



**CHAMPAIGN COUNTY BOARD  
FACILITIES COMMITTEE AGENDA**

County of Champaign, Urbana, Illinois

Tuesday, September 6, 2016 - 6:30 p.m.

Lyle Shields Meeting Room

Brookens Administrative Center, 1776 E. Washington St., Urbana

**Committee Members:**

Gary Maxwell – Chair

James Quisenberry

Giraldo Rosales – Vice-Chair

Jon Rector

Jack Anderson

Rachel Schwartz

Josh Hartke

**Facility Tour: Animal Control, 210 S. Art Bartell Road, Urbana - 5:15pm** - Meet in the Animal Control parking lot at 5:10p.m. Tour will start at 5:15pm and conclude by 6:10pm.

- I. Call to Order
- II. Roll Call
- III. Approval of Agenda/Addenda
- IV. Approval of Minutes – August 2, 2016 1-3
- V. Public Participation
- VI. Communications
- VII. Request Approval of Authorization of Updated FY16 Capital Asset Projects (handout)
- VIII. Request Approval of Authorization for ITB #2016-009 Champaign County ADA Compliance Interiors Work
  - A. Proposed Bid Document and Drawings 4-196
  - B. Proposed Project Schedule 197
- IX. County Facilities Action Plan Proposal (handout)
- X. Facilities Director’s Report
  - A. Update on Brookens’ POD’s #200 & #300 Boiler Replacement Project
    1. Update on DCEO Grant 198-230
    2. Otto Baum Proposal 246-248
  - B. Update on Pre-Cast Concrete Wall Panel Project – County Highway Painting Project 231-238
  - C. Update Veterans Memorial
    1. Copy of Original Agreement 239-245
    2. Update Dobbins Downs Playground 249-251
  - D. Update Dobbins Downs Playground 249-251
- XI. Other Business
  - A. Semi-Annual Review of Closed Session Minutes
- XII. Chair’s Report
  - A. Future Meeting – Tuesday, October 4, 2016 at 6:30 pm
  - B. Tour of METCAD –Meet in the METCAD parking lot, 1905 E Main St., Urbana. Tour will begin at 5:15 p.m. and conclude by 6:10 p.m.
- XIII. Designation of Items to be Placed on the Consent Agenda
- XIV. Adjournment

All meetings are at Brookens Administrative Center – 1776 E Washington Street in Urbana – unless otherwise noted. To enter Brookens after 4:30 p.m., enter at the north (rear) entrance located off Lierman Avenue.

Champaign County will generally, upon request, provide appropriate aids and services leading to effective communication for qualified persons with disabilities. Please contact Administrative Services, 217-384-3776, as soon as possible but no later than 48 hours before the scheduled meeting.



**Champaign County Board  
Facilities Committee  
County of Champaign, Urbana, Illinois**

7 **MINUTES – SUBJECT TO REVIEW AND APPROVAL**

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8 **DATE:** Tuesday, August 2, 2016  
9 **TIME:** 6:30 p.m.  
10 **PLACE:** Lyle Shields Meeting Room  
11 Brookens Administrative Center  
12 1776 E. Washington, Urbana, IL 61802

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13 **Committee Members**

14 Present: Gary Maxwell (Chair), Jack Anderson, Josh Hartke, James Quisenberry, Giraldo Rosales,  
15 Absent: Jon Rector, Rachel Schwartz

16 **County Staff:** Dana Brenner (Facilities Director), Rick Snider (County Administrator), Linda Lane  
17 (Administrative Assistant)

18 **Others Present:** Patsi Petrie (County Board Chair), Chris Alix (County Board Member)

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19 **MINUTES**

20 **I. Call to Order**

21 Committee Chair Maxwell called the meeting to order at 6:32 p.m.

22 **II. Roll Call**

23 A verbal roll call was taken and a quorum was declared present.

24 **III. Approval of Agenda**

25 **MOTION** by Mr. Rosales to approve the agenda; seconded by Mr. Quisenberry. Upon vote, the **Motion**  
26 **Carried Unanimously.**

