coated.
         3) C80.4 - Specification for fittings for Rigid Metal Conduit and EMT.

b. National Electrical Manufacturers Association, NEMA.
   1) OS-1 - Sheet steel outlet boxes, device boxes, covers and box supports.
   2) 250 Enclosures for electrical equipment.
   3) WC-5 - Thermoplastic insulated wire and cable.
   4) WD-1, WD-5 - General Purpose Wiring Devices.
   5) FB-1 - Conduit and cable assemblies.
   6) KS-1 - Switches.
c. Manufacturer's Catalog.
   1) Catalogs of specified manufactures current at date of contract documents are incorporated by reference to same force and effect as if repeated herein. In conflicts between catalogs and project manual. Project Manual governs.

4. Provide all new materials, without blemish or defect, in accord with standards specified and NRTL (Nationally Recognized Testing Laboratory) listed or labeled.

1.04 STANDARDS

A. Provide materials, perform work and install materials in strict accordance with the latest requirements of the following:
   1. National Electrical Code (NEC) of National Fire Protection Association (NFPA).
   2. Other applicable codes and standards of NFPA.
   3. Factory Mutual System (FM).
   4. American National Standards Institute (ANSI).
   5. Occupational Safety and Health Act (OSHA).
   6. Federal, state and local codes, laws, ordinances; and rules and regulations of authorities having jurisdiction.
   7. In case of conflict or disagreement between codes, laws, ordinances, rules and regulations or within either document itself, the more stringent condition shall govern.
   8. Use electrical materials tested, listed and labeled by NRTL and bearing the NRTL label.
      a. All fabricated assemblies, manufactured items or electrically operated equipment shall have NRTL approval or NRTL re-examination listing in every case where such approval has been established for the particular type of materials or devices in question.

1.05 COORDINATION & SUBMITTALS

A. The contractor shall provide 1/4" = 1'-0" coordination drawings showing locations, dimensions and height of installation of all major pieces of equipment, electrical conduits >1-1/2", ductwork, and piping provided under their respective contracts. The contractor shall overlay their respective drawings and resolve all conflicts before actual installation begins.

B. Submit copies of drawings and information for review in accordance with project specifications.

C. Submit for review and before installation, shop drawings and/or descriptive literature on all electrical products, materials and specialties proposed to be furnished including the following:
   1. Wiring devices and coverplates.
   2. All cuts for the above shall have rough-in dimensions, connection sizes and any special installation requirements.

D. Operation & Maintenance Manual:
   1. Upon completion of the work, provide the Owner with three (3) copies of a hard bound-operating manual for all equipment furnished and installed under this work. The manual shall, however, first be approved by the Architect/Engineer.

1.06 DEFINITIONS

A. Wherever the words “the Contractor”, “this Contractor” or “Electrical Contractor”, appear in this section, they refer to the Contractor for Electrical Work.

B. The term “provide” includes such labor, methods, materials, equipment and transportation or other facilities required to complete the Contract, and the performance of all duties thereby upon the Contractor.

1.07 GUARANTEE

A. In entering into a contract covering this work, the contractor accepts the specifications and guarantees that the work will be carried out in accordance with the requirements of this specification or such modifications as may be made under the contract documents.

B. Contractor further guarantees that the workmanship and material will be of the best procurable and that none but experienced workmen familiar with each particular class of work will be employed.

C. Contractor further guarantees to replace and make good at his own expense all defects, which may develop within 1 year after final payment and acceptance by the Architect/Engineer, due to faulty workmanship or material, upon, receipt of written notification from the Owner.

1.08 JOB CONDITIONS

A. Existing conditions:
   1. In order to become familiar with the scope of the work involved, visit the existing site, before submitting bid, and carefully examine the existing condition in order to have full knowledge and understanding of the conditions and restrictions affecting the performance of the work required. Include in bid all work which is reasonably inferred by the contract drawings and specifications, whether specifically shown or not, as a result of existing conditions, construction, irregularities and interferences which may affect work. No additional compensation will be considered for misunderstanding the conditions to be met.
   2. The layout shown on the drawings is necessarily diagrammatic but shall be followed as closely as other work will permit. Changes from these drawings required to make this work conform to the building construction shall be made only with prior written approval of the Architect/Engineer. All proposed changes shall be shown on shop drawings. All measurements shall be verified by actual observation and all work shall fit in place meeting the approval of the Architect/Engineer.
   3. The contractor shall provide openings required in new and existing construction that may be necessary for the installation of electrical work and all patching and workmen competent in the trade required, at the expense of the contractor shall do repairing. The contractor shall be responsible for arranging the work so that minimum cutting will be required. All rubbish and excess materials involved in such cutting shall be promptly removed from the site and disposed of by the contractor. Cutting through the floor or roof systems or load bearing walls shall be done only with the prior written approval of the Architect/Engineer so as to avoid damaging the structural system.
   4. Sequencing, scheduling:
      a. Confer with the contractor regarding the location and size of conduits, equipment, rough-in openings and special architectural treatments in order that there may be no interferences between the installation or the progress of the work of the contractor on the project. The order of space preference shall be as listed above.
      b. In the case of interconnection of the work of two or more contractors, verify at the site or on shop drawings all dimensions relating to such work. All errors due to the failure to so verify any such dimensions shall be promptly rectified.

c. All line voltage wiring and final connections to complete mechanical systems shall be provided by the Electrical Contractor. All electrical conduit, wire, and connections relating to mechanical equipment controls and all wiring associated with starter holding coils, shall be the responsibility of the contractor installing the mechanical equipment unless otherwise indicated on the drawings. The contractor installing the mechanical equipment shall be responsible for magnetic motor starters where such starters are part of the control package of the equipment supplied. All other starters shall be furnished and installed by the Electrical Contractor.
d. Access panels, in walls or ceilings, required for access and maintenance shall be provided by the respective contractor. Access panels are not required in areas where the ceiling system is lay-in tile; however, sufficient space must be available in and through the ceiling system to allow maintenance and adjustment of equipment. Access panels shall be approximately 15 inches by 18 inches wherever possible and shall be provided with flush trim and an allen key operated cam lock fastener. Karp, Milcor, or Bilco shall manufacture panels.
e. Items of equipment may be specified in the singular however, provide and install the number of items of equipment as indicated on the drawings and as required for a complete system.
f. Each contractor shall provide excavating, pumping, backfilling, and compacting required for the installation of their respective work as shown on the drawings.
g. Equipment and devices furnished and installed by electrical contractors, which have factory prime coat, or final surface finish shall be replaced, repaired or refinished if defective or damaged during installation.
h. Arrange all work so a minimum period of interruption or outages will occur in the temporary or permanent transfer of services as required for all electrical revisions. Not less than 48 hours notification to the Owner shall be required before approval will be granted for any disruption of gas, electric, or telephone services. The outage request shall include the extent of the work to be done, length of outage time required, and the time at which the outage is to begin. No allowance will be made for extra payment as a result of scheduling "overtime" work necessary to perform before or after normal or regular working hours to accomplish the work intended.
i. Submit a "Sequence of Work Schedule" in respect to all temporary and permanent utility and service cutovers after final determination. This schedule shall be submitted for approval to the Architect/Engineer. The submittal shall designate priority order, service or utility affected, date of cutover, and time of day to start and finish.

PART 2 PRODUCTS

2.01 RACEWAYS AND CONDUIT

A. Electrical Metallic Tubing (thin wall conduit, EMT)
1. All electrical metallic tubing shall be hot dipped galvanized coated, bear a NRTL label and shall conform to Federal Specifications WW-C-563, ANSI C80-3, and UL 797.
2. Allied Tube and Conduit Corp., Republic Steel Corp., Wheatland Tube Co., Southwire Co. shall manufacture all electrical metallic tubing, or Architect/Engineer approved equal.

B. Rigid Steel Conduit
1. All rigid steel conduits shall be hot dipped galvanized coated plus a secondary coat with galvanized threads bears a NRTL label and shall conform to Federal Specifications WW-C-581d, ANSI C80-1.
2. Allied Tube and Conduit Corp., Republic Steel Corp, Wheatland Tube Co., Southwire Co. shall manufacture all rigid steel conduits, or Architect/Engineer approved equal.

C. Intermediate Metal Conduit (IMC)
1. Intermediate metal conduit shall be hot dipped galvanized coated; galvanized coated threads bear a NRTL label and shall conform to a NRTL standard for IMC.

2. Allied Tube and Conduit Corp., Republic Steel Corp., Wheatland Tube Co., Southwire Co. shall manufacture intermediate metal conduit or Architect/Engineer approved equal.

D. Flexible Steel Conduit
   1. All flexible steel conduits shall be hot dipped galvanized coated bears a NRTL label and shall conform to Federal Specifications WW-C-566C.
   2. Triangle PWC, American Flexible Conduit Co., Inc., Anaconda Metal Hose, shall manufacture all flexible steel conduits or Architect/Engineer approved equal.

E. Liquid-tight Flexible Steel Conduit
   1. All liquid-tight flexible steel conduit shall be interlocking flexible galvanized steel conduit with a special polyvinyl chloride covering extruded over the flexible conduit to make the conduit liquid-tight resistant to moisture, oil, chemicals and corrosive fumes.
   2. Anaconda Metal Hose, O-Z/Gedney, Triangle PWC shall manufacture all liquid-tight flexible steel conduits, or Architect/Engineer approved equal.

F. PVC Plastic Conduit
   1. All PVC conduits shall be schedule 40 heavy wall duct. Conduit shall be composed of high impact PVC (Polyvinyl Chloride-C-200 compound) and shall conform to industry NEMA Standards and be NRTL listed for underground and exposed use. Material shall have tensile strength of 7,000 psi at 73.4°F, flexural strength of 11,000 psi, compression strength of 8,600 psi, and minimum wall thickness in various sizes.
   2. All conduit fittings, couplings, terminal adapters, junction boxes and necessary fittings shall be of the solvent welding material.
   3. Carlon, Can-Tex, Triangle PWC Inc., shall manufacture all PVC conduits or Architect/Engineer approved equal.

2.02 CONDUIT HANGERS AND SUPPORTS

A. Surface Mounted Conduits
   1. Rigid steel, IMC and EMT conduits 1 inch and smaller shall be supported with hot dipped galvanized one hole steel pipe straps.
   2. Rigid steel, IMC and EMT conduits 1 1/4 inches and larger shall be supported with hot dipped galvanized one hole malleable iron pipe straps with pipe spacers.
   3. Raco, Efcor, T & B, Appleton shall manufacture all pipe straps, or Architect/Engineer approved equal.

B. Suspended Conduits
   1. Individual rigid steel, IMC and EMT conduit 1 inch and smaller shall be supported with conduit clips of high carbon spring steel or zinc plated steel and support 100 pounds static load. Conduit clip shall be provided with 1/4” 20 threaded impression for attachment to 1/4 inch 20 threaded rod.
   2. Individual rigid steel, IMC and EMT conduit 1 1/4 inches and larger shall be supported with stamped steel conduit clamps with 1/4 inch 20 bolt and nut and support 150 pounds static load. Provide conduit clamps with 3/8 inch 16 threaded boss for attachment to 3/8 inch 16 threaded rod.
   3. Support two or more rigid steel, IMC or EMT conduits adjacent to each other by 1 5/8 inches by 1 5/8 inches metal framing channel with minimum of two 1/2 inch 13 threaded rod at each end. Attach conduits to metal framing channel with electro-galvanized split pipe clamps with screw and nut.
   4. Raco, Efcor, T & B, Appleton shall manufacture conduit clips and clamps, or Architect/Engineer approved equal.
   5. Unistrut, Super Strut, Kindorf shall manufacture metal framing channel and split pipe clamps, or Architect/Engineer approved equal.
   6. Conduit shall not be supported from plumbing lines or ductwork.

C. Anchors
   1. Toggle bolts or spider type expansion anchors shall be used for hollow masonry.
   2. Lead expansion anchors or preset anchors shall be used for solid masonry.
   3. Self-drilling anchors or preset anchors shall be used for concrete.
   4. Machine screws, bolts, self-tapping screws or welded studs shall be used for metal.
   5. Wood screws shall be used for wood.

2.03 CONDUIT FITTINGS

A. All conduit fittings and box connectors shall be strong in construction and shall be of such material and finish as not to cause any chemical reaction between itself and the conduit or outlet box which it is fastened or supported.

B. All conduit fittings and box connectors shall be listed by a NRTL.

C. Insulated throat fittings are only required on conduits 2” and larger.

D. All conduit fittings, box connectors and lock nuts shall be of steel or malleable iron materials.

E. Fittings for EMT shall be set compression type, rain-tight and concrete-tight. Connectors, couplings, locknuts and other fittings for rigid steel heavy wall and IMC conduit shall be threaded type.

F. Connectors specified in this paragraph can be zinc plated steel in lieu of malleable iron.

G. Liquid-tight flexible conduit connectors shall be steel or malleable iron compression type with insulated throat and “O” ring assembly.

H. Fittings for flexible conduit or liquid-tight flexible conduit shall be of the straight 45 degree or 90 degree connectors and approved for grounding purposes.

I. Provide expansion joint fittings where expansion joints are shown on architectural drawings.

2.04 BOXES AND COVERS

A. All junction boxes pull boxes, fixture outlet boxes and switch boxes shall be listed by a NRTL.

B. All boxes and covers shall meet all requirements of the National Electrical Code.

C. All boxes and covers shall be made of code gauge steel.

D. All boxes shall be of proper size and shape for all conduits and conductors entering them.

E. Install device boxes with bracket attached to box and wall stud to eliminate movement of box in wall.

F. All boxes installed in poured concrete, block, brick or tile shall be masonry type.

G. All multiple gang switch boxes of more than three-gang shall be solid gang box.

H. Surface mount boxes on the ceiling are note required to be FS or FD type boxes. Stamped steel boxes are acceptable for boxes on the ceiling.

I. Where two or more conduits enter a box, the minimum size of boxes shall be 4 inches by 4 inches by 1 1/2 inches minimum depth. For single device installation, install square cut single device cover.

J. Install all device boxes with square cut device covers for number of devices required.

K. All boxes shall have tapped hole for 10-32 ground screw.

L. Raco, Steel City, Appleton shall manufacture boxes and covers, or Architect/Engineer approved equal.

2.05 CABLE AND WIRE

A. All wire shall have copper conductors and be listed by a NRTL.

B. Service entrance conductors shall be 600 volts insulation type XHHW-2 90°C. All other wire shall be 600 volts insulation type THWN 90°C insulation for sizes No. 6 to 500 MCM and type THHN 90°C insulation for sizes No. 12 to No. 8.

C. Under ground wire to pole mounted light fixtures shall be type USE in conduit.

D. Provide long barrel, NEMA 2 hole copper compression connectors for all cables connected to the padmounted transformer. Make all connections with stainless steel hardware.

E. All pulling lubricants shall be water based, no exceptions.

F. Minimum wire size shall be No. 12 except for internal fixture wire that shall be minimum size of No. 14 type AF, CF or TFN, 300 volt.

G. All wire (excluding fire alarm and low voltage wiring) shall be stranded, including #12 AWG and #10 AWG branch circuit wiring.

H. All branch circuit wiring and feeder cables for circuits over 20 amperes shall be sized as noted on the drawings. If size is not specifically noted, size all branch circuit wiring and feeder cables in accordance with the National Electrical Code.

I. Cable and wire not installed in conduit shall be #12 AWG SO or SJO type grounded cord. Cord shall terminate at junction boxes and devices with strain relief cord grids.

J. Triangle, Crescent, Colleyer, and General Cable shall manufacture all wire, or Architect/Engineer approved equal.

2.06 METAL CLAD CABLE

A. MC cable is not allowed.

2.07 ELECTRICAL WIRING DEVICES

A. All devices are specified as having black finish in wood, white finish if in drywall. The Architect/Engineer reserves the right to change the color.

B. Furnish all special outlets with mating caps with cord grips.

C. Schedule of all electrical devices:
   1. Single Pole Switch - 20 amperes at 120 volts
      a. Hubbell DS120
   2. Three Way Switch - 20 amperes at 120 volts
      a. Hubbell DS320
   3. Four Way Switch - 20 amperes at 120 volts
      a. Hubbell DS420
   4. Duplex Convenience Outlet - 20 amperes at 120 volts
      a. Hubbell DR20

5. Duplex Convenience Tamper Resistant Outlet - 20 amperes at 120 volts
   a. Hubbell D20TR
6. Duplex Convenience Outlet - GFI - 20 amperes at 120 volts
   a. Hubbell GF20

D. Forward submittals to Architect/Engineer for review.

2.08 WIRING DEVICE PLATES

A. All device plates shall be furnished with proper openings for the device with which it is being used. Where required, multiple gang plates for correct combination shall be used.

B. Device plates shall fit tight against the finished walls and shall completely cover the openings in the walls for the boxes.

C. Device plates shall be attached and adjusted so they finish straight and level.

D. Where more than one light switch is gained or a light switch and outlet are installed in a two gang box, install multiple gang device plates with proper openings.

E. Provide 1/2 inch raised galvanized device covers where used for exposed conduit work.

F. All device plates shall be black if located on wood and white if located on drywall, with the proper openings for the device with which they are being used.

G. All device plates for exterior weatherproof outlets and switches shall be lockable. Cover shall meet NRTL WDL “in use” listing requirement. Cover shall be suitable for standard boxes or FS type boxes.

H. Mounting screws for all plates shall have the same finish as the plate.

I. The same manufacturer shall furnish all device plates as devices for proper color match except stainless steel covers.

J. Forward submittals to Architect/Engineer for review.

2.09 SEALS

A. Fire Seal:
   1. Seal penetrations of fire-rated walls, floors or ceilings by raceways for compliance with NEC 300-21. Fill void around raceway. Sleeves shall be heavy wall steel pipe, anchored to building construction and finished plug with wall or ceiling. Fire stop material shall be Dow Corning #-6548 Silicone RTV Foam, Chase Technology Corp, CTC PR-855 fire resistant foam sealant, 3M 303 Fire Barrier, T & B S-101 Fire Barrier or Nelson Flameseal.
   2. Must be listed as part of a NRTL approved assembly.

B. Water Seal:
   1. Seal penetrations of perimeter walls or floors below grade to prevent entry of water. Use materials compatible with wall or floor construction and approved by Architect/Engineer.
   2. Seal all conduit penetrating air handling units air tight including conduit installed by the air handling unit manufacturer.

PART 3 EXECUTION

3.01 SPACE PREFERENCE

A. Carefully verify and coordinate the location and level of all lines. Run preliminary levels and check with all other contractors so that conflict in location may be avoided.

B. If conflicts occur, the following preference schedule shall be followed:
   1. Recessed electric fixtures
   2. High-pressure duct work
   3. Soil and waste piping
   4. Domestic water piping
   5. Low-pressure ductwork
   6. Domestic water storm and vent lines.
   7. Electric conduits

C. No other work shall have preference over plumbing lines below fixtures.

D. No other work shall have preference over conduit above or below electric switchgear and above or below panels.

E. No piping conveying fluids shall be provided directly over electrical, communications or elevator equipment.

3.02 FIELD CORRECTIONS AND CHANGES

A. Carefully and accurately record on field set of drawings, any deviations or changes in location of conduit, wiring and/or equipment made in the field and shall keep the Architect/Engineer informed on all deviations and changes.

B. At the completion of the job, furnish the Architect/Engineer three complete sets (not the field set) of drawings indicating these deviations or changes. Extra sets of drawings will be provided to the contractor for this purpose. Any changes in the exterior work shall be recorded by dimension.

3.03 LOCATION OF EQUIPMENT

A. The approximate location of all equipment is shown on the drawings.

B. The Architect/Engineer reserves the right to change the location of all equipment 5 feet in any direction without these changes being made the subject of an extra charge provided such changes are made before final installation.

3.04 LINES AND LEVELS

A. Determine all grades, maintain necessary lines and levels throughout the progress of the work, and assume full responsibility for their correctness. Where levels are indicated on the drawings, work shall be installed at those levels unless prior written approval to change is obtained from the Architect/Engineer.

3.05 CLEANING

A. Upon completion of the contract all remaining materials and rubbish shall be removed from the building and premises and the work areas shall be left clean and free from stains, mortar, paint spots, etc.

B. All switches, controls, and safety devices shall be clearly and permanently marked with embossed or printed plates as to purpose and as to operation and shall be tested in the presence of the Owner's designated representative to insure that their function and purpose is understood.

C. Upon completion of the work, put systems into service maintaining responsibility for the equipment during all testing operations including turning on and off of such apparatus.

3.06 OPENINGS IN NEW CONSTRUCTION

A. Openings required in new construction for Division 26 Work will be provided by the General Contractor at the request of and in accordance with information furnished by the Electrical Contractor. The General Contractor will advise the Electrical Contractor in advance so that he may lay out the required openings. If said Electrical Contractor fails to lay out required openings, he shall be financially responsible for the necessary cutting, patching and repairing. The General Contractor will do the patching and repairing.

3.07 WALL AND FLOOR SLEEVE INSTALLATION

A. Set all wall and floor sleeves during the construction of the portion of the new construction through which the piping is to pass.

B. Provide sleeves of black iron pipe and of proper size to accommodate raceway. Install sleeves flush with walls and ceilings. Coordinate locations of sleeves with other trades to avoid interferences with their work.

C. Anchor all sleeves properly to the building construction.

D. Set floor sleeves plumb, wall sleeves level and center all piping in sleeves.

E. Care shall be taken to set sleeves in formwork and check all dimensions before concrete is poured.

F. Extend floor sleeves in finished areas 1/2 inch above finished floor and neatly level top of sleeve.

G. Finish all wall sleeves flush with wall lines unless otherwise specified.

H. Where sleeves occur in exterior walls above grade, caulk sleeves with sealant.

I. Where sleeves occur in exterior walls below grade, caulk sleeves with oakum and lead wool.

J. Openings between sleeves and conduit through fire or smoke barriers shall be closed with fire stop material to maintain fire or smoke barrier rating.