27 **IV. Approval of Minutes – June 7, 2016**

28 **MOTION** by Mr. Anderson to approve the minutes of the June 7, 2016 meeting; seconded by Mr.  
29 Quisenberry. Mr. Quisenberry noted that Mr. Hartke left just before the discussion to cancel the July  
30 meeting and the vote was not unanimous. He suggested the minutes should be amended to correct  
31 that. Upon vote, the **Motion Carried Unanimously** to approve the minutes as amended.

32 **V. Public Participation**

33 None

34 **VI. Communications**

35 None

36 **VII. Approval of Contract for the ITB #2016-005 ADA Compliance Exterior Concrete and Asphalt Work**

37 Mr. Brenner reported that bids were opened Thursday and said it was late Monday before he received  
38 the final recommendations from Bailey Edward and Berns Clancy. He stated that nine companies were  
39 contacted to provide bids. He said that five bids were received with Schomburg & Schomburg being the  
40 low bidder at \$82,219. Mr. Brenner commented that the high bid came in at \$187,100. He noted there  
41 is a significant difference between the high and low bids, as well as significant difference between the  
42 low bid and next lowest bid. He said both professional partners contacted the two low bidders to make  
43 sure they understood the scope and were comfortable with their bids. He referenced the handout  
44 memo from Bailey Edward that recommends awarding the contract to Schomburg & Schomburg. He  
45 said that his memo also recommends awarding the contract to them. Mr. Brenner noted that he and

46 both professional partners feel very positive with this contractor and comfortable with their ability to  
47 get this work done at this price. **MOTION** by Mr. Quisenberry to approve acceptance of the bid from  
48 Schomburg & Schomburg in the amount of \$82,219 for ITB 2016-005 for ADA compliance of exterior  
49 concrete and asphalt work; seconded by Mr. Hartke. Upon vote, the **Motion Carried Unanimously.**

50 Mr. Quisenberry commented that it looks like the bid is half of what was expected. Mr. Brenner said  
51 that is correct. Mr. Quisenberry noted that it's great news. Mr. Brenner said it was forecasted at  
52 \$170,000 by both Bailey Edward and Berns Clancy. He noted they lowered the scope during the process  
53 at the Courthouse, resulting in a savings of \$30,000-\$35,000.

54 **VIII. Facilities Director's Report**

55 *A. Update on Brookens PODs #200 & #300 Boiler Replacement*

56 Mr. Brenner referenced a handout from GHR. He said Reliable Plumbing began work on July 13 with  
57 the demolition of the old boilers and enlarging the concrete slabs. He said all materials are here  
58 except the boilers, which will arrive tomorrow. He noted the project is ahead of schedule and the  
59 contractor expects to be done in two weeks. Mr. Brenner said that fits well in the timeline for  
60 substantial completion of the project by the end of August, with the punch list coming out right after  
61 Labor Day. He reported that GHR is assisting with a DCEO grant application that could result in an  
62 \$18,850 rebate. He summarized all the costs for the project and noted that the DECO grant numbers  
63 are half of what they were the previous year.

64 Ms. Petrie thanked Mr. Brenner for working to keep a positive relationship with Reliable.

65 *B. Update on the Pre-Cast Concrete Wall Panel Repair Project-Painting at County Highway*

66 Mr. Brenner explained that because the project spanned two fiscal years, Highway now has the  
67 funds to pay for the painting. He said they went through several paint samples before Mr. Blue  
68 decided on a color, and the paint should arrive next week. Mr. Hartke asked what the color is. Mr.  
69 Brenner replied that it is a variation of what they have with a beige tint.