K. All occupied and unoccupied conduit sleeves in closet shall be fire stop after cable or conduit is in place. Occupied conduit sleeves shall be fire stopped with fire stop material and unoccupied conduit sleeves shall be fire stopped with metal caps on both ends.

3.08 PROTECTION OF WORK

A. Protect work from damage by keeping all conduit and boxes capped and plugged or otherwise protected. This includes damage by freezing and/or stoppage from building materials, sand, dirt or concrete.

3.09 INSTALLATION

A. Coordinate with other contractors engaged in project. Execute work in a manner not to interfere with other contractors or Owner's operation.

B. Coordinate work with other contractors regarding location and size of pipes, raceways, ducts, openings, switches, outlets, so there is no interference between installations or of progress of any contractor.

C. Install all equipment with ample space allowed for removal, repair, or changes to equipment. Provide ready accessibility to removable parts of equipment and to all wiring without moving equipment installed or already in place. Provide access panels for all devices installed above non-accessible ceilings or within walls or partitions.

D. At project completion, clean all equipment to the original finish. Remove all shipping labels.

E. Provide touch-up painting of all equipment marred in any way during shipment or installation.

3.10 INSTALLATION OF RACEWAYS AND CONDUITS

A. All raceways shall be concealed in wall construction and/or above ceiling construction except in mechanical equipment rooms, where it may be exposed at the ceiling or on walls.

B. There shall not be any branch circuit conduits installed horizontally in the concrete floor slabs throughout the building, except where specifically shown on the drawings.

C. In mechanical and electrical equipment spaces, expose ceiling outlets and conduit with due consideration to ventilating ducts and mechanical piping. Where numerous ducts occur, install conduits and outlets after ventilating ducts. Puncturing of ductwork or hanging equipment such as light fixtures, ceiling hangers, conduit, from ductwork, is prohibited, unless specifically noted otherwise.

D. Lay out all partitions on the project, for proper rough-in locations of all boxes and conduits. Verify all partition locations, door swings, cabinet locations before roughing in, and make any/all changes necessary to ensure that all switches, outlets, systems equipment, rough-ins are located properly. Any changes necessary in locations and rough-ins, due to a partition change and this contractor's failure to coordinate and verify same, shall be made.

E. The routing of conduit shown on the drawings is diagrammatic only, and this contractor shall install conduit as required to complete the systems so as not to interfere with other trades in both elevation and location.

F. The location of all conduit, boxes, fixtures, etc., in all areas finished and unfinished shall be coordinated.

G. Route conduit through roof openings for piping and ductwork where possible. Provide flashing making waterproof joints where conduits pass through roof or roofing membrane.

H. Provide conduit expansion joints at building expansion joints for conduit runs 1 1/2 inches and larger. Provide conduit expansion joints or flexible conduit connection at building expansion joints for conduits less than 1 1/2 inches.

I. Conduit shall be a minimum of 3/4 inch unless otherwise noted on the drawings.

J. All conduit bends shall be long radius with not more than the equivalent of three 90-degree bends between pull points.

K. Provide all open ends of conduit with bush caps to exclude any foreign material during construction.

L. All conduits installed in or under concrete or underground shall have joints sealed to exclude all water or other foreign material.

M. Coordinate the installation of all conduits in mechanical equipment spaces or where large amounts of ductwork and piping are present, with the other contractors so as to avoid interferences.

N. Unless otherwise noted on the drawings, size all conduits according to the National Electrical Code.

O. Install all exposed conduits parallel or perpendicular to adjacent walls, ceilings or floors.

P. All conduit couplings and fittings shall be made up wrench tight.

Q. Make all conduit systems mechanically and electrically continuous from source of current to all outlets, and ground in accordance with the National Electrical Code.

R. Where building construction or other conditions make it impossible to use standard threaded couplings, install watertight threaded unions.

S. Install rigid steel conduit for the following:
   1. All conduit in poured concrete construction (unless noted as PVC).
   2. All conduit underground (unless noted as PVC).
   3. All conduit exposed in exterior areas.
   4. All conduit installed through foundation or basement wall, below grade, to a minimum of 10'0" beyond wall.
   5. All service entrance conduit and all exterior conduit larger than 2" trade size.

T. Install electrical metallic tubing (thin wall) conduit for the following:
   1. All conduits in block, brick, tile or stud walls.
   2. All feeders for panelboards and distribution equipment.
   3. All conduit exposed in interior areas.

U. Install flexible steel conduit for the following:
   1. Final connections for all recessed lighting fixtures (fluorescent and incandescent).
   2. All vibration generating equipment except where flexible liquid-tight is specifically called for.
   3. A maximum length of flexible steel conduit shall be limited to 6'0".

V. Install liquid-tight flexible steel conduit for the following:
   1. Final connections to all motors, except exhaust fans in ceiling space and wall 1/8 horsepower and less.
   2. All vibration generating equipment exposed to exterior conditions.
   3. Maximum length of liquid-tight flexible conduit shall be limited to 6'0".

W. Install PVC conduit for the following:
   1. All conduit for underground exterior circuits 2" and smaller. PVC conduit shall be complete with all accessories, such as, couplings, male and female adapters, expansion couplings, elbows and support straps. Install one expansion coupling for every 100 feet of run, or in any run solidly connected at both ends. Use solvent welding cement recommended by the duct manufacturer, for all conduit terminations at fittings of all types to seal and secure the connections. Support the plastic conduit horizontal conduit runs 4 feet on center and vertical runs every 8 feet.

X. Communications
   1. Minimum communications raceway size to be 1" conduit, unless otherwise noted on drawings.
   2. Provide one conduit from each communications box. Horizontal conduit runs between wall boxes are not allowed.
   3. Provide insulated grounding bushings on end of conduit.
   4. Provide flush two-gang box with single gang plaster ring for each communications outlet or as noted on drawings.
   5. Conduit bends to be no less than 10 times outside diameter of conduit.
   6. Conduits shall have no more that (2) 90 degree bends or total of 180 degree bends or offsets without a pull box. Pull boxes shall be installed in accessible locations.
   7. No underslab installations allowed.

3.11 RACEWAY SUPPORTS AND HANGERS

A. Securely fasten raceways in place and support from ceiling or walls.

1. Maximum Spacing of Supports	Material
a. 1/2" through 1” trade size	6 feet
b. 1 1/4" through 1 1/2" trade size	8 feet
c. 2” through 4” trade size	10 feet
d. Flexible metal conduit	4 1/2 feet

B. Support IMC or EMT conduit within three feet of every outlet box, junction box, pull box, cabinet or termination. Support flexible conduit within 12 inches of every outlet box or fitting.

C. Support vertical runs or conduits at each floor level and at interval not to exceed ten feet.

D. Support conduits by pipe straps, wall brackets, hangers, or ceiling trapeze. The use of perforated iron on wire for supporting conduits is prohibited. Fasten with wood screws or screw nails to wood; by toggle bolts on hollow masonry units, by concrete inserts, or expansion steel conduits on steel. Do not weld conduits or pipe straps to steel structures unless specifically indicated.

E. The load applied to fasteners shall not exceed one-third the proof test load of the fasteners.

F. For fasteners attached to concrete, use vibration and shock resistant.

G. In partitions of light steel construction, use sheet metal screws.

H. Conduit shall not be supported from suspended ceiling hangers, ductwork or plumbing lines.

I. Where two or more conduits one inch trade size or larger run parallel, trapeze hangers may be used consisting of threaded solid rods, washers, nuts and galvanized “L” angle or channel iron. Individually fasten conduits to the cross member of every other trapeze hanger with one hole straps or clamp backs with proper size bolts, washers and nuts. When adjustable trapeze hangers are used, use U-bolt type clamps at end of conduit runs, at each elbow and at each third intermediate hanger to fasten each conduit.

J. Make hangers of durable materials suitable for the application involved. Applied loads shall not exceed one-third of their loading capacity.

K. Fabricate all screws, bolts, washers and miscellaneous hardware used for conduit supports from rust-resisting metal. Trapeze hangers shall have hanger assemblies' protected galvanized finish.

3.12 INSTALLATION OF BOXES

A. Provide pull boxes, junction boxes or outlet boxes as shown on the drawings and/or in all runs of conduit having the equivalent of three 90 degree bends or more than 100 feet in length.
   1. Communications conduit runs shall have no more than 100 linear feet and/or no more than two (2) 90-degree bends without a pull box.
   2. Do not provide pull box in lieu of 90-degree bend for communications cable.
   3. LB type fittings are not to be used for communications cable.

B. Location of outlets shown on the drawings is diagrammatic only. Coordinate exact location of outlets with architectural details, equipment connection requirements and all ceiling outlets with due consideration to clearance from ventilating ducts and piping.

C. Locations of all junction boxes shall be verified on the job.

D. All junction boxes shall be installed so that they are accessible by removing an access door, recessed fixture, coverplate, etc.

E. Where flush coverplates are required in finished areas, they shall be painted to match adjacent wall or ceiling finishes.

F. All junction boxes, other than for power or lighting, shall be identified as to their usage; such as, television, telephone, door security, fire alarm, etc., by permanently attached labels on the inside or outside of the coverplate.

G. Power and communication outlets shall not be installed in the same junction box.

3.13 METHOD OF WIRING

A. Install all the conductors in conduits.

B. Equipment and devices installed and not constructed with cases especially suited for mounting and enclosing all live parts shall be installed in metal cabinets.

C. A complete metal raceway or enclosure shall be provided for all circuiting throughout the extent of the systems specified.

D. Make conductors continuous from outlet to outlet. Do not make splices except in outlet or junction boxes. Make all feeder cables continuous from origin to panel or equipment terminations without running splices in intermediate pull or boxes, unless specifically indicated on the drawings or approved in writing by Architect/Engineer.

E. Blow out and swab all conduit until all moisture and grit is removed before any wires are pulled or installed. Use water-based pulling lubricant, compatible with insulation and covering, that will not cause deterioration of insulation or jacket covers of cables on conductors. Use pulling lubricant recommended by wire manufacturer.

F. Provide each cable or conductor in panels, pullboxes or troughs with a permanent pressure-sensitive label with suitable numbers or letter for easy identification. Identify control wires at each end and in junction boxes with designated wire numbers corresponding to control schematic drawings.

G. Provide wires and cables entering equipment or panels with enough slack to eliminate stretched, angular connection. Neatly arrange wiring, bundle and fan out to termination panels. Make minimum bending radius for conductors in accord with National Electrical Code.

H. Support all conductors in vertical raceways in accord with National Electrical Code.

I. Leave at least six-inch loops or ends at each outlet for installation of devices or fixtures. Roll up all wires in outlet boxes not for connection to fixture or device at that outlet, connect together and tape.

J. Size all branch circuit wiring for circuits over 20 amperes as shown on the drawings and/or as required by the National Electrical Code. All home run branch circuit wiring from the first outlet, fixture or device on 120 volt, 1 phase, or 277 volt, 1 phase circuit to the panelboard shall conform to the following wire sizes for amp circuits unless otherwise noted on the drawings:
   1. 120-VOLT CIRCUITS
      a. 0 to 50 feet #12 wire
      b. 51 to 100 feet #10 wire
      c. 101 to 150 feet # 8 wire
      d. 151 to 200 feet #6 wire

K. Clarification to the color-coding of conductors is as follows: For all voltages and systems equipment grounds shall be green, isolated grounds shall be green with yellow stripe or with yellow tape bands and travelers for 3-way switches shall be violet.

L. At the Electrical Contractor's option, the three phase power circuits and feeder cables can be installed with color-coded conductors or with three conductors of the same color. If they are installed with the same color of insulation, mark with colored tape in the panelboard and starter.

M. Phase all distribution equipment left-to-right, A, B, and C for continuity of phasing throughout the installation.

N. All stranded cables shall terminate into mechanical type or compression type lugs at termination points.

O. Neatly group all circuits in all distribution equipment and tie with Seine Twine, Ty-Rap or Wrap Tabs.

P. Special care shall be taken to balance connections of circuit wires on different phases at the lighting panelboards using distinguishing colors for identifying the particular phase on which the circuit belongs.

Q. In general, lighting and outlet circuits shall distribute from single pole 20-ampere breakers, 2 wire with solid neutral. Where noted on drawings, run single phase or 3 phase power circuits from two or three pole breakers.

R. A separate neutral conductor shall be pulled for each phase conductor for all 120 volt and 277 volt branch circuits. Common neutrals are not allowed.

3.14 WIRING JOINTS

A. Joints in conductors shall be as few in number as practicable and where they are necessary they shall be mechanically strong, well made and shall provide complete electrical contact.

B. Joints shall be so made that they have an electrical resistance not in excess of that of two feet of the conductor.

C. Make all branch circuit joints for wire up to and including No. 10 AWG with expandable steel spring and polypropylene body type connectors and wire nuts manufactured by Ideal, Scotch, Buchanan or Architect/Engineer approved equal.

D. Make all wire splices in wire No. 6 and larger with mechanical compression crimp type connectors of proper size and wire configuration. Cover all connectors with a minimum of three layers of 600 volts tape or heat shrinkable insulation equivalent to 150 percent conductor insulation.

E. Neutral conductors in outlet boxes at receptacles shall be jointed and pigtailed to the outlet. The removal of a receptacle from the circuit shall not affect the continuity of the neutral conductor.

3.15 HEIGHTS OF WALL SWITCHES AND RECEPTACLES

A. Determine the exact height of each light, receptacle outlets, and outlet boxes on the premises and examine the general drawings and details to see that outlets are properly spaced and located with relation to the interior finish and treatment.

B. In order that all outlets may be located in proper relation to paneling and decorated areas, become familiar with the details of these areas. Consult with the other contractors on the project and procure all details of the various areas so as to make the outlet boxes and panelboards come in proper relation to the work of all other contractors. Be responsible for the exact and proper location of the various portions of work. Such work must be entirely satisfactory to the Architect/Engineer.

C. Mounting heights of devices shall comply with ADA. The following is a list of mounting heights for equipment:
   1. Locate wall switches 3'6" above the floor, except where special treatment requires a higher or lower setting.
   2. Locate receptacles as follows:
      a. In general, locate 18 inches above finished floor except as hereinafter specified or as indicated on the architectural drawings.
      b. In block walls, locate either in the bottom or top of the nearest block course.
      c. In brick walls, mount in the horizontal position, in the fourth brick course.
      d. In spaces where noted to be above counters, mount in the horizontal position, 4 inches from backsplash to bottom of box.
      e. In rooms that house mechanical and electrical equipment, locate 40 inches above finished floor.
      f. Locate weatherproof receptacles 24 inches above finished grade.
   3. F.A. Speakers and Visual Indicators: 84" above finished floor to bottom of device.
   4. F.A. Pull Stations: 3'6" above finished floor to center of device.
   5. Disconnect Switches: 5'0" above finished floor.
   6. Manual and Magnetic Starters or Pushbutton Controls: 5'0" above finished floor
   7. Telephone/Data Outlets: Same as receptacles above.

D. All of the above mounting heights shall be held as near as possible to the center line of the equipment.

E. The above list is general in nature. Examine all Architectural Drawings and consult with the Architect/Engineer and vary mounting heights as directed.

3.16 TESTING 600 VOLT

A. After wires and cables are in place and before connection to the devices and equipment is made, test the system for shorts and grounds by means of an approved type of constant potential "Megger", which is to be furnished by the Electrical Contractor.

B. Remove and replace all hot wires if shorted or grounded.

END OF SECTION

SECTION 26 05 26
GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 WORK INCLUDES

A. Completely grounded system. Electrical equipment, conduits, supports, cabinets and panels shall be grounded in accord with NEC and as shown on Drawings.

1.02 QUALITY ASSURANCE

A. Codes & Standards:
   1. UL listed.
   2. NFPA 70 (NEC), 2011
   3. NEMA
   4. NEC Article 250

PART 2 PRODUCTS

2.01 MATERIALS

A. Equipment:
   1. All grounding clamps and devices shall be of type approved by UL.
   2. Approved Manufacturers:
   3. Thomas & Betts Co.
      a. O.Z.
      b. Burndy

PART 3 EXECUTION

3.01 INSTALLATION

A. Electrical System shall be grounded. Grounding shall be in accord with NEC 250 and NEC 680. By reference herein, NEC Sections 250 and 680 shall become a part of this specification and shall be adhered to strictly.

B. All conduit, raceways, equipment, enclosures, panel housings, fixture housings, bus ducts, shall be grounded back to the service equipment location utilizing the continuous metallic conduit system as the grounding means. Discontinuity of the metallic conduit grounding system will not be acceptable.

C. All connections to motors, receptacles and equipment shall contain a separate grounding conductor bonded to the panelboard grounding bus at one end and the motor frame, receptacles, or equipment at the other end.

D. Provide a ground wire in all lighting circuits. Ground all lighting equipment.

E. Provide a ground wire for all 120V receptacle outlet circuits.

F. See Sections 26 05 00 for fittings for continuous conduit grounding system.

G. All ground wires shall be run in conduit except where otherwise indicated on the drawings.

H. Color code of ground wire shall be green.

END OF SECTION

THIS PAGE

INTENTIONALLY

LEFT BLANK

SECTION 26 05 53
IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 WORK INCLUDES

A. Provide identification as listed below.

1.02 QUALITY ASSURANCE

A. Provide proper identification in accordance with NFPA 70- (NEC), 2011.

1.03 GENERAL

A. Provide identification of electrical system components in accordance with University of Iowa standards.
   1. Standard codes for junction boxes and covers:
      a. Fire Alarm - Red with “FA” stenciled on cover
      b. Emergency Power - Yellow
      c. Telecommunications - Brown
      d. Building Automation System - Blue
      e. Sound Systems - Gold
      f. Primary Distribution System - Gray
      g. 208/120 Volt System - White

B. Provide the following items with nameplates:
   1. All motor starters, motor controls, push-button stations, control panels and time switches.
   2. Switchboards, disconnect switches, circuit breakers, contactors or relays in separate enclosures. Power receptacles where the nominal voltage between any contact is greater than 150V to ground. Use at least 1-1/8” x 2-1/4” signs
   3. Special electrical systems shall be properly identified at junction and pull boxes, terminal cabinets and equipment racks.
   4. Nameplate inscription: Nameplate shall adequately describe the function or use of the particular equipment involved. Nameplate for panelboards and switchboards shall include the panel designation, voltage and phase of the supply, and where the circuit-feeding panel originates, i.e.:
      a. aPanel A
      b. 208/120 V.
      c. 3 Phase - 4 W.
      d. FED from “MDS”
   5. When equipment has more than one source of power, i.e.: separate control power source. The location of all power sources shall be CLEARLY identified at the equipment location. I.e.: Nameplate on door, etc.
   6. Mark all wires in panelboards with the circuit number they serve.
   7. Legibly mark feeder conduits entering and leaving a panelboard or switchboard with their destination.

1.04 PANELBOARDS

A. Provide a typed card directory for each panel. Directory shall designate breaker number and load served. Panel shall have all breakers individually numbered and panel shall have an interior nameplate provided by manufacturer with voltage, amperage, phase and hertz listed. Provide an exterior engraved plastic signage with the panel name or number or letter designation., and where the panel is served from.

PART 2 PRODUCTS

2.01 MATERIALS

A. Nameplate construction shall be laminated phenolic plastic, black front and back with white core, with lettering engraved through the outer covering. Lettering shall be 3/16 inches high at push-button station starter, receptacles and similar devices where the nameplate is attached to the device plate. At all other locations, lettering shall be 1/4 inch high unless otherwise detailed on the drawings.

B. Other types and sized of signage may be used where appropriate.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install labels on motor starters, TT switches, relays, disconnect switches, main distribution switchboard, power distribution panels, branch power panels, branch lighting panels and cable trays.

B. Special outlets and receptacles shall be clearly labeled to identify the utilization equipment.

C. Overcurrent devices in panels clearly identify what they feed. This may be accomplished by means of the typewritten panel schedules mounted inside of the front cover doors under glass or plastic.

END OF SECTION

SECTION 26 51 00
LIGHTING

PART 1 GENERAL

1.01 WORK INCLUDES

A. Light fixtures.

B. Lamps.

C. Ballast.

D. Fixture bases.

E. Fixture lens.

F. Accessories.

1.02 QUALITY ASSURANCE

A. All fixtures shall have UL label.

B. Ballasts shall be in accord with ANSI Standards.

C. Comply with:
1. NFPA - 70
2. I.E.S.

D. Verify the ceiling trim requirements for fixtures to assure proper installation for the type of ceiling construction.

1.03 SUBMITTALS

A. Submit in accord with Division 01.

B. Submit manufacturer's data demonstrating compliance with this specification and the schedule on the drawings.

C. Shop Drawings:

1. Include data specified herein including fixture “mark” corresponding to the Drawings.

2. Clearly indicate type and color of each lamp(s) to be used for each fixture type.

3. Submit shop drawings for each type of lamp.

D. Submittals will be reviewed a maximum of three revisions. If after the third submission submittal package does not conform to Specifications herein, CONTRACTOR will be billed at Electrical Engineer's standard hourly rate.

E. Maintenance data for fixtures to include in the operation and maintenance manual specified in Division 1.

PART 2 PRODUCTS

2.01 FIXTURE SCHEDULE

A. Light fixtures shall be as listed on the drawing Fixture Schedule.

B. The various types of fixtures to be provided are indicated on the drawings. A fixture shall be provided for each ceiling outlet, bracket outlet and other lighting fixture outlets. Where a fixture type is not indicated, provide a fixture of the same type used in similar areas.

2.02 FIXTURES

A. Where installed on combustible surfaces, fixtures shall be specifically UL listed for this condition or be spaced not less than 1-1/2-inch from the combustible surface.

B. All glassware shall be high quality, homogeneous in texture and free from streaks, cords, stones, or blisters and of uniform thickness and properly annealed.