70 *C. Update on FY2016 Capital Asset Project Financials*

71 Mr. Brenner summarized the completed roof project and its costs, along with the boiler project and  
72 its costs. He said those two projects combined leave about \$150,000-\$160,000 left in the Capital  
73 Asset Fund. He explained he will not move forward with any other projects until both project's costs  
74 are finalized. Mr. Brenner noted that next up in terms of priority is the generator at the Coroner's  
75 Office/Election Storage and said they may not have enough to do that. He said they might skip that  
76 but he would at least like to get the parking lots done. He said if that's all that is done this year they  
77 could move the remaining money to next year to get more projects done.

78 **IX. Other Business**

79 Mr. Rosales asked when the final report from the Facilities Finance Planning Committee would be done  
80 so this committee could move it to the Full Board. He noted that time is running out to put a  
81 referendum on the November ballot. Mr. Maxwell replied the joint committee will meet tomorrow and  
82 should have a final report. He thought that report would go to Finance because it could not come back  
83 to Facilities in time. He said they could have a special Facilities Committee meeting next week to review  
84 it. Mr. Quisenberry questioned the need for a special Facilities Committee meeting since the report  
85 would be going to the COW where everyone should be present. Mr. Rosales felt if it's presented to  
86 Finance, it should be presented to Facilities as well. Mr. Quisenberry asked if there was any reason they  
87 couldn't call it a joint meeting of the Finance and Facilities Committees because it's the same people.  
88 Mr. Rosales asked for clarification that they would meet tonight and it would go directly to the COW.  
89 Mr. Maxwell said the special committee will meet tomorrow and pass something out to the Finance  
90 committee that meets next Tuesday and from there it will go to the COW. It was pointed out that  
91 Finance is part of the COW. Mr. Quisenberry suggested if the Facilities Committee felt it necessary to  
92 convene to hear and discuss the information, they could ask for a special Facilities meeting after the  
93 COW. He didn't feel the presentation needed to be repeated because everyone will be there. Mr. Hartke

94 noted as a point of order that any action for a tax referendum would be an action of the Finance  
95 Committee, not the Facilities Committee. He said this committee would need to see a plan for the  
96 money and then figure out how to spend it if it does pass. Mr. Quisenberry clarified with Mr. Hartke that  
97 there would be no need to work more deeply on the plan unless it goes further than Finance. Mr. Hartke  
98 agreed but said that if it does pass, Facilities needs to have some serious discussions about how they  
99 would either support or spend it.

100 Mr. Rosales asked if this referendum would be independent from the Nursing Home's request to put an  
101 item of finance as a referendum on the November ballot, or if it would be a combined effort. Mr.  
102 Maxwell said the sales tax issue could give some relief to the nursing home as part of the package, or  
103 there could be another referendum specifically for the nursing home, which would be property tax. Mr.  
104 Snider said the CCNH Board of Directors is meeting Thursday to make a recommendation on whether or  
105 not to advance a referenda ballot question to the Full Board. Ms. Petrie wanted to clarify that time  
106 tables are important and the CCNH BOD was going to meet last night but the agenda wasn't posted, so  
107 the meeting had to be pushed.

108 **X. Chair's Report**

- 109 A. Future Meeting – Tuesday, September 6, 2016 at 6:30 pm  
110 Mr. Maxwell informed everyone that the next Facilities Committee meeting is scheduled for  
111 Tuesday, September 6, 2016.
- 112 B. Tour of Animal Control  
113 Mr. Maxwell said there will be a tour of Animal Control at 5:15 p.m. before the next Facilities  
114 Committee meeting. He reported that Ms. Schwartz did notify that she would not be attending  
115 tonight's meeting.

116 **XI. Designation of Items to be Placed on the Consent Agenda**

117 Mr. Maxwell noted item VII is to be placed on the consent agenda.

118 **XII. Adjournment**

119 **MOTION** by Mr. Quisenberry to adjourn; seconded by Mr. Anderson. There being no further business,  
120 Mr. Maxwell adjourned the meeting at 7:06 p.m.  
121

122 *\*\*Please note the minutes reflect the order of the agenda and may not necessarily reflect the order of business conducted*  
123 *at the meeting.*

# **PROJECT MANUAL**

**ITB #2016-009**

## **CHAMPAIGN COUNTY INTERIOR ADA IMPROVEMENTS**

FOR

CHAMPAIGN COUNTY, ILLINOIS  
1776 EAST WASHINGTON STREET  
URBANA, ILLINOIS 61802

## **90% CONSTRUCTION DOCUMENTS**

Architect's Project # 15029

August 31, 2016

**Bailey Edward Design, Inc.**

**Henneman Engineering, Inc.**

PROJECT MANUAL  
Section 00 01 10 – Table of Contents

<u>DOCUMENT</u>	<u>TITLE</u>	<u>PAGES</u>
00 01 10	Table of Contents	00 01 10 – 03
00 01 15	Drawings, Schedules and Details	00 01 15 – 01
<u>BIDDING AND CONTRACT REQUIREMENTS</u>		
00 11 16	Invitation to Bid	00 11 16 – 02
00 21 13	Instructions to Bidders	00 21 13 – 01
00 21 13.1	AIA A701 Instructions to Bidders	00 21 13.1 – 06
00 21 13.2	AIA A201 General Conditions	00 21 13.2 – 40
00 22 13	Supplementary Instructions to Bidders	00 22 13 – 04
00 22 44	Additional Insurance Requirements	00 22 44 – 03
00 25 13	Prebid Meeting	00 25 13 – 02
00 32 50	Minority and Female Business Enterprise	00 32 50 – 01
00 32 50.1	Minority and Female Business Participation Documentation Form	00 32 50.1 – 01
00 41 05	Minority Female Business Enterprise Program Requirements	00 41 05 – 02
00 41 06	Bid Bond Form	00 41 06 – 01
00 41 13	Bid Form – Stipulated Sum (Single-Prime Contract)	00 41 13 – 02
CQ-1	Contractor's Qualification Form	CQ-1 – 03
DA-1	Bidder's / Contractor's Disclosure Affidavit	DA-1 – 04
DF-1	Drug Free Workplace Certification	DF-1 – 02
00 43 43	Prevailing Rate of Wages.	00 43 43 – 05
<u>GENERAL REQUIREMENTS</u>		
01 11 00	Project Summary	01 11 00 – 01
01 32 00	Construction Schedule	01 32 00 – 02
01 33 23	Shop Drawings, Product Data, & Samples Schedule	01 33 23 – 04
01 35 16	Remodeling Project Procedures	01 35 16 – 03
01 51 50	Use of Existing Facilities	01 51 50 – 03
01 54 00	Construction Aids	01 54 00 – 02
01 56 00	Barriers	01 56 00 – 01
01 62 04	Substitution Procedures	01 62 04 – 02
01 62 04.1	Request for Substitution Form	01 62 04.1 – 03
01 66 00	Storage & Protection	01 66 00 – 01
01 73 29	Cutting and Patching	01 73 29 – 02
01 74 13	Construction Cleaning	01 74 13 – 01
01 74 23	Final Cleaning	01 74 23 – 01
01 78 23	Operating & Maintenance Data Schedule	01 78 23 – 01
01 78 36	Extended Warranties & Bonds Schedule	01 78 36 – 01
01 78 39	Project Record Documents	01 78 39 – 02
<u>SITE WORK</u>		
02 07 00	Selective Demolition	02 07 00 – 04
<u>WOOD, PLASTICS &amp; COMPOSITES</u>		
06 10 00	Rough Carpentry	06 10 00 – 04
06 20 23	Interior Finish Carpentry	06 20 23 – 06