C. Enamel finish shall be baked. The finish of each fixture shall be uniform in quality, durable and free from defects.

D. All plastic molded lenses shall be acrylic prismatic K19, 0.156” type.

E. Disconnecting Means:
1. All applicable luminaires must be provided with means to comply with luminaire disconnect requirements specified in NEC 410.130(G), 2011 Edition.

PART 3 EXECUTION

3.01 FIXTURE INSTALLATION

A. Light fixtures for all outlets shown on the drawings shall be furnished and installed complete including the assembly, wiring, support materials, and installation of each unit in place. All lenses, glassware and metal parts shall be thoroughly cleaned just prior to final acceptance.

B. Lighting fixtures shall be mounted as specified, and shall include all necessary fittings for a complete installation. Provide all materials to adequately and safely support all fixture installations.

C. Verify ceiling suspension material and systems in the various areas and provide plaster frames and proper fixture trims.

3.02 FIXTURE LOCATION

A. Space fixtures as indicated on the drawings and in keeping with ceiling patterns, air inlets and outlets.

B. Light fixtures recessed in ceiling shall be coordinated with ceiling construction. Recessed fixtures as scheduled serve only as a guide as to the type of fixture, lamp, and lens. Supply fixture that shall integrate with the type of ceiling as scheduled on architectural drawings approved for construction. Recessed light fixtures installed in grid ceiling shall have tee grid clamps.

C. Exit lights shall be coordinated with adjacent architectural work and shall be located and modified as to type of mounting, as directed by Architect/Engineer.

3.03 FIXTURE SUPPORT

A. Conduits run to recessed fixtures shall terminate in a suitable box adjacent to fixture opening with final connections to fixture made with flexible conduit and Type AF wire. Airtight fiberglass gaskets shall be provided around recessed fixtures to eliminate light leakage or hot air dirt streaks between fixture trim and finished ceiling. Fixtures shall be designed, insulated and ventilated to prevent scorching of adjacent construction. Plaster or other special frames, including extension pan for exposed conduit installation, shall be provided.

B. Light fixtures shall have proper supports, flanges, and plaster frames to integrate with the type of ceiling construction. All fixtures shall be constructed so that they may be securely supported. All fixtures shall be supported from 3/8-inch stud in outlet box. Outlet boxes shall have fixture studs and shall be securely hung independently of conduits.

C. Provide auxiliary supports for mounting fixtures in areas without ceilings (i.e., exposed beams and slabs), for proper installation of fixtures. Such supports shall span a minimum of 2 beams for each individual fixture and shall be securely and suitably anchored.

D. Fixtures shall be supported with a stem and “L” hanger on one end and pipe stem on the other end. When conduit is used to support fixtures, 1-inch rigid heavy wall shall be the minimum size. When conduits are used as stems, locknuts and washers shall be employed. Conduit may not be reduced in size between fixtures.

E. Fixtures installed adjacent to unit heaters or mechanical equipment, which may cause fixtures to vibrate, shall be installed so not to sway.

F. Fixtures shall not be supported from underside of metal roof decks, except where specifically noted otherwise on the drawings.

G. Compression or indenter type couplings will not be acceptable for fixtures supports.

H. Recessed grid fixtures shall be provided with T-bar clips. Install 4 per fixture.

I. Fixtures installed in continuous rows shall be supported a minimum of 8'-0” on center. Where fixtures are mounted in continuous rows over 16 feet long, support from Kindorf, Unistrut, or Storack which will limit deflection to acceptable values. When channels are used for a wireway, thus eliminating conduit shown on the drawings as running parallel to the channels. Channels shall have closure plates if used as wireways. Continuous wireways may be used in place of conduit when approved in writing by Architect/Engineer for the installation.

J. In general, support all fluorescent fixtures from the building structure and not from the ceiling suspension system (such as tee bar system for a suspended acoustical tile ceiling.)

K. At the Electrical Contractor's option recessed fluorescent fixtures can be supported from the ceiling suspension system if the Electrical Contractor makes arrangements and pays for additional ceiling hanger wires of adequate strength and quantity to support the fixtures. Where recessed fixtures occur in grid system, install tie wires on all four corners of the grid system about the fixture. Fixtures so supported shall be securely fastened to the grid system members with safety tee bar clips.

3.04 MISCELLANEOUS REQUIREMENTS

A. Color of exit light lettering shall be green LED. All letters shall be 6 inches high by 3/4-inch stroke. Exit signs at an egress shall read “EXIT”.

B. Fixtures marked “WP” shall be waterproof with special waterproof boxes and gaskets as required to keep rain or hose spray from coming into contact with wiring.

C. Letters “a”, “b”, “c”, etc., indicate associated switch or switches. Figures “1”, “2”, “3', etc., indicate associated branch circuit. “F1”, “F2”, “F3”, etc. indicate fixture type.

3.05 LAMP INSTALLATION

A. Provide all lamps for all outlets and fixtures. All fixtures shall be complete with lamps and in operating condition when the building is turned over to the Using Agency. All “burnt out” or broken lamps that occur during the construction period shall be replaced.

B. All fixtures, reflectors, lenses, and lamps shall be cleaned.

END OF SECTION

Domestic Violence Intervention Program
Restroom Remodeling Project

SHEET INDEX

ARCHITECTURAL

ELECTRICAL

PLUMBING

Architect:

Thomas McInerney
ARCHITECT
319.331.0365
1208 Marcy Street Iowa City, Iowa 52240
www.thomasarchitect.com
thomas@thomasarchitect.com

Consultants:

IEI INNOVATIVE ENGINEERS, INC.
2871 Heinz Rd. Suite B, Iowa City, IA 52240
T 319.855.4115 I F 319.351.0070
www.innovativeengineersinc.com

Project :

DVIP Restroom Remodel

IOWA CITY , IOWA

Project number: 15.42

Issue date: Description

JAN 26, 2016	BID DOCUMENTS

Sheet Title:

COVER SHEET

Sheet Number:

A-000

THOMAS A. McINERNEY STATE OF 05242 IOWA REGISTERED ARCHITECT

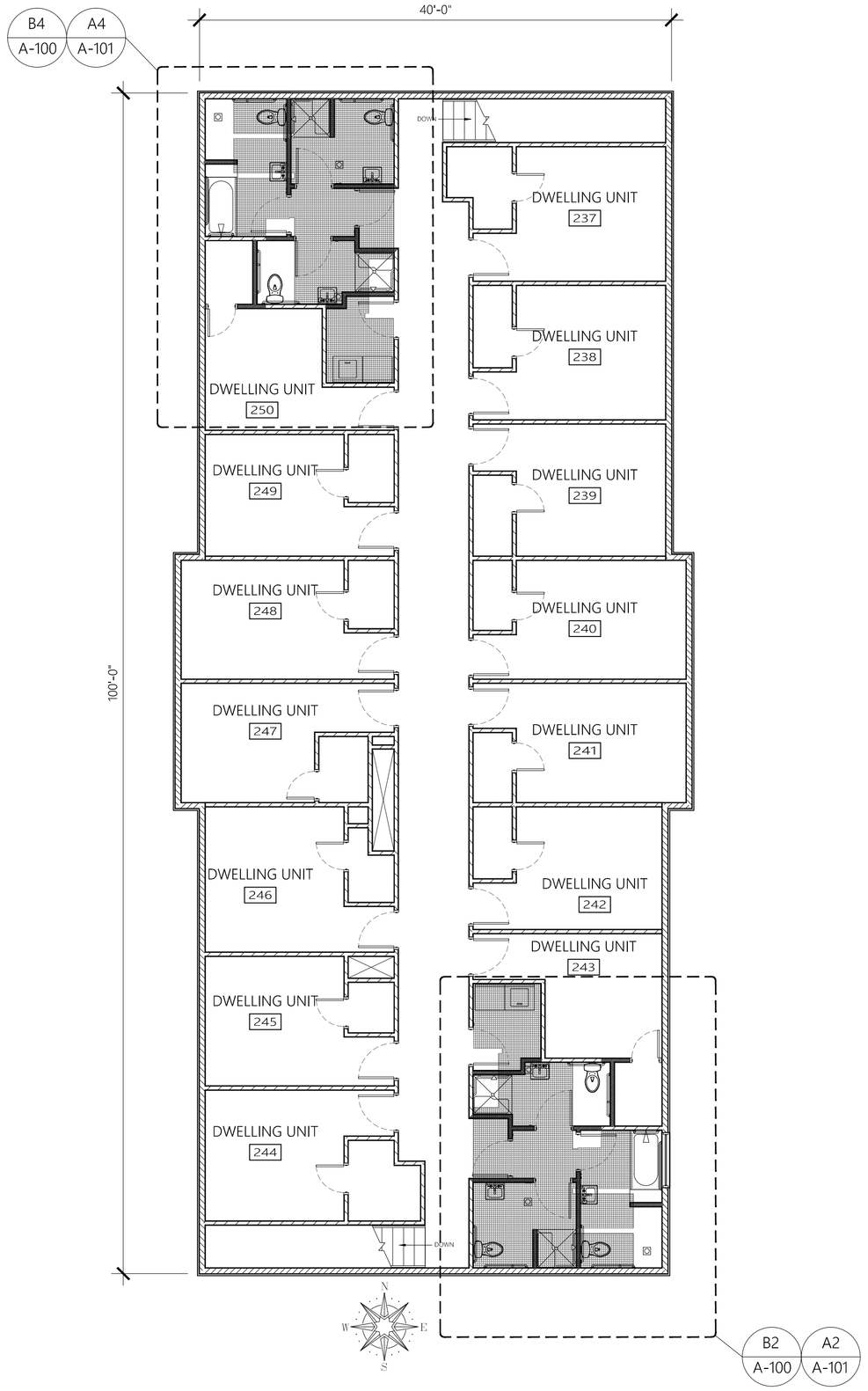
I hereby certify that the portion of this technical submission described herein was prepared by me or under my direct supervision and responsible charge. I am a duly registered Architect under the laws of the State of Iowa.

Signature THOMAS A. McINERNEY Date 01/ 26 / 2015

Registration expires: June 30, 2017 Date issued: JANUARY 2001

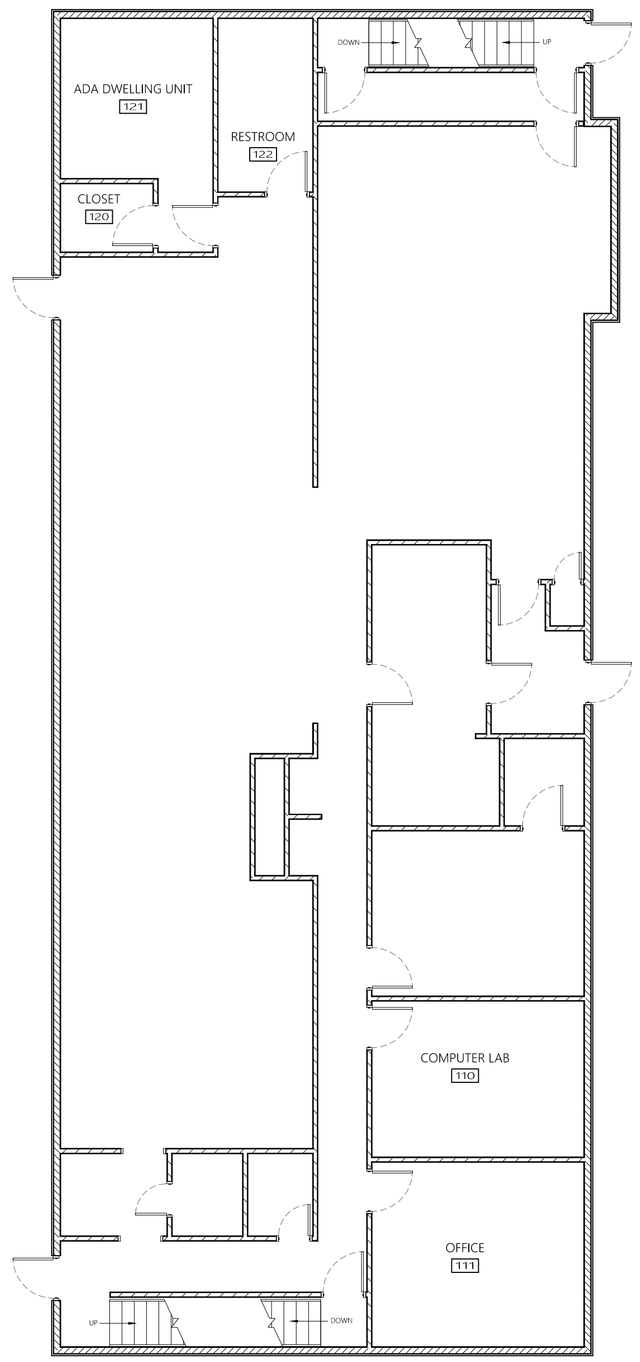
Pages or sheets covered by this seal:

A-000, A-100, A-101, A-201, A-501, E01, E02, E03, P01, P02, P03



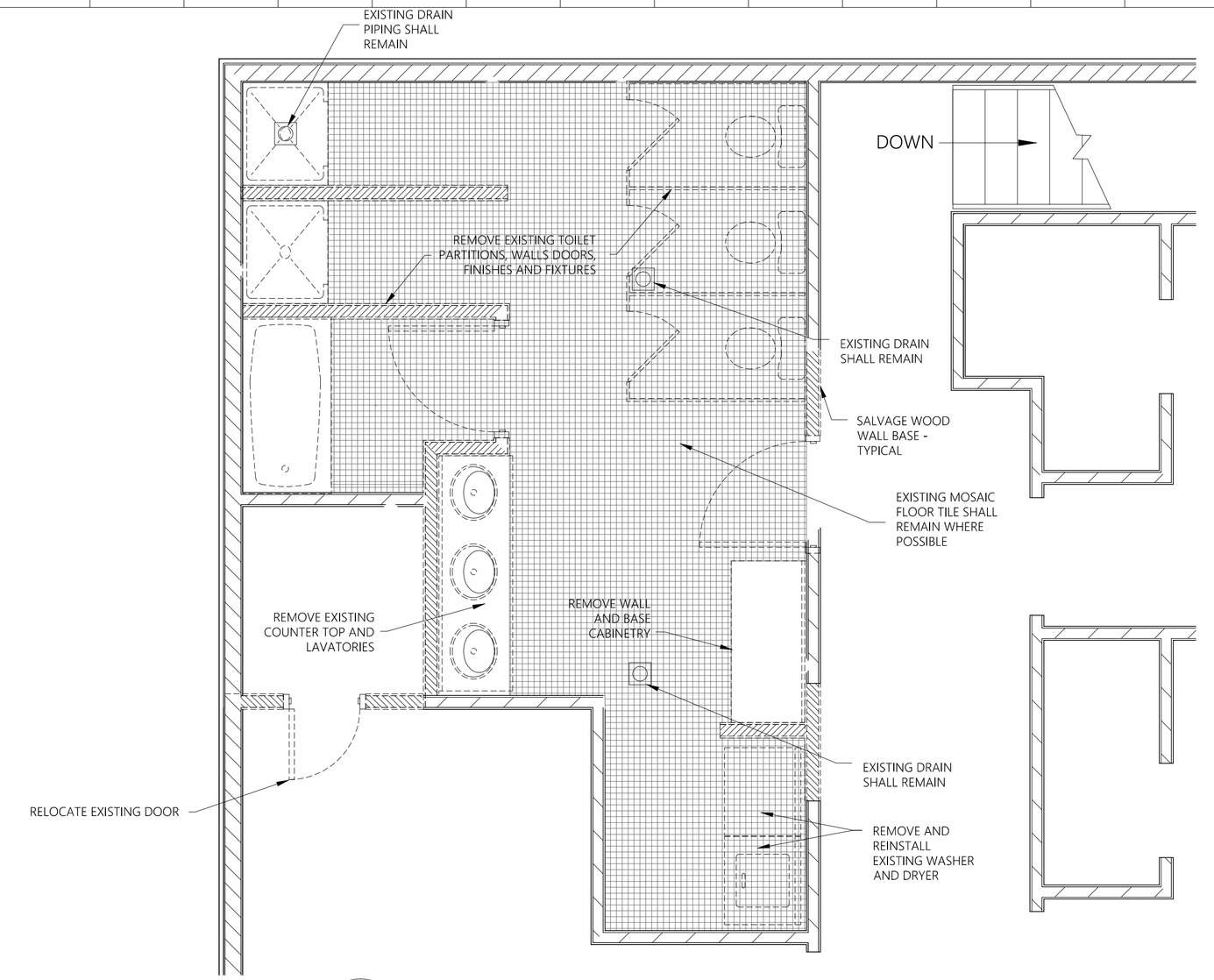
1st FLOOR PLAN

SCALE : 1/8" = 1'-0"



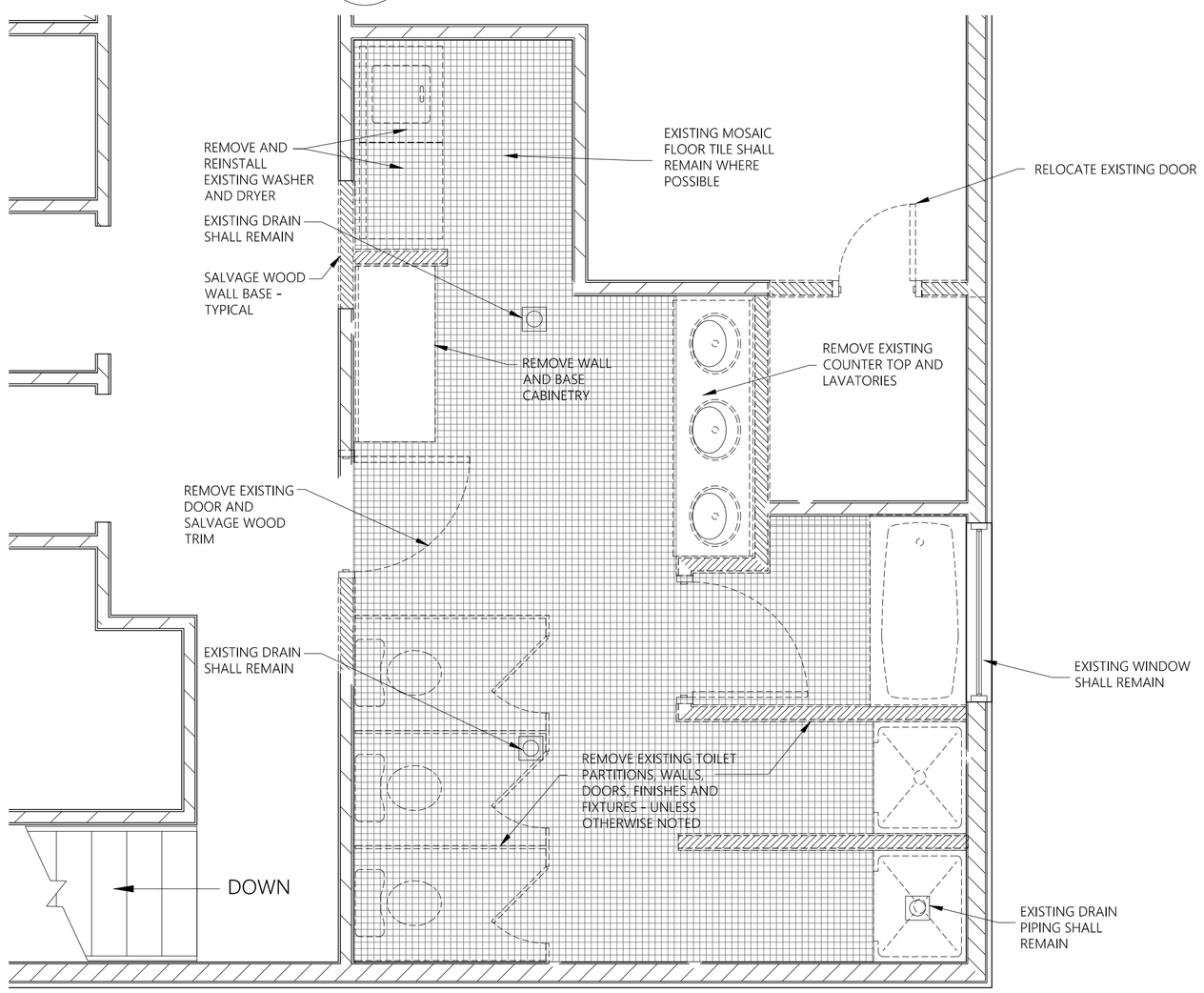
2nd FLOOR PLAN

SCALE : 1/8" = 1'-0"



B4 DEMOLITION PLAN @ NORTH RESTROOMS

SCALE : 3/8" = 1'-0"



B2 DEMOLITION PLAN @ SOUTH RESTROOMS

SCALE : 3/8" = 1'-0"

Architect:

Thomas McInerney
ARCHITECT

319.331.0365

1208 Marcy Street Iowa City, Iowa 52240
www.thomasarchitect.com
thomas@thomasarchitect.com

Consultants:

INNOVATIVE ENGINEERS, INC.
2871 Heinz Rd. Suite B, Iowa City, IA 52240
T 319.855.4115 I F 319.351.0070
www.innovativeengineersinc.com

Project :

DVIP Restroom Remodel

IOWA CITY , IOWA

Project number: 15.42

Note:

Issue date: Description

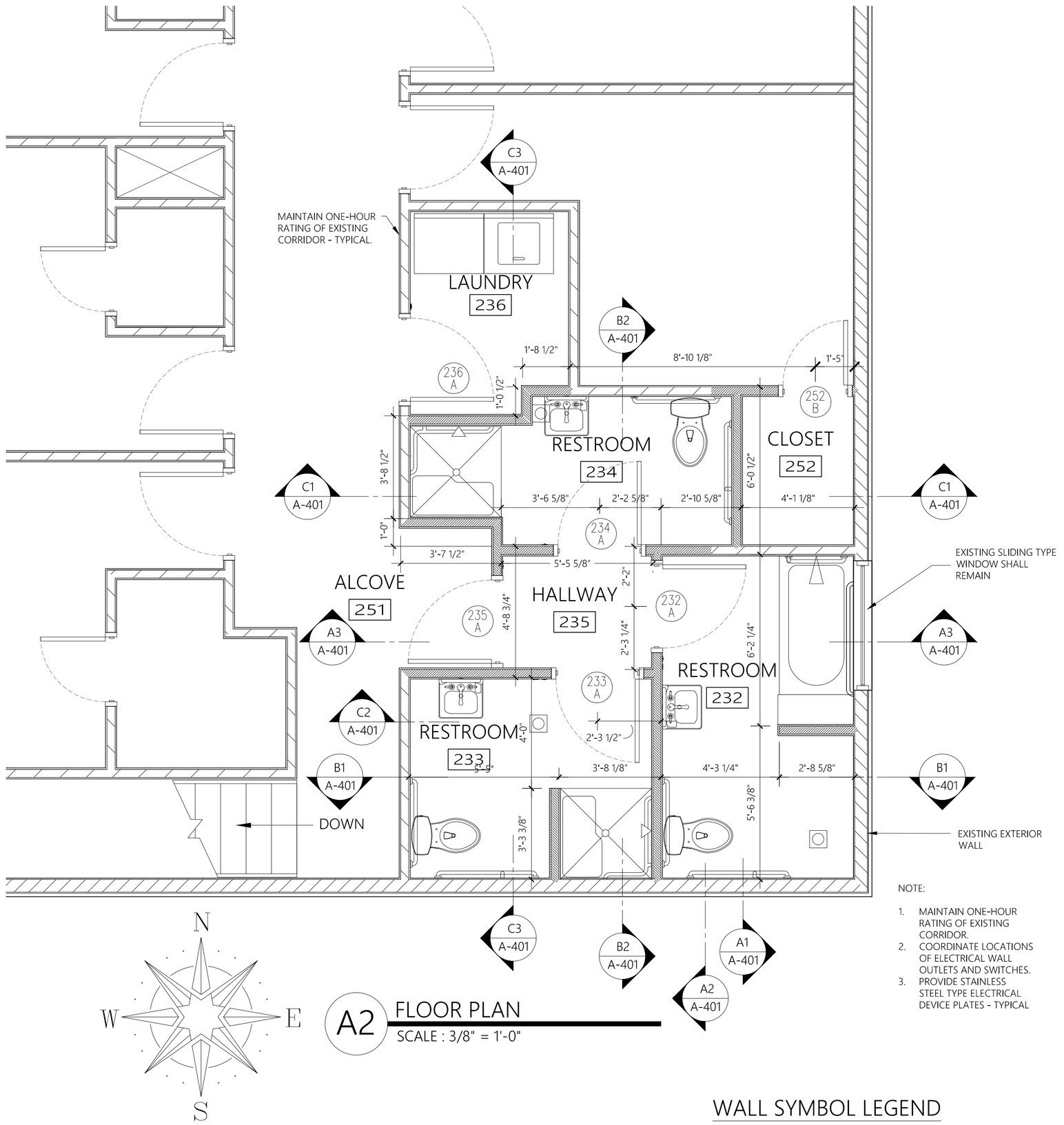
JAN 26, 2016	BID DOCUMENTS

Sheet Title:

FLOOR PLANS

Sheet Number:

A-100

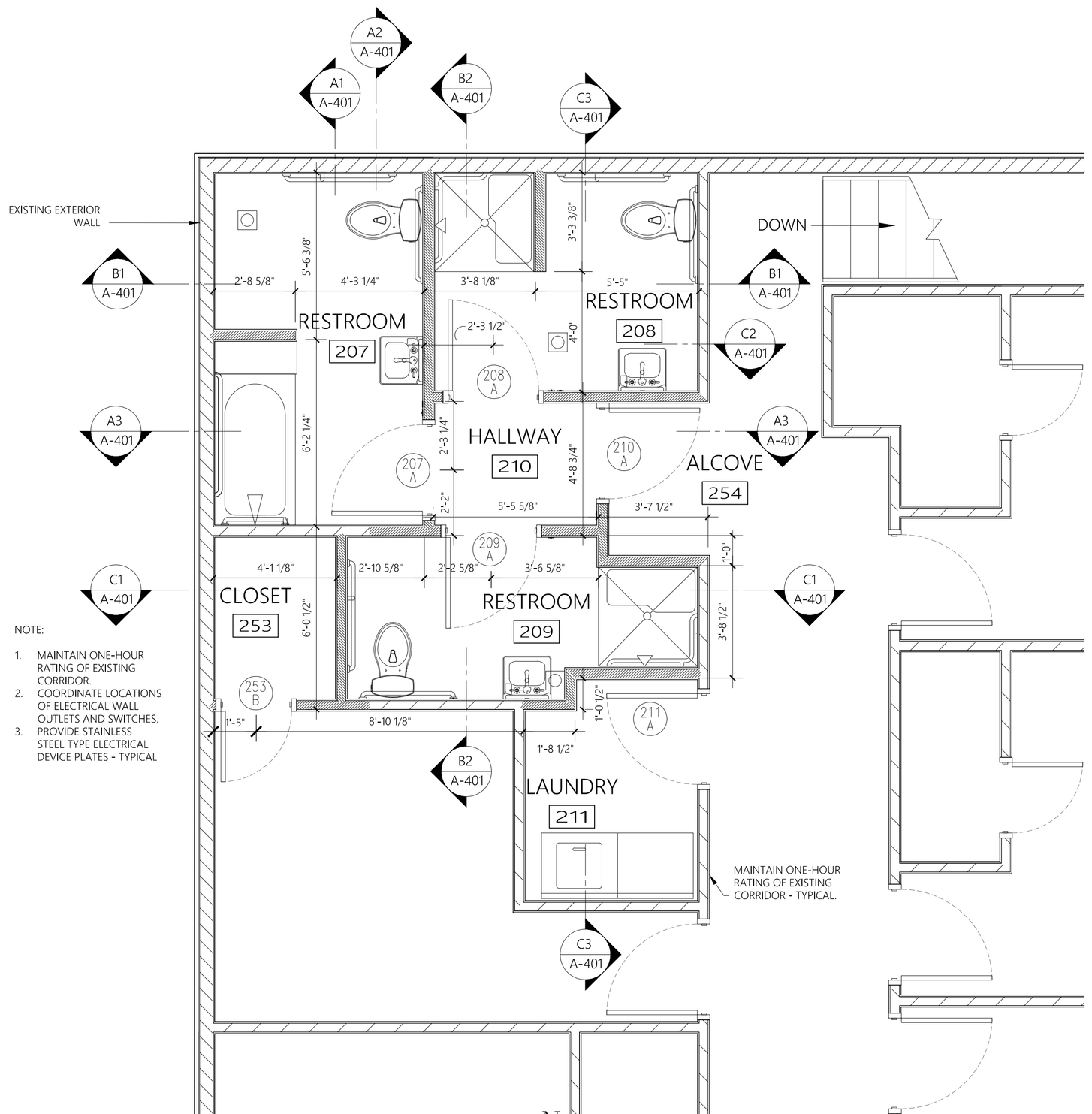


NOTE:

1. MAINTAIN ONE-HOUR RATING OF EXISTING CORRIDOR.
2. COORDINATE LOCATIONS OF ELECTRICAL WALL OUTLETS AND SWITCHES.
3. PROVIDE STAINLESS STEEL TYPE ELECTRICAL DEVICE PLATES - TYPICAL

A2 FLOOR PLAN

SCALE : 3/8" = 1'-0"



NOTE:

1. MAINTAIN ONE-HOUR RATING OF EXISTING CORRIDOR.
2. COORDINATE LOCATIONS OF ELECTRICAL WALL OUTLETS AND SWITCHES.
3. PROVIDE STAINLESS STEEL TYPE ELECTRICAL DEVICE PLATES - TYPICAL

A4 FLOOR PLAN

SCALE : 3/8" = 1'-0"

WALL SYMBOL LEGEND

EXISTING INTERIOR WALL (2x4 WOOD STUDS @ 16" O.C. WITH RATED WALL BOARD ON EACH FACE)

EXISTING EXTERIOR WALL (2x6 WOOD STUDS @ 16" O.C. WITH 7/16" OSB SHEATHING AND 4" VINYL SIDING) - INSULATE WALL CAVITY WITH 3" SPRAYED INSULATION AND PROVIDE RATED WALL BOARD ON INSIDE FACE OF STUD

FULL HEIGHT WALL - PROVIDE 3-1/2" WOOD STUDS @ 16" O.C. WITH RATED WALL BOARD EACH FACE - INSULATE WALL CAVITY WITH 2" SPRAYED INSULATION.

Architect:

Thomas McInerney
ARCHITECT

319.331.0365

1208 Marcy Street Iowa City, Iowa 52240
www.thomasarchitect.com
thomas@thomasarchitect.com

Consultants:

IEI INNOVATIVE ENGINEERS, INC.
2871 Heinz Rd. Suite B, Iowa City, IA 52240
T 319.855.4115 I F 319.351.0070
www.innovativeengineersinc.com

Project :

DVIP Restroom Remodel

IOWA CITY , IOWA

Project number: 15.42

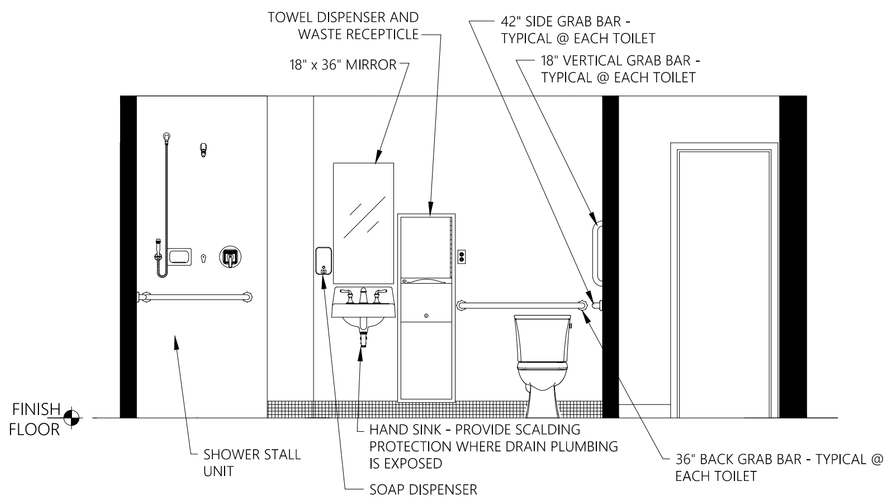
Issue date:	Description
JAN 26, 2016	BID DOCUMENTS

Sheet Title:

FLOOR PLANS

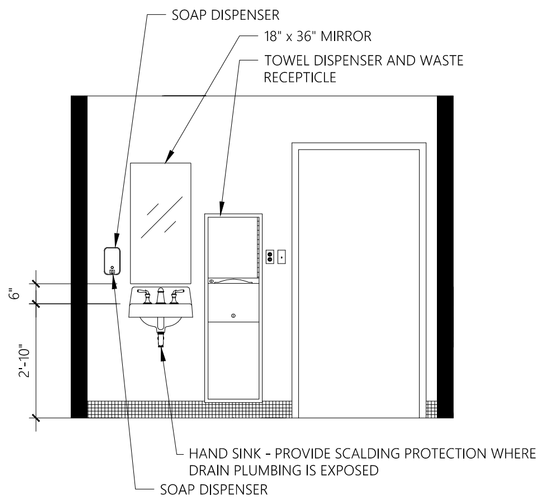
Sheet Number:

A-101



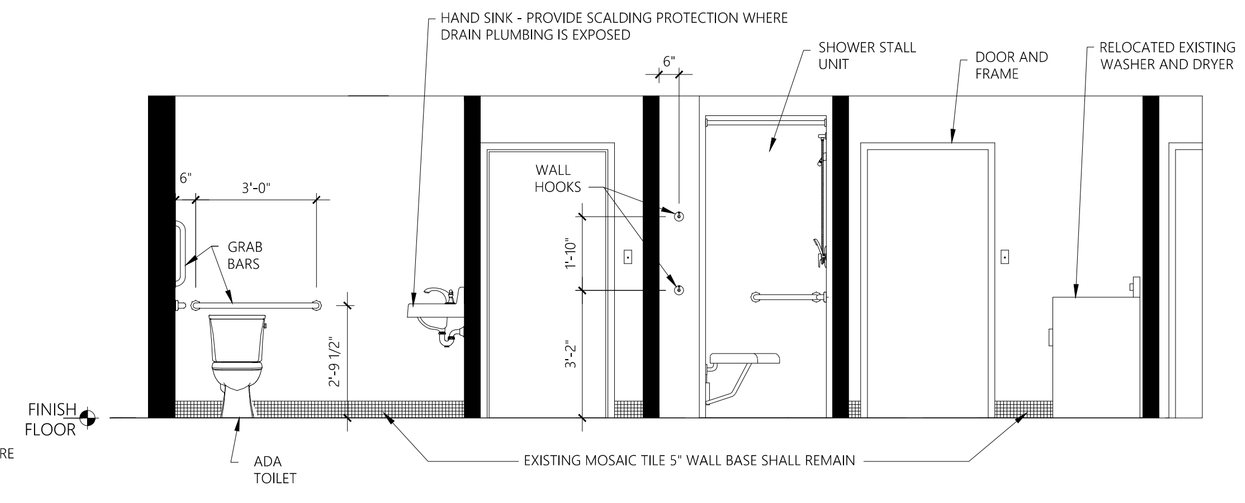
C1 INTERIOR ELEVATION

SCALE: 3/8" = 1'-0"



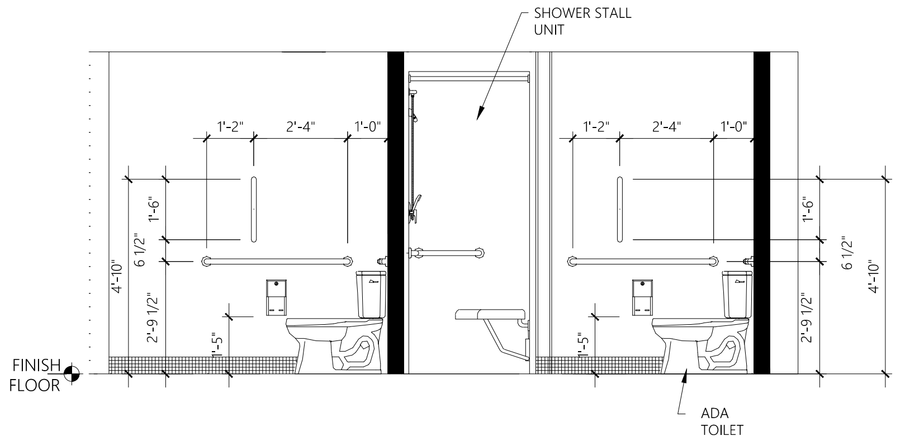
C2 INTERIOR ELEVATION

SCALE: 3/8" = 1'-0"



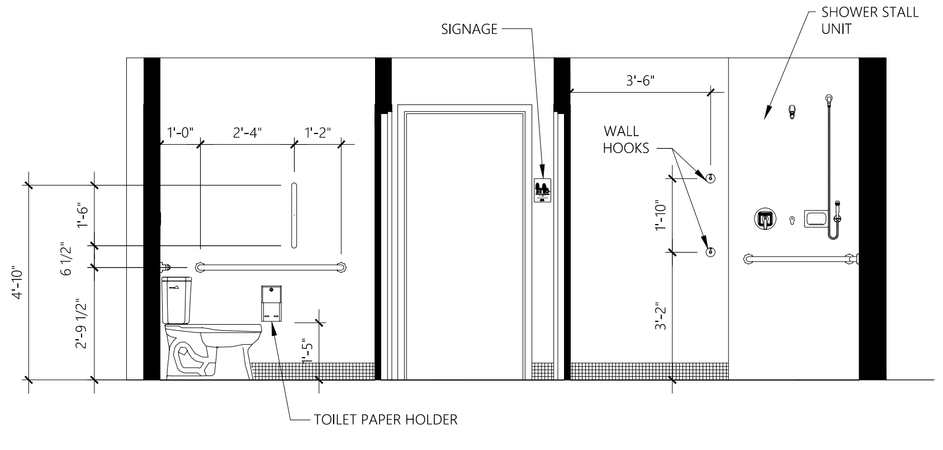
C3 INTERIOR ELEVATION

SCALE: 3/8" = 1'-0"



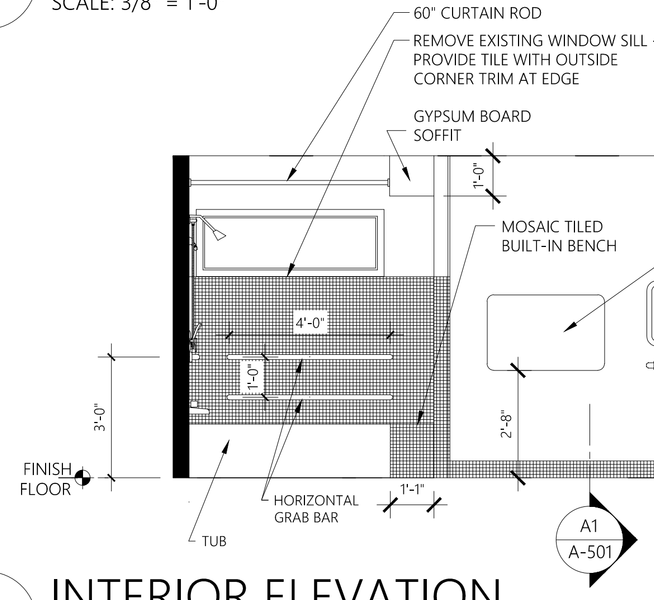
B1 INTERIOR ELEVATION

SCALE: 3/8" = 1'-0"



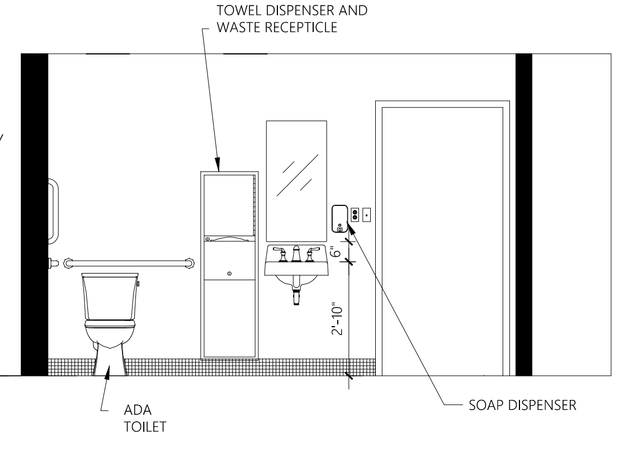
B2 INTERIOR ELEVATION

SCALE: 3/8" = 1'-0"



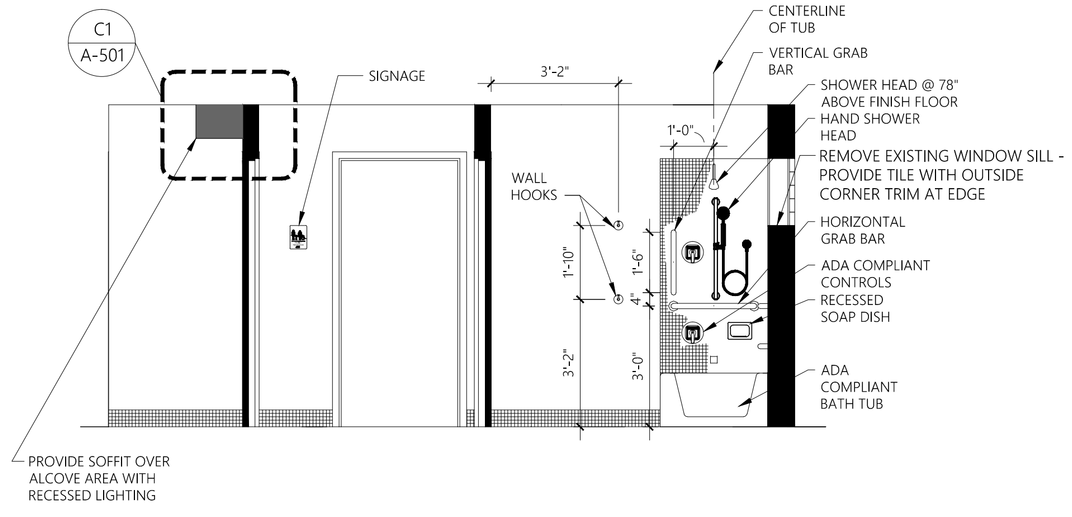
A1 INTERIOR ELEVATION

SCALE: 3/8" = 1'-0"



A2 INTERIOR ELEVATION

SCALE: 3/8" = 1'-0"



A3 INTERIOR ELEVATION

SCALE: 3/8" = 1'-0"

Architect:

Thomas McInerney
ARCHITECT

319.331.0365

1208 Marcy Street Iowa City, Iowa 52240
www.thomasarchitect.com
thomas@thomasarchitect.com

Consultants:

INNOVATIVE ENGINEERS, INC.
2871 Heinz Rd. Suite B, Iowa City, IA 52240
T 319.855.4115 I F 319.351.0070
www.innovativeengineersinc.com

Project :