**DRAWING INDEX**

G000	COVER SHEET
B-G000	GENERAL PROJECT INFORMATION AND DRAWING INDEX
B-G001	BUILDING PLAN
B-D100	RESTROOM DEMOLITION PLANS
B-A100	PODS 100 AND 200 RESTROOM PLANS AND ELEVATIONS
B-A101	POD 400 RESTROOM PLANS AND ELEVATIONS
B-PD100	PLUMBING DEMOLITION BROOKENS
B-P100	PLUMBING NEW WORK BROOKENS
C-G000	GENERAL PROJECT INFORMATION AND DRAWING INDEX
C-D100	SECOND LEVEL DEMOLITION PLANS
C-A100	SECOND LEVEL PLANS
C-A101	RESTROOM ADA PLAN
C-PD100	PLUMBING DEMOLITION COURTHOUSE

All Drawings dated: August 31, 2016

END OF SECTION 00 01 15.

DIVISION 0 – BIDDING AND CONTRACT REQUIREMENTS  
Section 00 11 16 – Invitation to Bid

**INVITATION TO BID:**

**CHAMPAIGN COUNTY INTERIOR ADA IMPROVEMENTS  
BROOKENS ADMINISTRATIVE CENTER  
CHAMPAIGN COUNTY COURTHOUSE**

Sealed bids for the Champaign County Interior ADA Improvements will be received by the Champaign County at the Brookens Administrative Center, 1776 East Washington Street, Urbana, IL 61802. Bids will be opened publicly.

The work includes the following:

Brookens Administrative Center:

Work generally includes but is not limited to the following: removal, replacement and/or relocation of plumbing fixtures, accessories, toilet partitions, plumbing, and related work in various toilet room areas for improved barrier free access.

Champaign County Courthouse:

Work generally includes but is not limited to the following: modifications made to existing access ramps in Court Room 205 and Court Room 220 for improved barrier free access. Existing carpet shall be removed and replaced, and existing wall covering shall be removed, walls prepped, and painted.

Proposals must be submitted on the forms provided and shall contain no qualifications or interlineations. In submitting a bid, it is agreed that the bid may not be withdrawn for a period of forty-five (45) days after Bid Date.

The Owner reserves the right to require from any bidder, prior to contract award, a detailed statement regarding the business and technical organization of the bidder that is available for the contemplated work, and a list of his proposed subcontractors. Information pertaining to financial resources may also be required.

A Bid Security in the form of a cashier's check, certified check, or acceptable bidder's surety bond, made payable to the Owner, in an amount that is not less than ten percent (10%) of the Bid proposal submitted, including all Alternates, shall accompany each Bid as a guarantee that: (1) the Bidder will not modify, withdraw or cancel the proposal for forty-five (45) days after the bid date; and (2) the bidder, if awarded the contract, will promptly enter into a contract and execute such bonds and furnish such insurance certificates as may be required. Should the Bidder fail to honor these two (2) guarantee for any reason, the Owner shall total the damages and shall deduct the amount of such damages from the Bidder's Bid Security. Should the damages total less than the amount of the Bid Security, the difference shall be returned to the Bidder. However, all damages in excess of the Bid Security shall be borne by the Owner. Damages may include, but shall not be limited to, reasonable compensation for the Owner's additional time spent, additional Architect's fees, costs to the Owner for delays in completion of the Work based upon the Bidders proposed Contract Time and the Contract Time as Awarded including, but not limited to, interest expense and lost revenue, the difference between the Bidder's proposed Contract Sum and the Contract Sum as awarded and costs to re bid the Project should such action become necessary. Such bid securities will be returned to the unsuccessful bidders after execution of the Contract.

Sealed bids for the proposed work will be received up to the hour of 2:00 P.M. Central Standard Time on **X x**, 2016 at the Brookens Administrative Center, 1776 East Washington Street, Urbana, IL 61802.

A pre-bid conference will be held in the Lyle Shields Meeting Room, Brookens Administrative Center, 1776 East Washington Street, Urbana, IL 61802, on **X x**, 2016 at 10:00 A.M. CST.

A complete set of documents will be available from Dean's Superior Blueprint, 404 E. University Ave., Champaign, IL. 61820, [www.deansblueprint.com](http://www.deansblueprint.com), 217.359.3261.

Refundable Plan Deposit: \$100 / each set of bid documents. Two (2) sets maximum, Additional sets may be purchased without refund. Only after obtaining one (1) copy of Bid Documents, an optional CD with Bid Documents may be purchased for a non-refundable cost of \$100.00.

Plan deposits will be refunded in full upon the return of the Bid Documents, in good condition, within ten (10) days after the bid opening. The deposits of General Contractors, who do not submit a bonafide bid or do not return the Bid Documents within ten (10) days after the bid opening, will not be refunded.

Contractor and Subcontractors shall include in bids, the cost for the current prevailing wage (Illinois Prevailing Wage Act - 820 ILCS 130/0.01 et seq.). The Contractor shall ensure that any Subcontractors shall comply with the Illinois Prevailing Wage Act.

The Owner reserves the right to reject any or all bids, to waive any irregularities in the bidding, or to accept the bids that in their judgment will be for their best interest.

Once awarded the contract, the Contractor will furnish a satisfactory performance bond, execute the contract and proceed with the work. The Contractor shall indicate the amount of the performance bond on the bid form.

END OF SECTION 00 11 16

DIVISION 0 – BIDDING AND CONTRACT REQUIREMENTS

Section 00 21 13 – Instructions to Bidders

1.1 INSTRUCTIONS TO BIDDERS

A. AIA Document A701, "Instructions to Bidders," is hereby incorporated into the Procurement and Contracting Requirements by reference.

1. A copy of AIA Document A701, "Instructions to Bidders," is bound in this Project Manual.

B. AIA Document A201 "General Conditions" is hereby incorporated into the Procurement.

1. A copy of AIA Document A201 "General Conditions" is bound in this project manual.

END OF DOCUMENT 00 21 13



**AIA**<sup>®</sup>

# Document A701<sup>™</sup> – 1997

## Instructions to Bidders

### for the following PROJECT:

*(Name and location or address)*

Champaign County Interior ADA Improvements  
Brookens Administrative Center, 1776 East Washington St., Urbana, IL 61802  
Champaign County Courthouse, 101 East Main St., Urbana, IL 61801

### THE OWNER:

*(Name, legal status and address)*

Champaign County  
1776 East Washington Street  
Urbana, IL 61802

### THE ARCHITECT:

*(Name, legal status and address)*

Bailey Edward Design, Inc.  
1103 S. Mattis Avenue  
Champaign, IL 61821

### TABLE OF ARTICLES

- |   |  |
|---|--|
| 1 | DEFINITIONS                                    |
| 2 | BIDDER'S REPRESENTATIONS                       |
| 3 | BIDDING DOCUMENTS                              |
| 4 | BIDDING PROCEDURES                             |
| 5 | CONSIDERATION OF BIDS                          |
| 6 | POST-BID INFORMATION                           |
| 7 | PERFORMANCE BOND AND PAYMENT BOND              |
| 8 | FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR |

### ADDITIONS AND DELETIONS:

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

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

## ARTICLE 1 DEFINITIONS

§ 1.1 Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement or Invitation to Bid, Instructions to Bidders, Supplementary Instructions to Bidders, the bid form, and other sample bidding and contract forms. The proposed Contract Documents consist of the form of Agreement between the Owner and Contractor, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications and all Addenda issued prior to execution of the Contract.

§ 1.2 Definitions set forth in the General Conditions of the Contract for Construction, AIA Document A201, or in other Contract Documents are applicable to the Bidding Documents.

§ 1.3 Addenda are written or graphic instruments issued by the Architect prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.

§ 1.4 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

§ 1.5 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 deleted for sums stated in Alternate Bids.

§ 1.6 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 the Bidding Documents, is accepted.