DVIP Restroom Remodel

IOWA CITY , IOWA

Project number: 15.42

Issue date: Description

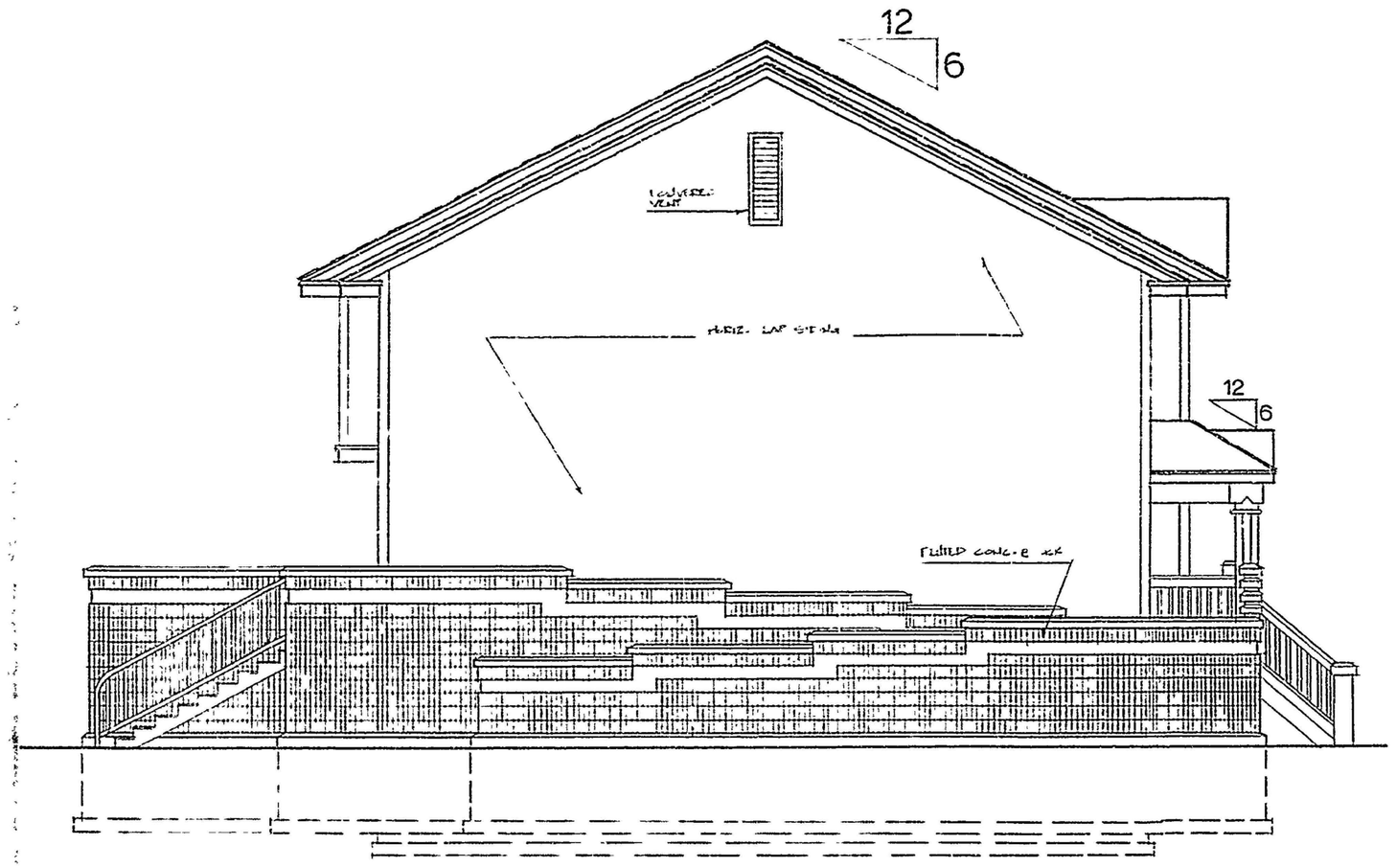
JAN 26, 2016	BID DOCUMENTS

Sheet Title:

INTERIOR ELEVATIONS

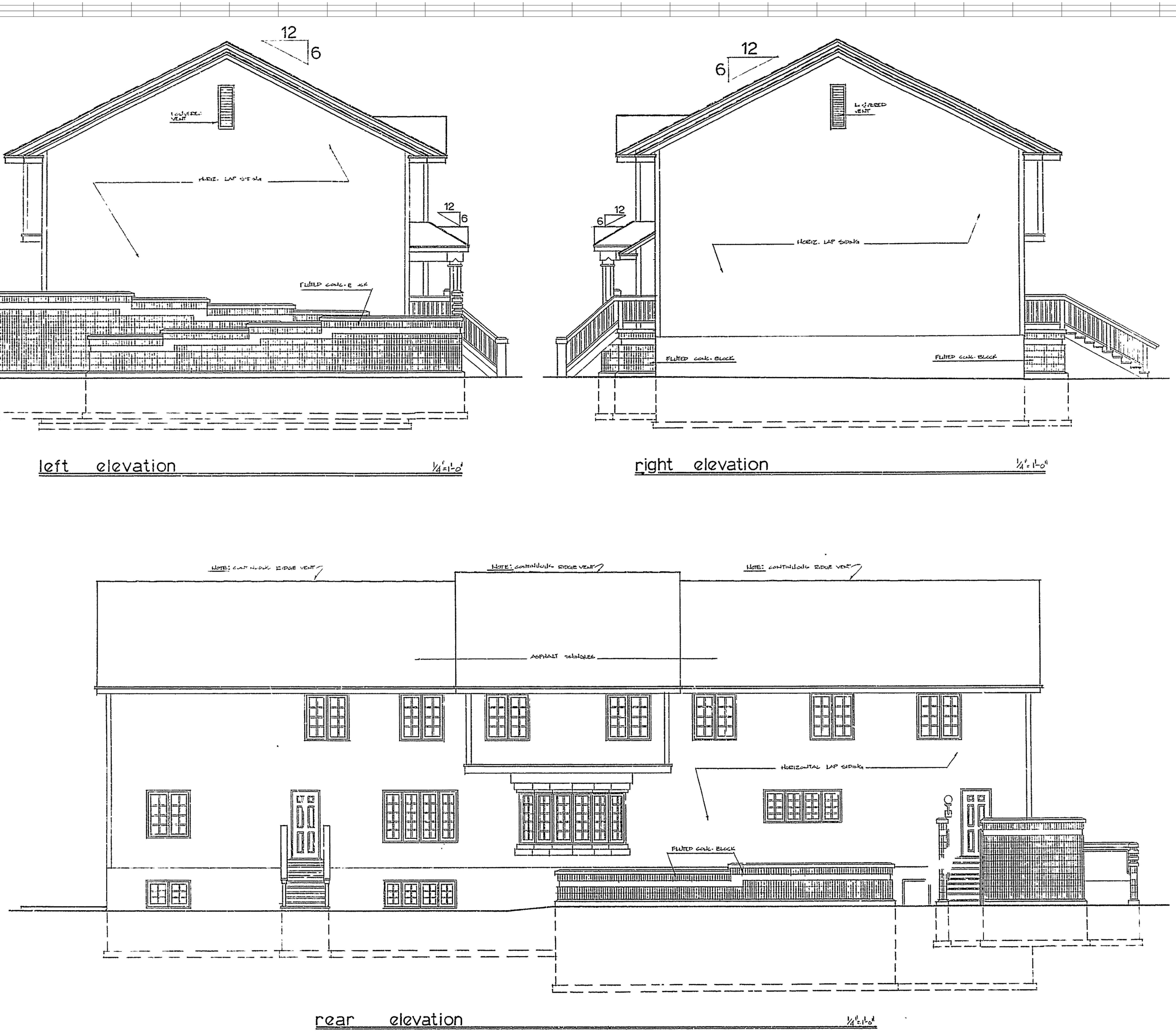
Sheet Number:

A-401



left elevation 1/4"=1'-0"

right elevation 1/4"=1'-0"



rear elevation 1/4"=1'-0"

Architect:

Thomas McInerney
ARCHITECT
319.331.0365
1208 Marcy Street Iowa City, Iowa 52240
www.thomasarchitect.com
thomas@thomasarchitect.com

Consultants:

IEI INNOVATIVE ENGINEERS, INC.
2871 Heinz Rd. Suite B, Iowa City, IA 52240
T 319.855.4115 I F 319.351.0070
www.innovativeengineersinc.com

Project :

DVIP Restroom Remodel

IOWA CITY , IOWA

Project number: 15.42

Note:

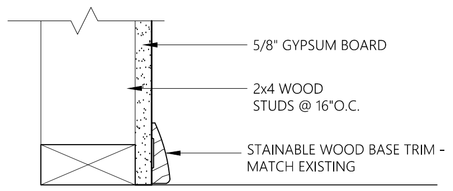
Issue date:	Description
JAN 26, 2016	BID DOCUMENTS

Sheet Title:

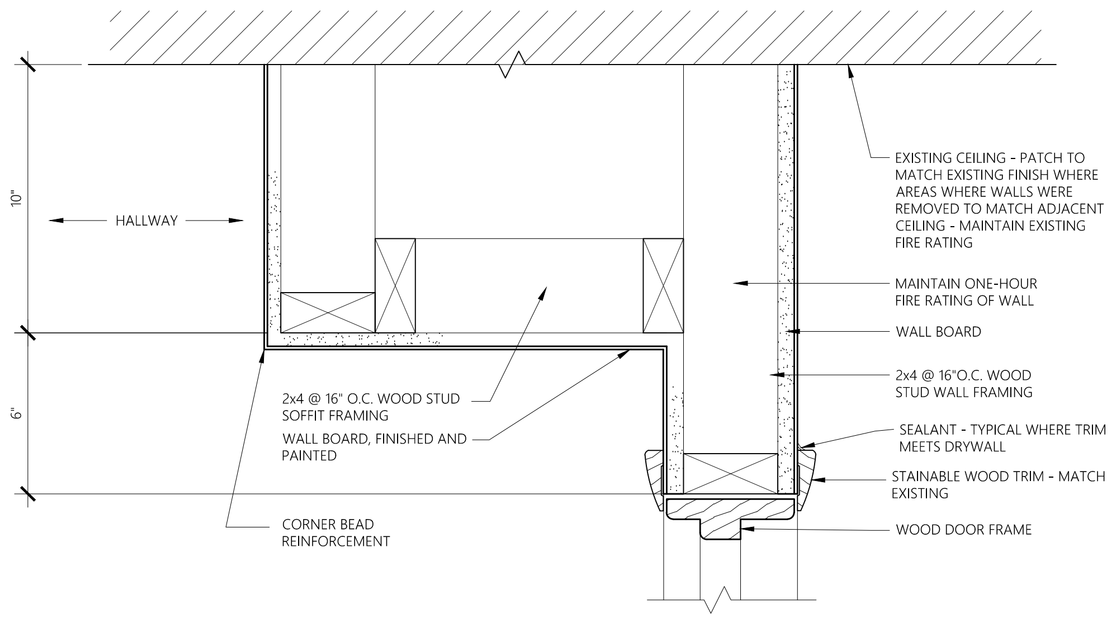
EXTERIOR ELEVATIONS

Sheet Number:

A-402



D1 SECTION @ WOOD WALL BASE
3" = 1'-0"



C1 DETAIL
3" = 1'-0"

ROOM FINISH SCHEDULE

ROOM		FLR	Base	WALL FINISH AND TYPE				CEILING		NOTES
NO.	NAME			NORTH	SOUTH	EAST	WEST	MATL	Height	
207	RESTROOM	T-1	T-1	PNT-1	PNT-1	PNT-1	PNT-2	GYP	8'-0"	--
208	RESTROOM	T-1	T-1	PNT-1	PNT-1	PNT-1	PNT-2	GYP	8'-0"	--
209	RESTROOM	T-1	T-1	PNT-1	PNT-1	PNT-1	PNT-2	GYP	8'-0"	--
210	HALLWAY	T-1	T-1	PNT-1	PNT-1	PNT-1	PNT-2	GYP	8'-0"	--
211	LAUNDRY	T-1	T-1	PNT-1	PNT-1	PNT-1	PNT-2	GYP	8'-0"	--
232	RESTROOM	T-1	T-1	PNT-1	PNT-1	PNT-1	PNT-2	GYP	8'-0"	--
233	RESTROOM	T-1	T-1	PNT-1	PNT-1	PNT-1	PNT-2	GYP	8'-0"	--
234	RESTROOM	T-1	T-1	PNT-1	PNT-1	PNT-1	PNT-2	GYP	8'-0"	--
235	HALLWAY	T-1	T-1	PNT-1	PNT-1	PNT-1	PNT-2	GYP	8'-0"	--
236	LAUNDRY	T-1	T-1	PNT-1	PNT-1	PNT-1	PNT-2	GYP	8'-0"	--
251	ALCOVE	T-1	T-1	PNT-1	PNT-1	PNT-1	PNT-1	GYP	8'-0"	--
252	CLOSET	EXIST	EXIST	PNT-1	PNT-1	PNT-1	PNT-1	GYP	8'-0"	1
253	CLOSET	EXIST	EXIST	PNT-1	PNT-1	PNT-1	PNT-1	GYP	8'-0"	1
254	ALCOVE	T-1	T-1	PNT-1	PNT-1	PNT-1	PNT-1	GYP	8'-0"	--

ABBREVIATION LEGEND:

T-1 PATCH AREAS WHERE WALLS AND FIXTURES WERE REMOVED.

PROVIDE MOSAIC FLOOR AND WALL TILE MANUFACTURED BY AMERICAN OLEAN.

1"x1" UNGLAZED COLORBODY PORCELAIN COLOR; A68 "SNOW LEOPARD".

GROUT: GRAY, UNSANDED

PROVIDE 1"x1" CERAMIC TILE OVER DECOUPLING MEMBRANE - TYPICAL AT FLOOR .

SEE DETAIL A1 THIS SHEET FOR TILE AT WALL BASE AND AROUND FLOOR DRAIN.

WHERE WALL BASE IS TO BE PROVIDED, PROVIDE AND MATCH EXISTING 5" HIGH MOSAIC WALL BASE WITH COVE CERAMIC TRIM AT FLOOR AND WALL TRANSITION.

PROVIDE Non-Ceramic Trim: Satin-finished anodized aluminum, style and dimensions to suit application, for setting using tile mortar or adhesive.
Manufacturer: Schluter Systems, L.P., 194 Pleasant Ridge Road, Plattsburgh, NY 12901- 5841. Tel.: (800) 472-4588. Fax: (800) 477-9783. E-mail: specassist@schluter.com. Internet: www.schluter.com.
Use in the following locations:
Transition between floor finishes: "RENO-TK".
Transition between tub and wall: "DILEX-AS".

ABBREVIATION LEGEND:

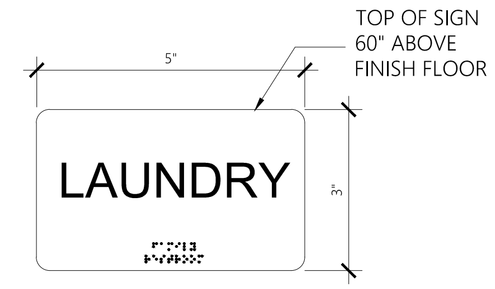
PNT-1 PAINT - COLOR # 1 (MATCHING MOSAIC COLOR AS APPROVED BY ARCHITECT)

PNT-2 PAINT - COLOR #2 (MATCHING MOSAIC COLOR AS APPROVED BY ARCHITECT)

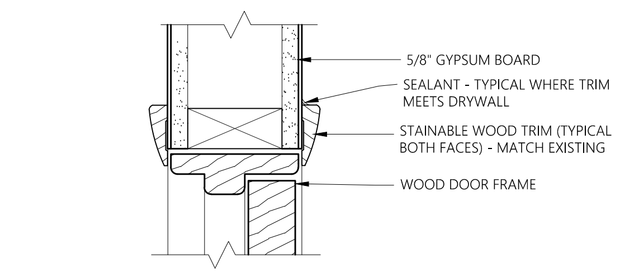
GYP EXISTING GYPSUM WALL BOARD WITH TEXTURED "POPCORN" FINISH -
1. PATCH TO MATCH WHERE WALLS WERE REMOVED.
2. MAINTAIN EXISTING FIRE RATING.

NOTES:

1. PROVIDE WOOD TRIM AT WALL BASE. SEE DETAIL D1 THIS SHEET.



C4 SIGNAGE DETAIL
SCALE : 6" = 1'-0"



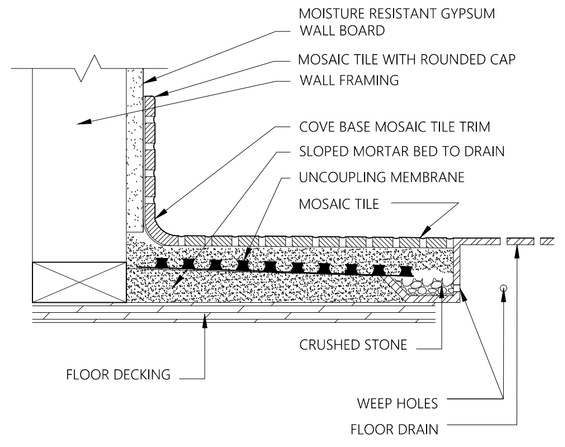
B1 TYPICAL SECTION @ DOOR HEAD / JAMB
3" = 1'-0"

DOOR AND FRAME SCHEDULE

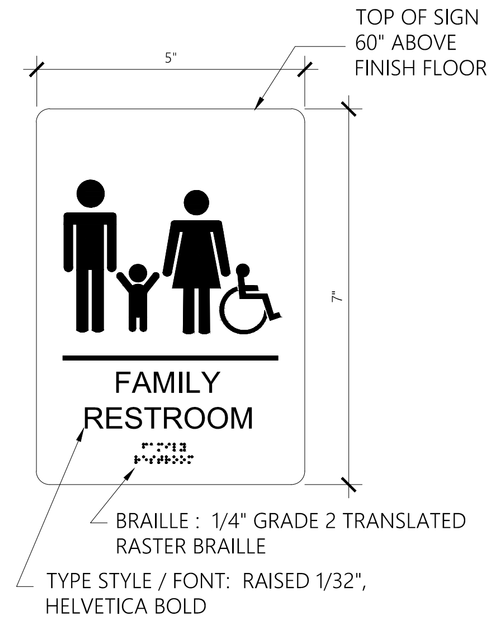
NO.	ROOM	Style	SIZE-PR WxH	DOOR MAT.	DOOR FIN.	HARDWARE	FrameType	Fire Rating	NOTES
207A	RESTROOM	Hinged - Single	3'-0" x 6'-8"	WOOD	STAIN	2	WOOD	-	1
208A	RESTROOM	Hinged - Single	3'-0" x 6'-8"	WOOD	STAIN	2	WOOD	-	1
209A	RESTROOM	Hinged - Single	3'-0" x 6'-8"	WOOD	STAIN	2	WOOD	-	1
210A	HALLWAY	Hinged - Single	3'-0" x 6'-8"	WOOD	STAIN	1	WOOD	20 MIN	1
211A	LAUNDRY	Hinged - Single	3'-0" x 6'-8"	WOOD	STAIN	1	WOOD	20 MIN	1
232A	RESTROOM	Hinged - Single	3'-0" x 6'-8"	WOOD	STAIN	2	WOOD	-	1
233A	RESTROOM	Hinged - Single	3'-0" x 6'-8"	WOOD	STAIN	2	WOOD	-	1
234A	RESTROOM	Hinged - Single	3'-0" x 6'-8"	WOOD	STAIN	2	WOOD	-	1
235A	HALLWAY	Hinged - Single	3'-0" x 6'-8"	WOOD	STAIN	1	WOOD	20 MIN	1
236A	LAUNDRY	Hinged - Single	3'-0" x 6'-8"	WOOD	STAIN	1	WOOD	20 MIN	1
252B	CLOSET	Hinged - Single	2'-4" x 6'-8"	EXIST	EXIST	-	-	-	2
253B	CLOSET	Hinged - Single	2'-4" x 6'-8"	EXIST	EXIST	-	-	-	2

NOTES:

1. PROVIDE WOOD TRIM AT JAMB AND HEAD. SEE DETAIL B1 THIS SHEET.
2. SALVAGE EXISTING CLOSET DOOR WITH TRIM AND RELOCATE AS INDICATED ON PLANS.



A1 SECTION @ FLOOR DRAIN AND WALL BASE
3" = 1'-0"



A4 SIGNAGE DETAIL
SCALE : 6" = 1'-0"

Architect:
Thomas McInerney
ARCHITECT
319.331.0365
1208 Marcy Street Iowa City, Iowa 52240
www.thomasarchitect.com
thomas@thomasarchitect.com

Consultants:
INNOVATIVE ENGINEERS, INC.
2871 Heinz Rd. Suite B, Iowa City, IA 52240
T 319.855.4115 I F 319.351.0070
www.innovativeengineersinc.com

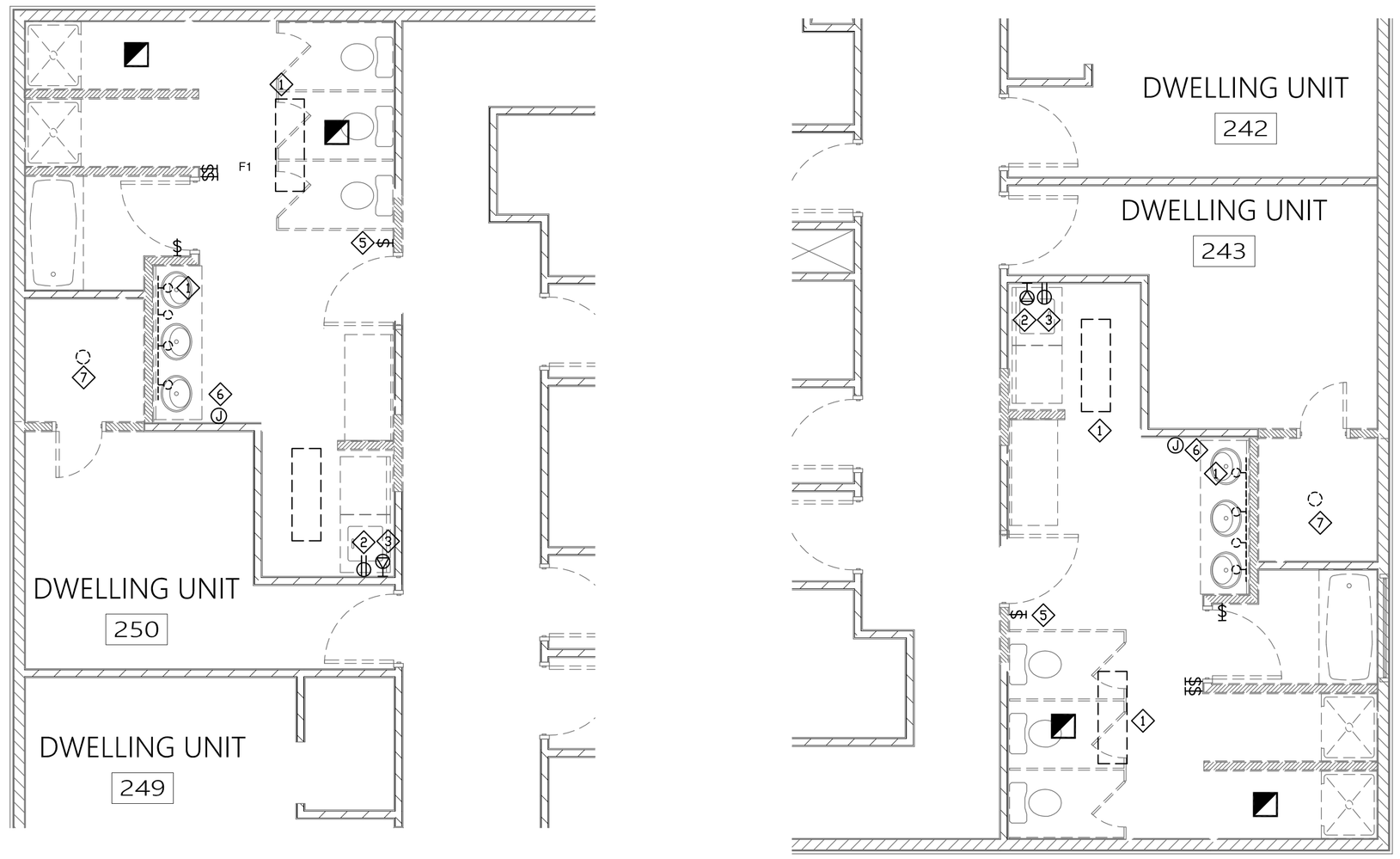
Project :
DVIP Restroom Remodel
IOWA CITY , IOWA

Project number: 15.42

Issue date:	Description
JAN 26, 2016	BID DOCUMENTS

Sheet Title:
DETAILS & SCHEDULES

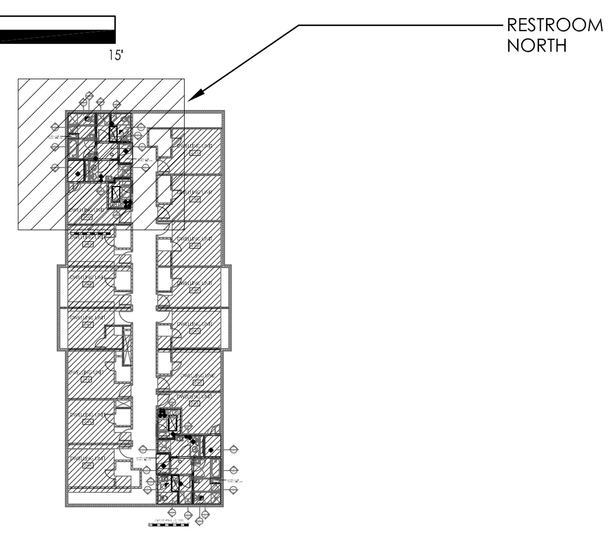
Sheet Number:
A-501



A E01 RESTROOMS - ELECTRICAL DEMOLITION PLAN

SCALE 1/4" = 1' - 0"

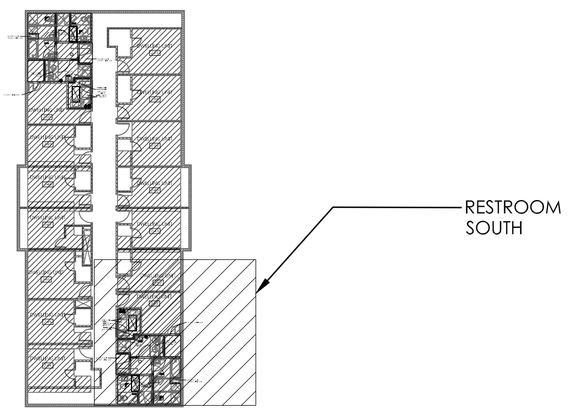
0' 5' 10' 15'



KEY PLAN - SECOND FLOOR

SCALE: NTS

N



KEY PLAN - SECOND FLOOR

SCALE: NTS

N

LIGHTING CONTROLS	
SYMBOL	DESCRIPTION
~~\$~~	SINGLE POLE (LOWER CASE LETTER INDICATES SWITCH LEG)
~~\$~~ 3	THREE WAY
~~\$~~ D	DIMMER
S	INFARED SENSOR
S_U	ULTRASONIC SENSOR

LIGHTING FIXTURES	
SYMBOL	DESCRIPTION
F1 — FIXTURE TYPE 23-1 — CIRCUIT-RELAY a — CONTROL DEVICE	
EM	FIXTURE ON EMERGENCY BATTERY BACKUP
	SURFACE MOUNTED FIXTURE
	RECESSED MOUNTED FIXTURE
	EXIT SIGN - FACES AND ARROWS AS SHOWN
	BATTERY PACK EMERGENCY LIGHTING
J	JUNCTION BOX
F V	VISUAL ALARM

X	ELECTRICAL KEYED NOTES
1	EXISTING LIGHT FIXTURE TO BE REMOVED. MAINTAIN EXISTING CIRCUIT TO FEED NEW LIGHTS (TYPICAL).
2	EXISTING DRYER RECEPTACLE TO REMAIN ..
3	EXISTING WASHER RECEPTACLE TO REMAIN.
4	EXISTING SMOKE DETECTOR TO REMAIN.
5	EXISTING SWITCH TO BE REMOVED (TYPICAL).
6	EXISTING HAND DRYER TO BE REMOVED. REUSE SAME CIRCUIT TO SERVE GFI RECEPTACLE TO INSTALLED IN THE SAME LOCATION. REFERENCE SHEET E02.
7	RELOCATE EXISTING FIXTURE TO THIS LOCATION. REFERENCE SHEET E02 FOR NEW LOCATION. REUSE EXISTING CIRCUIT.

GENERAL ELECTRICAL DEMOLITION NOTES:

1. E.C. SHALL VERIFY THE EXISTING CONDITIONS AT THE PROJECT SITE BEFORE SUBMITTING COST PROPOSAL.
2. THE E.C. SHALL VISIT THE SITE TO VERIFY DEVICES AND EQUIPMENT NOT SHOWN.
3. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN DEMOLITION REMOVAL, CAPPING, ABANDONING, DISCONNECTING OF EXISTING ELECTRICAL EQUIPMENT AND MATERIAL. ALL CUTTING, PATCHING, REPAIRING, REPLACEMENT AND REFINISHING, SHALL MATCH THE EXISTING CONSTRUCTION AS NEARLY AS POSSIBLE.
4. THE OWNER SHALL HAVE THE FIRST CHOICE TO ACCEPT EXISTING DEVICES AND EQUIPMENT BEING REMOVED AND NOT REUSED.

Architect:

Thomas McInerney
ARCHITECT
319.331.0365
1208 Marcy Street Iowa City, Iowa 52240
www.thomasarchitect.com
thomas@thomasarchitect.com

Consultants:

INNOVATIVE ENGINEERS, INC.
2871 Heinz Rd. Suite B, Iowa City, IA 52240
T 319.855.4115 I F 319.351.0070
www.innovativeengineersinc.com

Project :

DVIP Restroom Remodel

IOWA CITY , IOWA

Project number: 15.42

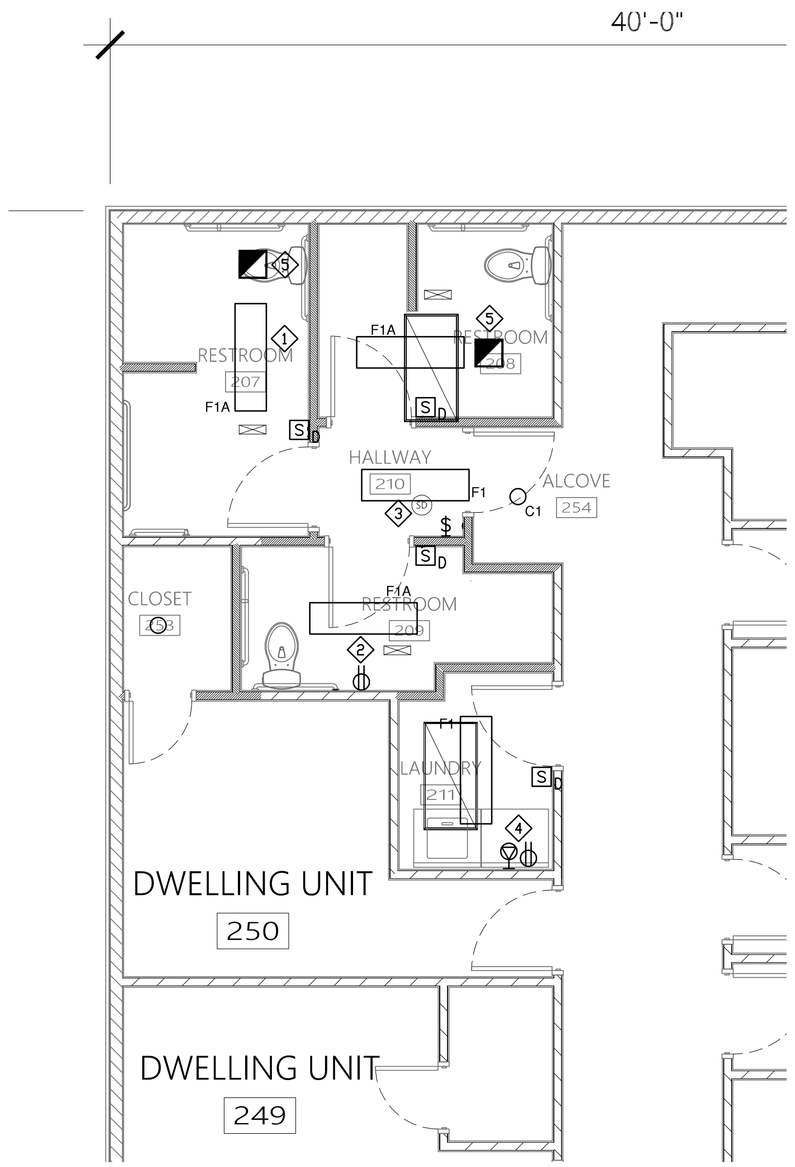
Issue date:	Description
JAN. 26, 2016	BID DOCUMENTS

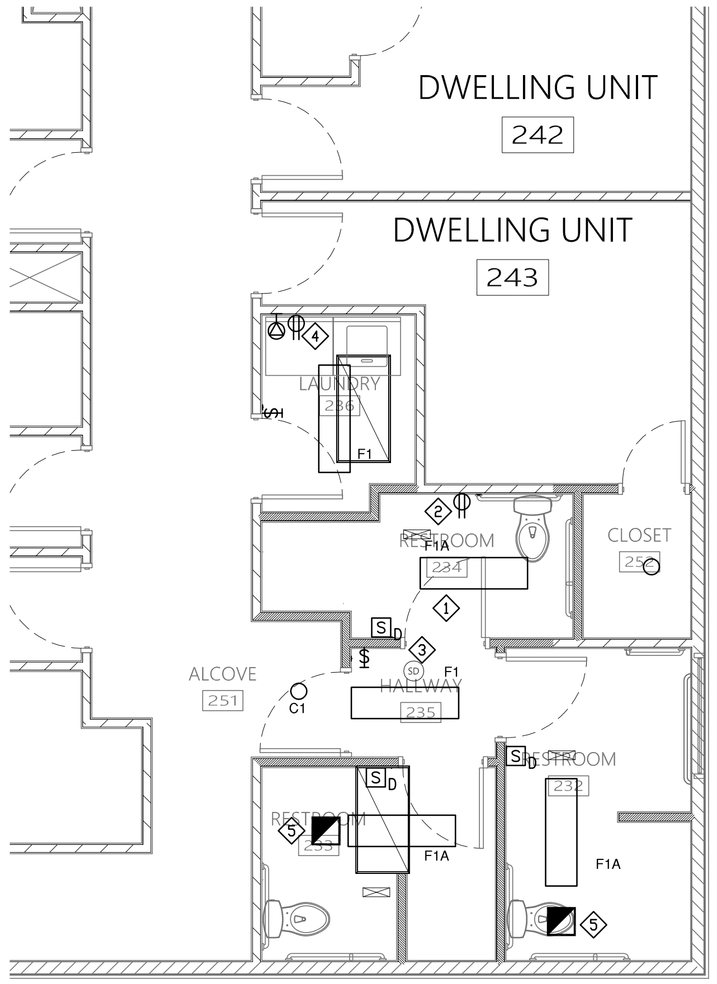
Sheet Title:

ELECTRICAL -DEMOLITION WORK

Sheet Number:

E01

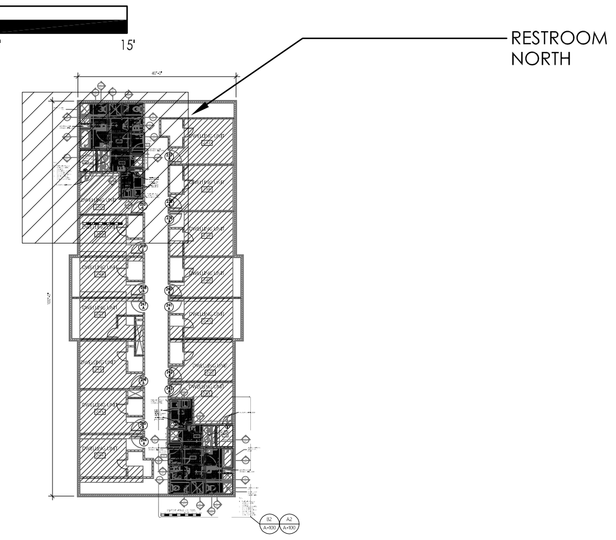




A E01 RESTROOMS - ELECTRICAL NEW PLAN

SCALE 1/4" = 1'-0"

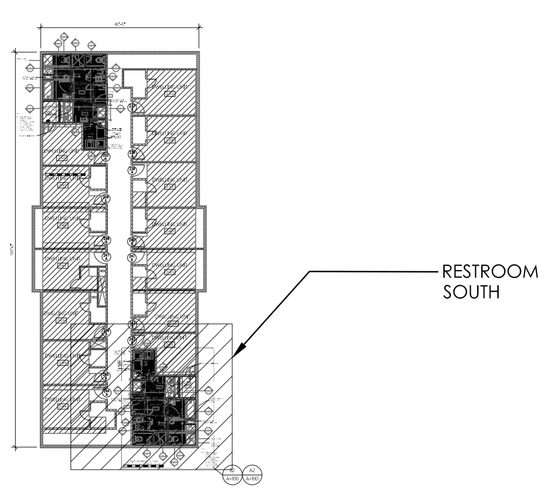
0' 5' 10' 15'



KEY PLAN - SECOND FLOOR

SCALE: NTS

N



KEY PLAN - SECOND FLOOR

SCALE: NTS

N

LIGHTING CONTROLS	
SYMBOL	DESCRIPTION
~~S~~	SINGLE POLE (LOWER CASE LETTER INDICATES SWITCH LEG)
~~S~~ 3	THREE WAY
~~S~~ D	DIMMER
S	INFARED SENSOR
S_U	ULTRASONIC SENSOR
S_D	WALL MOUNTED DUAL TECHNOLOGY SENSOR

LIGHTING FIXTURES	
SYMBOL	DESCRIPTION
F1 — FIXTURE TYPE 23-1 — CIRCUIT-RELAY a — CONTROL DEVICE	
EM	FIXTURE ON EMERGENCY BATTERY BACKUP
	SURFACE MOUNTED FIXTURE
	RECESSED MOUNTED FIXTURE
	EXIT SIGN - FACES AND ARROWS AS SHOWN
	BATTERY PACK EMERGENCY LIGHTING
J	JUNCTION BOX

X	ELECTRICAL KEYED NOTES
1	PROVIDE NEW LIGHT FIXTURES AS SHOWN (REFER TO LIGHT FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION). CONNECT FIXTURE TO EXISTING LIGHTING CIRCUIT. TIE EXHAUST FAN (NOT SHOWN) TO LIGHT FIXTURE SWITCH(TYPICAL).
2	PROVIDE NEW GFI RECEPTACLE. REUSE EXISTING CIRCUIT FROM REMOVED HAND DRYER.
3	EXISTING SMOKE DETECTOR TO REMAIN.
4	EXISTING WASHER AND DRYER ELECTRICAL OUTLETS TO REMAIN.
5	EXHAUST FAN TO BE PROVIDED BY M.C. IN THE SAME LOCATION AS EXISTING FAN. PROVIDE FINAL CONNECTIONS.

GENERAL ELECTRICAL NOTES:

1. ALL BRANCH CIRCUITS SHALL HAVE GROUND CONDUCTORS.
2. PROVIDE SEPARATE NEUTRAL FOR EACH BRANCH CIRCUIT PHASE CONDUCTOR.
3. NON-METALLIC SHEATHED CABLE(NM & NMC) IS ALLOWED AS PERMITTED PER NEC REGULATIONS AND LOCAL AUTHORITY HAVING JURISDICTION.
4. EXISTING POWER, LIGHTING, AND CIRCUITRY NOT SHOWN ON DRAWING IS TO REMAIN.
5. EXIT LIGHTS AND EMERGENCY LIGHTS TO BE FED FROM UNSWITCHED LIGHTING CIRCUIT.

Architect:

Thomas McInerney
ARCHITECT
319.331.0365
1208 Marcy Street Iowa City, Iowa 52240
www.thomasarchitect.com
thomas@thomasarchitect.com

Consultants:

INNOVATIVE ENGINEERS, INC.
2871 Heinz Rd. Suite B, Iowa City, IA 52240
T 319.855.4115 I F 319.351.0070
www.innovativeengineersinc.com

Project :

DVIP Restroom Remodel

IOWA CITY , IOWA

Project number: 15.42

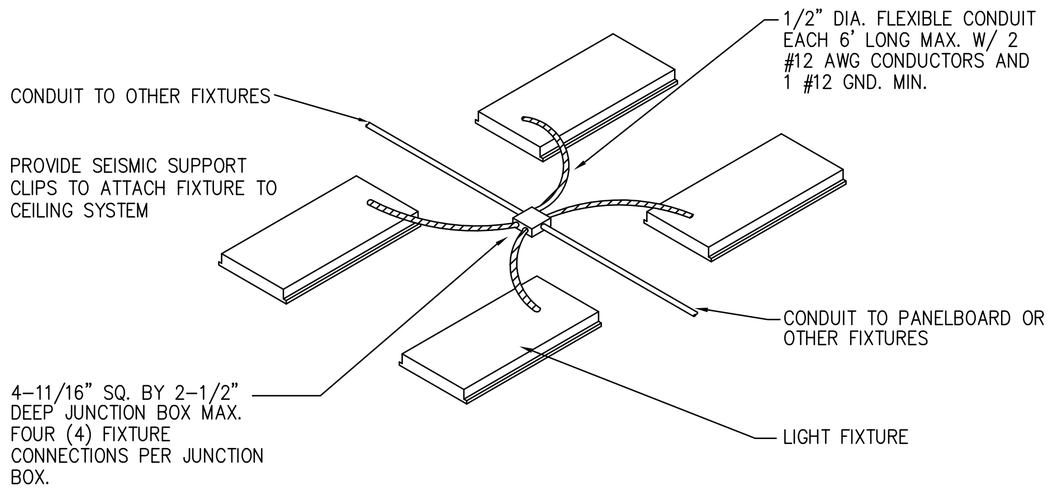
Issue date:	Description
JAN. 26, 2016	BID DOCUMENTS

Sheet Title:

ELECTRICAL -NEW WORK

Sheet Number:

E02



NOTE:
RECESSED FLUORESCENT CAN LIGHTING AND HID LIGHTING TO BE WIRED IN ACCORDANCE WITH THIS DETAIL.