§ 1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment or services or a portion of the Work as described in the Bidding Documents.

§ 1.8 A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.

§ 1.9 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

§ 2.1 The Bidder by making a Bid represents that:

§ 2.1.1 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, and for other portions of the Project, if any, being bid concurrently or presently under construction.

§ 2.1.2 The Bid is made in compliance with the Bidding Documents.

§ 2.1.3 The Bidder has visited the site, 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 proposed Contract Documents.

§ 2.1.4 The Bid is based upon the materials, equipment and systems required by the Bidding Documents without exception.

## ARTICLE 3 BIDDING DOCUMENTS

### § 3.1 COPIES

§ 3.1.1 Bidders may obtain complete sets of the Bidding Documents from the issuing office designated in the Advertisement or Invitation to Bid in the number and for the deposit sum, if any, stated therein. The deposit will be refunded to Bidders who submit a bona fide Bid and return the Bidding Documents in good condition within ten days after receipt of Bids. The cost of replacement of missing or damaged documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the Bidding Documents and the Bidder's deposit will be refunded.

§ 3.1.2 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the Advertisement or Invitation to Bid, or in supplementary instructions to bidders.

§ 3.1.3 Bidders shall use complete sets of Bidding Documents in preparing Bids; neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

§ 3.1.4 The Owner and Architect may make copies of the Bidding Documents available on the above terms for the purpose of obtaining Bids on the Work. No license or grant of use is conferred by issuance of copies of the Bidding Documents.

### § 3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

§ 3.2.1 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 submitted, shall examine the site and local conditions, and shall at once report to the Architect errors, inconsistencies or ambiguities discovered.

§ 3.2.2 Bidders and Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the Architect at least seven days prior to the date for receipt of Bids.

§ 3.2.3 Interpretations, corrections and changes of the Bidding Documents will be made by Addendum. Interpretations, corrections and changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon them.

### § 3.3 SUBSTITUTIONS

§ 3.3.1 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.

§ 3.3.2 No substitution will be considered prior to receipt of Bids unless written request for approval has been received by the Architect at least ten days prior to the date for receipt of Bids. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment or other portions of the Work, including changes in the work of other contracts that incorporation of the proposed substitution would require, shall be included. The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

§ 3.3.3 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.

§ 3.3.4 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

### § 3.4 ADDENDA

§ 3.4.1 Addenda will be transmitted to all who are known by the issuing office to have received a complete set of Bidding Documents.

§ 3.4.2 Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.

§ 3.4.3 Addenda will be issued no later than four days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.

§ 3.4.4 Each Bidder shall ascertain prior to submitting a Bid that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

## ARTICLE 4 BIDDING PROCEDURES

### § 4.1 PREPARATION OF BIDS

§ 4.1.1 Bids shall be submitted on the forms included with the Bidding Documents.

§ 4.1.2 All blanks on the bid form shall be legibly executed in a non-erasable medium.

§ 4.1.3 Sums shall be expressed in both words and figures. In case of discrepancy, the amount written in words shall govern.

§ 4.1.4 Interlineations, alterations and erasures must be initialed by the signer of the Bid.

§ 4.1.5 All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change."

§ 4.1.6 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 stipulations on the bid form nor qualify the Bid in any other manner.

§ 4.1.7 Each copy of the Bid shall state the legal name of the Bidder and the nature of legal form of the Bidder. The Bidder shall provide evidence of legal authority to perform within the jurisdiction of the Work. Each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.

### § 4.2 BID SECURITY

§ 4.2.1 Each Bid shall be accompanied by a bid security in the form and amount required if so stipulated in the Instructions to Bidders. The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and will, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. The amount of the bid security shall not be forfeited to the Owner in the event the Owner fails to comply with Section 6.2.

§ 4.2.2 If a surety bond is required, it shall be written on AIA Document A310, Bid Bond, unless otherwise provided in the Bidding Documents, and the attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of the power of attorney.