A/E03 TYPICAL RECESSED LIGHT FIXTURE WIRING DETAIL

NO SCALE

LIGHTING FIXTURE SCHEDULE

MARK	FIXTURE		VOLT.	LAMP		MOUNTING		MANUFACTURER		REMARKS
	TYPE	DIFFUSER		# & WATTS	TYPE	TYPE	HT.	NAME	SERIES NO.	
F1	WRAPAROUND	N/A	120	LED 4000 LUMN	LED 30K	SURFACE	CEILG.	DAYBRITE WILLIAMS	OWL 17	4' LONG
F1A	WRAPAROUND	N/A	120	LED 4000 LUMN	LED 30K	SURFACE	CEILG.	DAYBRITE WILLIAMS	OWL 17	PROVIDE EMERGENCY BALLAST 4' LONG
C1	6" DOWNLIGHT	OPEN	120	2000 LUM	LED 40K	RECESS.	CEILG.	LIGHTOLIER WILLIAMS	C6L20 EQUAL	

ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR TRIM TYPES, COORDINATE WITH REFLECTED CEILING PLANS

GENERAL ELECTRICAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (N.E.C.) AND GOVERNING MUNICIPAL, STATE AND LOCAL CODES. ALL MATERIAL SHALL BE NEW AND SHALL BEAR THE U.L. LABEL WHERE APPLICABLE.
2. CONTRACTOR SHALL MAKE ALL NECESSARY, CUTTING AND DO ALL THE REPATCHING AS NECESSARY FOR THE PROPER EXECUTION OF THIS WORK.
3. AFTER COMPLETION OF THE INSTALLATION, THE SYSTEM SHALL TEST FREE FROM SHORT CIRCUITS AND GROUNDS.
4. WHERE ELECTRICAL CONDUCTORS ARE INSTALLED IN CONDUIT, THE CONDUIT SHALL COMPLY WITH THE N.E.C. REQUIREMENTS.
5. ALL CONDUCTOR SHALL BE COPPER. NO CONDUCTOR SHALL BE SMALLER THAN #12 AWG AND SHALL BE RATED FOR 600VOLTS THWN OR THHN INSULATION. INSTALL A GROUNDING CONDUCTOR WITH ALL CIRCUITS, UNLESS NOTED OTHERWISE, SIZED PER N.E.C.250-122.
6. VERIFY BREAKER AND CORRESPONDING WIRE SIZES FOR ALL ELECTRICAL EQUIPMENT. DONOT ORDER MATERIAL BEFORE VERIFYING BREAKER & WIRE SIZE. REPORT ANY DISCREPANCY IMMEDIATELY TO THE ENGINEER OF RECORD.
7. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
8. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY THE OWNER.
9. ALL BRANCH CIRCUITS SHALL HAVE GROUND CONDUCTORS.
10. THE ELECTRICAL CONTRACTOR SHALL PROVIDE, IF REQUIRED, ADJUSTMENTS (±) 6'-0" IN THE LOCATION OF ALL SYSTEM DEVICES, FIXTURES, OUTLETS, PANELS, ETC. IN ORDER TO EXPEDITE THE ELECTRICAL WORK. THE POSITION OF ALL WORK AS SHOWN IS INTENDED TO BE FIXED AND IN THE PROPER LOCATION. SUCH REQUIRED ADJUSTMENT SHALL BE DETERMINED BY THE A/E.
11. PROVIDE SEPARATE NEUTRAL FOR EACH BRANCH CIRCUIT PHASE CONDUCTOR.

Architect:

Thomas McInerney
ARCHITECT
319.331.0365
1208 Marcy Street Iowa City, Iowa 52240
www.thomasarchitect.com
thomas@thomasarchitect.com

Consultants:

IEI INNOVATIVE ENGINEERS, INC.
2871 Heinz Rd. Suite B, Iowa City, IA 52240
T 319.855.4115 I F 319.351.0070
www.innovativeengineersinc.com

Project :

DVIP Restroom Remodel

IOWA CITY , IOWA

Project number: 15.42

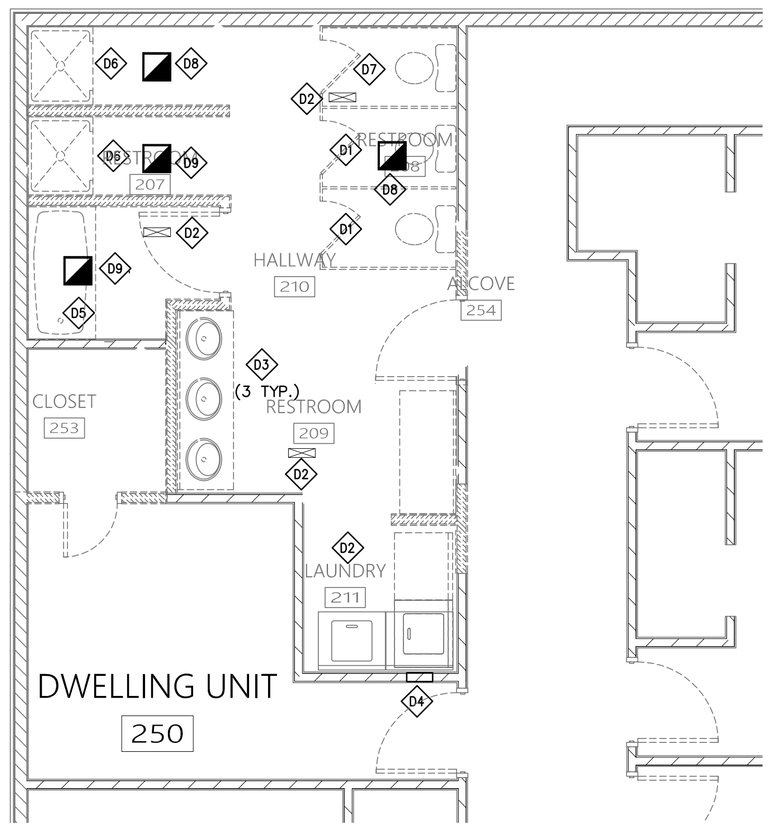
Issue date:	Description
JAN. 26, 2016	BID DOCUMENTS

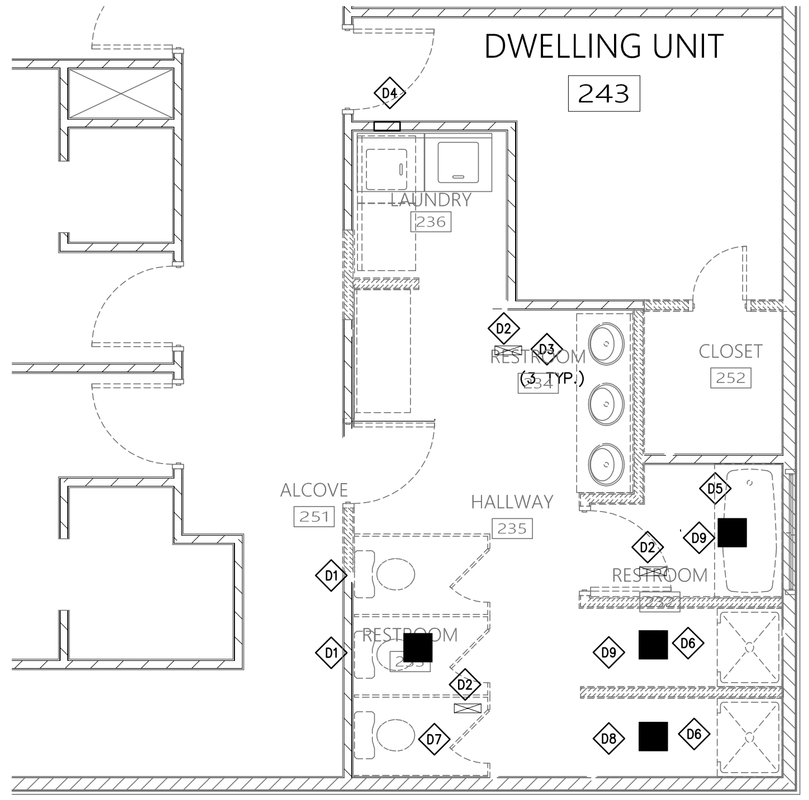
Sheet Title:

ELECTRICAL - NOTES & DETAILS

Sheet Number:

E03





1 P01 PLUMBING DEMOLITION PLAN - NORTH

SCALE 1/4" = 1' - 0"

0' 5' 10' 15'

2 P01 PLUMBING DEMOLITION PLAN - SOUTH

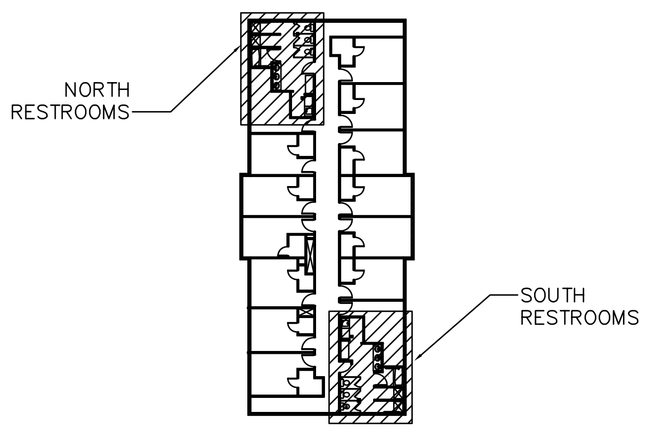
SCALE 1/4" = 1' - 0"

0' 5' 10' 15'

Dx	PLUMBING DEMOLITION KEYED NOTES
D1	REMOVE EXISTING FLOOR-MOUNTED WATER CLOSET AND ASSOCIATED PIPING BACK TO MAIN.
D2	SUPPLY AIR DIFFUSER TO REMAIN.
D3	REMOVE EXISTING COUNTER-MOUNTED LAVATORIES AND ASSOCIATED PIPING BACK TO MAIN.
D4	WASHING MACHINE UTILITY BOX AND ASSOCIATED PIPING TO REMAIN.
D5	REMOVE EXISTING BATH TUB, ASSOCIATED PIPING TO REMAIN.
D6	REMOVE EXISTING SHOWERS, VALVES AND SHOWER DRAIN AND ASSOCIATED PIPING BACK TO MAIN.
D7	REMOVE EXISTING FLOOR MOUNTED WATER CLOSET, EXISTING PIPING SHALL REMAIN TO SERVE NEW WATER CLOSET.
D8	EXHAUST FAN TO BE REMOVED. EXHAUST DUCT TO REMAIN TO SERVE NEW FAN TO BE INSTALLED IN THE SAME LOCATION.
D9	EXHAUST FAN TO BE REMOVED. CAP ASSOCIATED DUCT.

DEMOLITION NOTES:

1. CONTRACTOR SHALL BE REPONSIBLE FOR ENSURING ANY ITEM INDICATED TO BE SALVAGED FOR REUSE OR TURNED OVER TO OWNER, IS NOT DAMAGED DURING REMOVAL OR RELOCATION.
   - A. OWNER SHALL HAVE FIRST RIGHT OF SALVAGE FOR ALL SALVAGEABLE DEMOLITION ITEMS.
   - B. ITEMS INDICATED TO BE REMAIN THAT ARE INADVERTENTLY REMOVED OR DAMAGED SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
   - C. VERIFY WITH OWNER'S REPRESENTATIVE PRIOR TO DISPOSAL OF SALVAGEABLE DEMOLITION ITEMS.
   - D. SALVAGEABLE DEMOLITION ITEMS DECLINED BY OWNER SHALL BE REMOVED FROM PREMISES AND DISPOSED OF PROPERLY.
3. THIS DRAWING DOES NOT LIMIT EXTENT OF OF REQUIRED DEMOLITION WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION WORK REQUIRED TO COMPLETE WORK INDICATED.
   - A. DISCONNECT AND CAP SERVICES PRIOR TO REMOVING EQUIPMENT.
   - B. REMOVE PORTION OF PIPING OR INDICATED TO BE REMOVED AND CAP PIPING TO REMAIN WITH SAME OR COMPATIBLE MATERIAL.
   - C. REMOVE ANY PIPES PROTRUDING ABOVE FINISHED FLOOR OR THROUGH WALL AND CAP AND FINISH OVER WITH MATERIAL TO MATCH EXISTING.
   - D. REMOVE ALL FIXTURES, CARRIERS, SUPPLY & WASTE & VENT PIPING AS NOTED. CAP AT NEAREST ACTIVE MAIN. SUPPLY & RETURN MAINS TO BE VALVED & CAPPED. VALVES AND CAP ALL CONTROL AIR LINES AT MAIN.
   - E. IN REMODELED/ALTERED AREAS ANY PIPING PASSING THROUGH REMODELED AREAS TO SERVE (OR BEING SERVED FROM EXISTING ADJACENT, REMOTE, OR SURROUNDING AREA THAT ARE TO REMAIN) SHALL BE RETAINED AND KEPT OPERATIONAL AND SHALL BE REROUTED IN ALL CASES WHERE THEY INTERFERE WITH ANY NEW WORK OR USAGE TO BE ACCOMPLISHED IN REMODELED AREA.
   - F. ALL COMPONENTS NEED TO BE REMOVED IN THE DEMOLITION AREA UNLESS NOTED ON THE DRAWINGS.
   - G. PENETRATIONS THROUGH EXISTING WALLS AND FLOORS FORMERLY OCCUPIED BY REMOVED PIPING SHALL BE PATCHED TO MATCH EXISTING CONSTRUCTION.
   - H. ALL CUTTING, PATCHING, REPAIRING, REPLACEMENT AND REFINISHING SHALL MATCH EXISTING CONSTRUCTION AS NEARLY AS POSSIBLE.
   - I. ALL SURFACES AND INSULATION (PIPING AND/OR EQUIPMENT) DISTURBED OR EXPOSED DURING DEMOLITION SHALL BE PATCHED AND REPAIRED TO MATCH ADJACENT SURFACES.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN DEMOLITION, REMOVAL, CAPPING, STORING, ABANDONING, DISCONNECTING, RELOCATING, AND RECONNECTION OF EXISTING EQUIPMENT AND MATERIAL.
5. CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS TO FAMILIARIZE WITH EXTENT OF ALTERATION/REMODELING WORK AND MORE SPECIFICALLY NOT WHERE NEW PARTITIONING IS BEING INSTALLED, WHERE EXISTING PARTITIONING IS BEING REMOVED, WHERE CEILINGS ARE BEING REMOVED AND OR REPLACED, ETC.. VERIFY WITH ARCHITECT PRIOR TO MODIFICATION OR REMOVAL OF ANY STRUCTURAL ELEMENTS, COLUMNS, BEAMS, LINTELS, BEARING WALLS, CUTTING OF FLOOR OPENINGS, ETC..



KEY PLAN - SECOND FLOOR

SCALE: NTS

N

Architect:

Thomas McInerney
ARCHITECT
319.331.0365
1208 Marcy Street Iowa City, Iowa 52240
www.thomasarchitect.com
thomas@thomasarchitect.com

Consultants:

IEI INNOVATIVE ENGINEERS, INC.
2871 Heinz Rd. Suite B, Iowa City, IA 52240
T 319.855.4115 I F 319.351.0070
www.innovativeengineersinc.com

Project :

DVIP Restroom Remodel

IOWA CITY , IOWA

Project number: 15.42

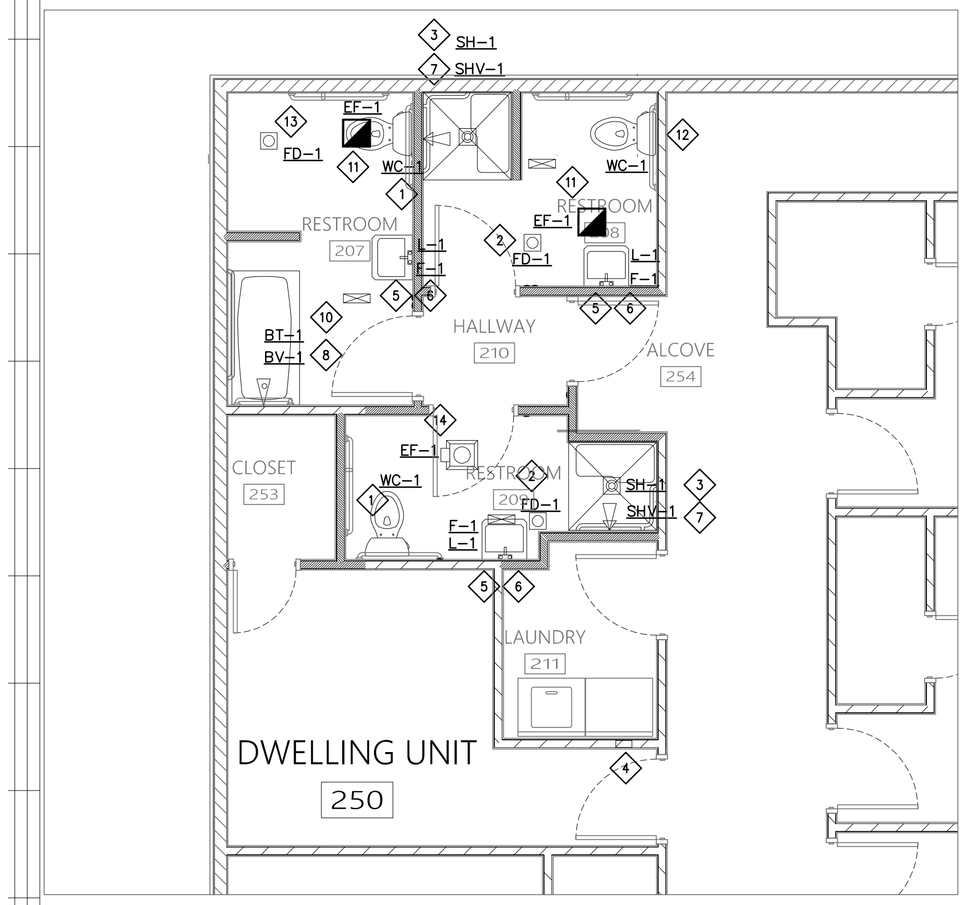
Issue date:	Description
JAN. 26, 2016	BID DOCUMENTS

Sheet Title:

PLUMBING DEMOLITION PLANS

Sheet Number:

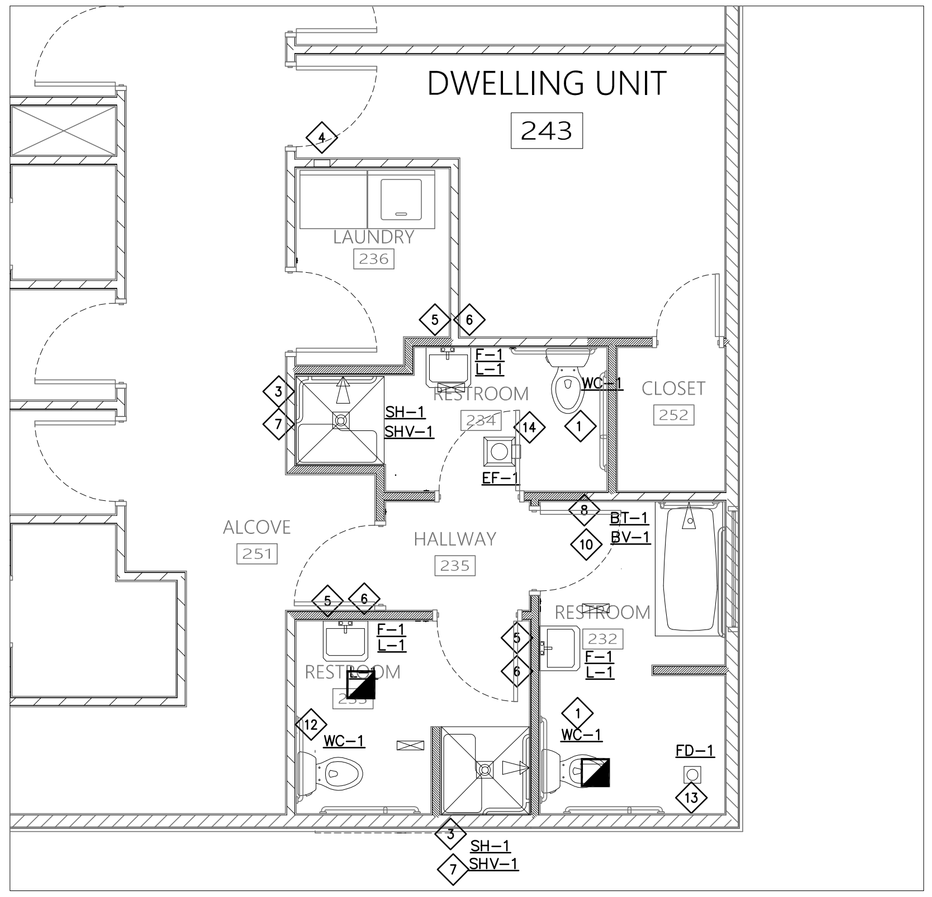
P01



1 P02 PLUMBING & VENTILATION PLAN - NORTH

SCALE 1/4" = 1' - 0"

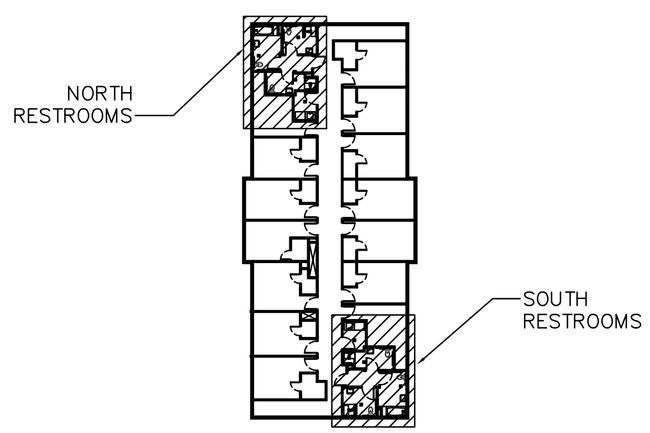
0' 5' 10' 15'



2 P02 PLUMBING & VENTILATION PLAN -SOUTH

SCALE 1/4" = 1' - 0"

0' 5' 10' 15'



KEY PLAN - SECOND FLOOR

SCALE: NTS

N

GENERAL NOTES:

1. CONTRACTOR IS ADVISED THAT ALL LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS AT PROJECT SITE.
2. IT IS MANDATORY THAT EXISTING BUILDING REMAIN IN CONTINUOUS & NON-INTERRUPTED OPERATION DURING REMODELING/ALTERING OF EXISTING BUILDING SPECIFIC AREA(S) BEING REMODELED/ALTERED AT ANY SCHEDULED TIME ARE OBVIOUSLY EXCLUSIVE OF THIS STATEMENT. SERVICES TO EXISTING BUILDING SHALL BE KEPT ON CONTINUOUS OPERATION INCLUDING DOMESTIC WATER, SANITARY, STORM, STEAM, HEATING, HOT WATER, HVAC SUPPLY, RETURN & EXHAUST, ETC. ANY ABSOLUTELY NECESSARY INTERRUPTION OF THESE SERVICES TO ACCOMPLISH PROJECT CONSTRUCTION SHALL BE ARRANGED WITH OWNER MINIMUM OF TWO (2) WEEKS IN ADVANCE. TEMPORARY SERVICES SHALL BE FURNISHED AND INSTALLED WHERE NECESSARY TO ACCOMPLISH THIS PURPOSE. TEMPORARIES SHALL BE REMOVED ONLY AFTER NEW PERMANENT SERVICES ARE INSTALLED AND FULLY OPERATIONAL.

PLUMBING NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH FEDERAL, STATE, AND CITY CODES, ORDINANCES, AND STANDARDS.
2. CONTRACTOR SHALL PAY ALL PERMIT FEES, PLAN REVIEW FEES, LICENSE FEES, INSPECTIONS AND TAXES APPLICABLE AND INCLUDED BID.
3. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND TOOLS FOR COMPLETE INSTALLATION OF ALL WORK SHOWN ON PLANS AND/OR DESCRIBED HEREIN, INCLUDING ALL DEVICES, CONTROLS AND APPURTENANCES REQUIRED TO SET NEW SYSTEMS INTO OPERATION.
4. AN ATTEMPT HAS BEEN MADE TO SHOW ALL LIMITS OF REQUIRED WORK. CONTRACTOR SHALL VISIT THE SITE TO VERIFY COMPONENTS, LOCATIONS AND SIZES SHOWN OR NOT SHOWN.
7. CONTRACTOR SHALL VERIFY ALL MOUNTING, ALL ARRANGEMENTS, HEIGHTS AND LOCATIONS PRIOR TO ROUGH-IN. ANY MENTION OF SPECIFIC MOUNTING ARRANGEMENT, HEIGHT OR LOCATION SHALL NOT RELIEVE CONTRACTOR OF RESPONSIBILITY TO VERIFY SPECIFIC REQUIREMENT FURNISHED OR OTHER TRADES WORKING IN THE SAME AREA. NO ADDITIONS TO CONTRACT SUM WILL BE PERMITTED FOR ITEMS INSTALLED IN WRONG LOCATIONS, IN CONFLICT WITH OTHER WORK, ETC.
8. THESE DRAWINGS ARE NECESSARILY DIAGRAMMATIC IN NATURE. NOT ALL FITTINGS, OFFSETS, VENTS, OR DRAINS ARE SHOWN,
   - A. CONTRACTOR SHALL INCLUDE ALL FITTINGS, OFFSETS, VENTS, AND DRAINS AS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONING SYSTEM.
   - B. PIPING SHALL NOT BE ROUTED OVER ELECTRICAL PANELS, ELECTRICAL EQUIPMENT, OR IN CODE REQUIRED CLEARANCE SPACES.
   - C. SAWCUT AND REMOVE FLOOR AS REQUIRED FOR INSTALLATION OF NEW PIPING.
   - D. PROVIDE WALL AND FLOOR MOUNTED SEWER CLEANOUTS AS REQUIRED BY CODE.
   - E. LOCATE PLUMBING VENTS THROUGH ROOF MINIMUM OF 10'-0" AWAY FROM ALL OUTDOOR AIR INTAKES OR OPERABLE WINDOWS.
9. SHOULD CONDITIONS NECESSITATE ANY REARRANGEMENTS, OR IF PIPING CAN BE RUN TO BETTER ADVANTAGE, PREPARE AND SUBMIT SHOP DRAWINGS SHOWING CHANGES BEFORE PROCEEDING WITH WORK. IF SUCH CHANGES ARE APPROVED BY ARCHITECT/ENGINEER, THEY SHALL BECOME A PART OF CONTRACT AFTER THEIR APPROVAL.
10. UPON COMPLETION OF WORK, CONTRACTOR SHALL REVIEW AND CHECK ENTIRE PORTION OF WORK, CLEAN EQUIPMENT AND DEVICES, REMOVE SURPLUS MATERIALS AND RUBBISH FROM OWNER'S PROPERTY, LEAVING WORK IN NEAT AND CLEAN ORDER; AND IN COMPLETE WORKING CONDITION. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ANY PACKING MATERIALS, DEBRIS, ETC., AND FOR EQUIPMENT INSTALLED BY CONTRACTOR INCLUDING EQUIPMENT FURNISHED BY OWNER OR EQUIPMENT FURNISHED BY OTHERS.
11. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING DELIVERY, RECEIVING, UNLOADING, UNPACKING, STORING, SETTING IN PLACE, AND PROTECTING FROM DAMAGE, VANDALISM, THEFT OR WEATHER DURING CONSTRUCTION FOR ALL NEW EQUIPMENT FURNISHED BY CONTRACTOR.
12. DO ALL CUTTING AND PATCHING OF BUILDING MATERIALS AS REQUIRED FOR INSTALLATION OF COMPLETE AND WORKABLE SYSTEM. PATCHING SHALL MATCH EXISTING FINISHES AND CONSTRUCTION TO GREATEST POSSIBLE EXTENT.
13. IN AREAS WITH UNFINISHED CEILINGS, PIPING SHALL BE RUN ALONG THE UNDERSIDE OF SUPPORT JOIST OR STRUCTURAL MEMBERS. PIPING SHOULD BE GENERALLY HIDDEN AS MUCH AS POSSIBLE. THEREFORE, IT SHOULD BE LOCATED ABOVE STRUCTURAL MEMBERS OR ALONG TOP SIDE OF STRUCTURAL FLANGES.
14. ENGINEER RESERVES RIGHT TO CHANGE LOCATION OF ALL EQUIPMENT AND PIPING FIVE FEET IN ANY DIRECTION WITHOUT THESE CHANGES BEING MADE SUBJECT OF AN EXTRA CHARGE PROVIDED SUCH CHANGES ARE MADE BEFORE FINAL INSTALLATION.
15. ALL MATERIALS SHALL BE NEW AND FREE OF NOTICEABLE DEFECT.
16. ISOLATE COPPER PIPE FROM HANGER OR SUPPORTS WITH ISOLATOR PAD.
17. ALL FIRE RATED FLOOR AND WALL PENETRATIONS SHALL BE PROPERLY PROTECTED FROM FIRE, SMOKE AND WATER PENETRATION BY FILLING VOIDS BETWEEN PIPE AND WALL/FLOOR SLEEVES WITH FIRE RATED FOAM, TO ACHIEVE THE SAME RATING AS WALLS OR FLOORS.
18. PROVIDE MEANS OF RESEALING ALL FLOOR DRAINS.
19. SHUTOFF VALVE(S) SHALL BE INSTALLED ON WATER SUPPLY PIPE TO EACH APPLIANCE OR MECHANICAL EQUIPMENT.
20. PROVIDE ACCESS PANELS TO ALLOW ACCESS AND MAINTENANCE WHEREVER VALVES NEED TO BE INSTALLED ABOVE HARD CEILINGS

◇	PLUMBING KEYED NOTES
1	INSTALL NEW ADA ACCESSIBLE FLOOR-MOUNTED WATER CLOSET AND ASSOCIATED PIPING.
2	EXISTING FLOOR DRAIN TO REMAIN.
3	INSTALL NEW ADA ACCESSIBLE SHOWER INSERT AND CONNECT NEW PIPING TO DRAIN.
4	EXISTING LAUNDRY BOX AND ASSOCIATED PIPING TO REMAIN.
5	INSTALL NEW ADA LAVATORY AND ASSOCIATED PIPING WITH PREMOLDED PIPE WRAP ON EXPOSED PIPES.
6	INSTALL NEW ADA ACCESSIBLE LAVATORY FAUCET AND ASSOCIATED PIPING.
7	INSTALL NEW ADA ACCESSIBLE SHOWER VALVE AND ASSOCIATED PIPING.
8	INSTALL NEW ADA ACCESSIBLE BATH TUB.
9	NOT USED
10	INSTALL NEW ADA ACCESSIBLE COMBINATION TUB/ SHOWER VALVE AND ASSOCIATED PIPING.
11	REPLACE EXISTING FAN WITH NEW FAN. REUSE EXISTING EXHAUST DUCT. COORDINATE WITH E.C.
12	REPLACE EXISTING WATER CLOSET WITH NEW ADA FIXTURE. REUSE EXISTING LOCATION.
13	REUSE EXISTING SHOWER DRAIN AND PIPING FOR NEW FLOOR DRAIN.
14	PROVIDE NEW EXHAUST FAN AND EXHAUST DUCT. COORDINATE LOCATION WITH ELECTRICAL CONTRACTOR.

Architect:

Thomas McInerney
ARCHITECT
319.331.0365
1208 Marcy Street Iowa City, Iowa 52240
www.thomasarchitect.com
thomas@thomasarchitect.com

Consultants:

IEI INNOVATIVE ENGINEERS, INC.
2871 Heinz Rd. Suite B, Iowa City, IA 52240
T 319.855.4115 I F 319.351.0070
www.innovativeengineersinc.com

Project :

DVIP Restroom Remodel

IOWA CITY , IOWA

Project number: 15.42

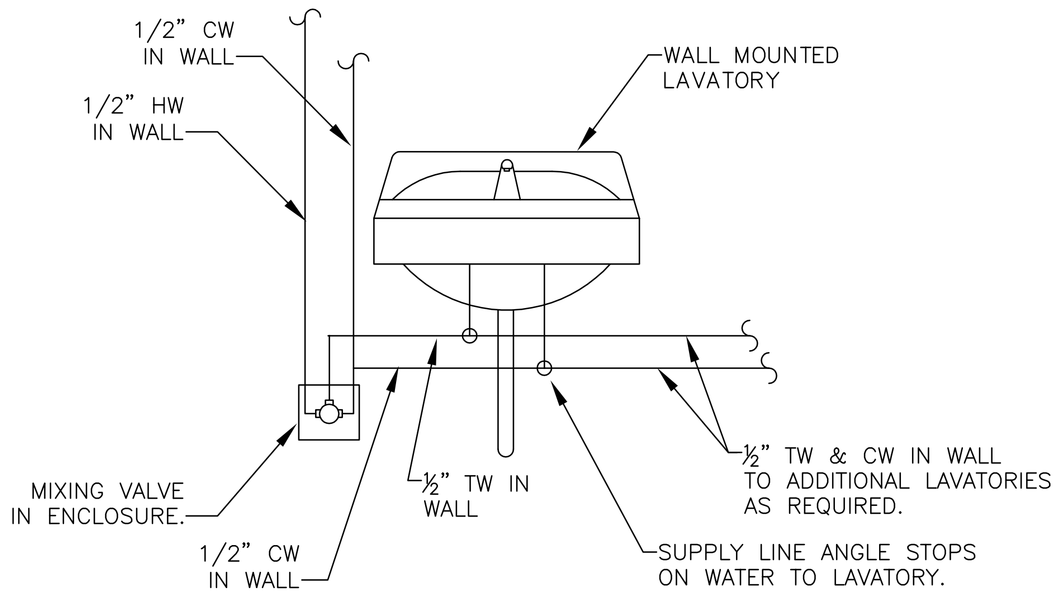
Issue date:	Description
JAN. 26, 2016	BID DOCUMENTS

Sheet Title:

PLUMBING PLANS

Sheet Number:

P-2



1 LAVATORY MIXING VALVE DETAIL
NO SCALE

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	DESCRIPTION	WASTE	TRAP	VENT	CW	HW	BASIS OF DESIGN MANUFACTURER & MODEL	SPEC SECTION	MOUNTING HEIGHT	COMMENTS
WC-1	FLOOR-MOUNTED WATER CLOSET, ADA	4"	INTEGRAL	2"	1-1/4"	-	KOHLER K-3979	22 40 00 PARAGRAPH 2.01	17" AFF TO RIM	BEMIS 3155C ANTI-MICROBIAL SEAT
SH-1	FIBERGLASS SHOWER INSERT	2"	2"	1-1/2"	-	-	AQUARIUS G3698BF	22 40 00 PARAGRAPH 2.02	18" AFF TO SEAT	
SHV-1	SHOWER VALVE	-	-	-	3/4"	3/4"	MOEN 8342	22 40 00 PARAGRAPH 2.03	38"-48" AFF TO CONTROLS	
L-1	WALL-MOUNTED LAVATORY, ADA	1-1/2"	1-1/2"	1-1/2"	-	-	KOHLER K-2007	22 40 00 PARAGRAPH 2.05	29"-34" AFF TO RIM	
F-1	LAVATORY FAUCET	N/A	N/A	N/A	1/2"	1/2"	MOEN 8417	22 40 00 PARAGRAPH 2.06		PROVIDE WATTS LFL1170 MIXING VALVE
FD-1	FLOOR DRAIN	2"	2"	1-1/2"	-	-	ZURN Z-415	22 40 00 PARAGRAPH 2.07		
BT-1	BATH TUB	2"	2"	1-1/2"	-	-	KOHLER K-505	22 40 00 PARAGRAPH 2.07		PROVIDE KOHLER K-7160 TUB DRAIN
BV-1	BATH TUB /SHOWEERVALVE	-	-	-	3/4"	3/4"	MOEN 8343	22 40 00 PARAGRAPH 2.07		

PIPE SCHEDULE

MARK	DESCRIPTION	PIPE MATERIAL	PIPE SPEC SECTION	PIPE INSULATION MATERIAL	PIPE INSULATION SPEC SECTION	COMMENTS
CW	DOMESTIC COLD WATER	COPPER	22 10 05 PARAGRAPH 2.02	1" FLEXIBLE ELASTOMERIC CELLULAR INSULATION	22 07 19 PARAGRAPH 2.02	
HW	DOMESTIC HOT WATER	COPPER	22 10 05 PARAGRAPH 2.02	1" FLEXIBLE ELASTOMERIC CELLULAR INSULATION	22 07 19 PARAGRAPH 2.02	
V	VENT	MATCH SYSTEM PIPE	-	-	-	
SAN	SANITARY SEWER (DRAINS)	CAST IRON, COPPER, STEEL	22 10 05 PARAGRAPH 2.01	-	-	

EXHAUST FAN SCHEDULE

MARK	DESCRIPTION	CFM	STATIC (INCHES WATER)	ELECTRICAL VOLTAGE	ELECTRICAL AMPS	ELECTRICAL WATTS	SONES	COMMENTS
EF-1	CEILING EXHAUST FAN	80	0.25"	120V	0.1A	5.8W	<0.3 AT 80 CFM	NOTES 1, 2, 3

NOTES:
1. M.C. TO INSTALL FAN. FIELD VERIFY EXACT LOCATION.
2. ROUTE 6 " EXHAUST DUCT TO NEAREST SIDEWALL AND TERMINATE WITH MANUFACTURER SUPPLIED EXHAUST TERMINAL.
3. COORDINATE INSTALLATION WITH E.C.

Architect:

Thomas McInerney
ARCHITECT
319.331.0365
1208 Marcy Street Iowa City, Iowa 52240
www.thomasarchitect.com
thomas@thomasarchitect.com

Consultants:

IEI INNOVATIVE ENGINEERS, INC.
2871 Heinz Rd. Suite B, Iowa City, IA 52240
T 319.855.4115 I F 319.351.0070
www.innovativeengineersinc.com

Project :

DVIP Restroom Remodel

IOWA CITY , IOWA

Project number: 15.42

Issue date:	Description
JAN. 26, 2016	BID DOCUMENTS

Sheet Title:

PLUMBING SCHEDULES AND DETAILS

Sheet Number:

P-3

ADDENDUM NUMBER ONE

Date: February 16, 2016

Project: DVIP RESTROOM REMODELING PROJECT
Iowa City, Iowa

From: Thomas McInerney, Architect
1208 Marcy Street
Iowa City, Iowa 52240-3331
(319) 331 - 0365

To: Plan Holders

Bid Documents Original Date of Issue: January 26, 2016

The information contained in this Addendum modifies, supplements or replaces information contained in the Project Manual and on the Drawings and is hereby made a part of the Contract Documents. This addendum forms a part of the Contract Documents and modifies the original bidding documents issued January 26, 2016 as noted below.

Acknowledge receipt of this Addendum by placing the appropriate addendum number in the blank on the Bid Form.

ADDENDUM INDEX:

ATTACHMENT(S):

FP-1

CHANGES TO PRIOR ADDENDA: (NONE)

CHANGES TO BIDDING REQUIREMENTS:

ITEM #01 Replace in its entirety FP-1, FORM OF PROPOSAL, with the attached.

CHANGES TO CONDITIONS OF THE CONTRACT: (NONE)

CHANGES TO SPECIFICATIONS:

ITEM #02 Refer to SECTION 01 3000, ADMINISTRATIVE REQUIREMENTS

A. **CHANGE** article 3.03 to read as follows:

3.03 CONSTRUCTION PROGRESS SCHEDULE

ITEM #03 Refer to SECTION 01 7700, CLOSEOUT PROCEDURES

A. **DELETE** paragraph 3.07.C.

ITEM #04 Refer to SECTION 01 7800, CLOSEOUT SUBMITTALS

A. **CHANGE** paragraph 1.01.C to read as follows:

C. Warranties.

B. **DELETE** paragraph 3.07.C.

ITEM #05 Refer to SECTION 07 2129, SPRAYED INSULATION

A. **DELETE** Section in its entirety.

ITEM #06 Refer to SECTION 09 3000, TILING

A. **CHANGE** subparagraph 2.2.A.1.c to read as follows:

c. Surface Finishes: Plain.

ITEM #07 Refer to SECTION 09 9000, PAINTING AND COATINGS

A. **ADD** paragraphs 2.3.E and 2.3.F to read as follows:

E. Wood; 2 finish coats over primer:

1. Primer:

a. PPG: Pure Performance Interior Latex Primer 9-900.

b. Benjamin Moore: 046 BM Fresh Start All 100% Acrylic Superior Primer.

c. S-W: Premium Wall & Wood Primer B28 Series

d. Diamond Vogel: Mill Max Interior Latex Enamel Undercoat.

2. Finish Coat:

a. PPG: Pure Performance Interior Latex Eggshell 9-300.

b. Benjamin Moore: N374 Eco Spec WB Interior Latex Eggshell.

c. S-W: ProClassic WB Interior Acrylic Satin B20-1100 Series

d. Diamond Vogel: SureFlo Acrylic Satin Enamel.

F. Wood; 2 top clear coats over stain:

1. Stain:

a. PPG: Olympic Premium Wood Stain.

b. Benjamin Moore: Arborcoat Semi Solid Deck and Siding Stain (639).

c. S-W: Wood Classics Stain.

d. Diamond Vogel: Old Masters High Solids Penetrating Stain.

2. Clear Coat:

a. PPG: Olympic Premium Water-based Polyurethane.

b. Benjamin Moore: Benwood Stays Clear Acrylic Polyurethane

c. S-W: Wood Classics Waterborne Polyurethane Varnish.

d. Diamond Vogel: Old Masters Water-based Polyurethane.

CHANGES TO DRAWINGS:

ITEM #08 On SHEET A-101, Refer to the WALL SYMBOL LEGEND.

A. **DELETE** references to Spray Foam Insulation.

ITEM #09 On SHEET A-501, SCHEDULES & DETAILS, refer to the ABBREVIATION LEGEND under the ROOM FINISH SCHEDULE.

A. **CHANGE** the definition of "GYP" to read as follows:

GYP Remove existing gypsum ceiling finish and match finish and "orange peel" texture of existing walls. Paint ceiling, color "ceiling white" with semi-gloss sheen.

ITEM #10 On SHEET E01, ELECTRICAL - DEMOLITION PLANS, refer to ELECTRICAL KEYED NOTES.

A. **ADD** KEYNOTE 8 located at wall to be demolished in LAUNDRY to read as follows:

D10 Remove existing washing machine receptacle.

B. Locate Keynote 8 at wall to be demolished in LAUNDRY.

ITEM #11 On SHEET P01, PLUMBING DEMOLITION PLANS, refer to PLUMBING DEMOLITION KEYED NOTES.

A. **ADD** KEYNOTE 10 located at wall to be demolished in LAUNDRY to read as follows:

D10 Remove existing washing machine utility box and associated piping.

B. Locate Keynote 10 at wall to be demolished in LAUNDRY.

APPROVED SUBSTITUTIONS SCHEDULE:

See the Project Manual for conditions and definitions of Product Substitutions.

Section #	Specified Item	Approved Substitution
09 90 00.2.1	Paint Manufacturer	Diamond Vogel
22 40 00.2.08	Shower Valve (SV-1)	Bradley, HN300
22 40 00.2.01.D	Water Closet Seats	Comfort Seats, C108CAM

END OF ADDENDUM

FORM OF PROPOSAL

DVIP Restroom Remodeling Project

Name of Bidder: _____

Address of Bidder: _____

BIDS RECEIVED BEFORE: **2:30 PM local time on February 19, 2016**

TO: Office of the Domestic Violence Intervention Program (DVIP)
1105 S. Gilbert Ct., Suite 300
Iowa City, Iowa, 52240

In response to your request for bids, and in compliance with the Procurement and Contracting Requirements, the undersigned proposes to furnish all labor, materials and equipment, all supervision, coordination, and all related incidentals necessary to perform the work to complete **DVIP Restroom Remodeling Project** in strict accordance with the Project Manual and the Drawings dated January 26, 2016 including Addenda numbered _____, _____ and _____, inclusive, prepared by Thomas McInerney Architect, for the Base Bid Lump Sum of :

BASE BID	**TOTAL PRICE**
1. Work associated Bid Package	$_____
2. Contingency Allowance	$ 3,000
TOTAL BASE BID	$_____ (Sum of items 1 and 2)

TOTAL BASE BID (Sum of items 1, 2, and 3) in words:

_____

_____

_____ Dollars ($_____)

The undersigned bidder certifies that this proposal is made in good faith, and without collusion or connection with any other person or persons bidding on the work.

Firm: _____

Signature: _____

Printed Name: _____

Title: _____

Address: _____

_____

Phone: _____

Contact: _____