§ 4.2.3 The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until either (a) the Contract has been executed and bonds, if required, have been furnished, or (b) the specified time has elapsed so that Bids may be withdrawn or (c) all Bids have been rejected.

### § 4.3 SUBMISSION OF BIDS

§ 4.3.1 All copies of the Bid, the bid security, if any, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

§ 4.3.2 Bids shall be deposited at the designated location prior to the time and date for receipt of Bids. Bids received after the time and date for receipt of Bids will be returned unopened.

§ 4.3.3 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

§ 4.3.4 Oral, telephonic, telegraphic, facsimile or other electronically transmitted bids will not be considered.

### § 4.4 MODIFICATION OR WITHDRAWAL OF BID

§ 4.4.1 A Bid may not be modified, withdrawn or canceled by the Bidder during the stipulated time period following the time and date designated for the receipt of Bids, and each Bidder so agrees in submitting a Bid.

§ 4.4.2 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 over the signature of the Bidder. Written confirmation over the signature of the Bidder shall be received, and date- and time-stamped by the receiving party on or before the date and time set for receipt of Bids. A change shall be so worded as not to reveal the amount of the original Bid.

§ 4.4.3 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.

§ 4.4.4 Bid security, if required, shall be in an amount sufficient for the Bid as resubmitted.

## **ARTICLE 5 CONSIDERATION OF BIDS**

### **§ 5.1 OPENING OF BIDS**

At the discretion of the Owner, if stipulated in the Advertisement or Invitation to Bid, the properly identified Bids received on time will be publicly opened and will be read aloud. An abstract of the Bids may be made available to Bidders.

### **§ 5.2 REJECTION OF BIDS**

The Owner shall have the right to reject any or all Bids. A Bid not accompanied by a required bid security or by other data required by the Bidding Documents, or a Bid which is in any way incomplete or irregular is subject to rejection.

### **§ 5.3 ACCEPTANCE OF BID (AWARD)**

§ 5.3.1 It is the intent of the Owner to award a Contract to the lowest qualified 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 shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's own best interests.

§ 5.3.2 The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the low Bidder on the basis of the sum of the Base Bid and Alternates accepted.

## **ARTICLE 6 POST-BID INFORMATION**

### **§ 6.1 CONTRACTOR'S QUALIFICATION STATEMENT**

Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request, a properly executed AIA Document A305, Contractor's Qualification Statement, unless such a Statement has been previously required and submitted as a prerequisite to the issuance of Bidding Documents.

### **§ 6.2 OWNER'S FINANCIAL CAPABILITY**

The Owner shall, at the request of the Bidder to whom award of a Contract is under consideration and no later than seven days prior to the expiration of the time for withdrawal of Bids, furnish to the Bidder reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. Unless such reasonable evidence is furnished, the Bidder will not be required to execute the Agreement between the Owner and Contractor.

### **§ 6.3 SUBMITTALS**

§ 6.3.1 The Bidder shall, as soon as practicable or as stipulated in the Bidding Documents, after notification of selection for the award of a Contract, furnish to the Owner through the Architect in writing:

- .1 a designation of the Work to be performed with the Bidder's own forces;
- .2 names of the manufacturers, products, and the suppliers of principal items or systems of materials and equipment proposed for the Work; and
- .3 names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

§ 6.3.2 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.

§ 6.3.3 Prior to the execution of the Contract, the Architect will notify the Bidder in writing if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, (1) withdraw the Bid or (2) submit an acceptable substitute person or entity with an adjustment in the Base Bid or Alternate Bid to cover the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

§ 6.3.4 Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

## **ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND**

### **§ 7.1 BOND REQUIREMENTS**

§ 7.1.1 If stipulated in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Bonds may be secured through the Bidder's usual sources.

§ 7.1.2 If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before execution of the Contract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.

§ 7.1.3 If the Owner requires that bonds be secured from other than the Bidder's usual sources, changes in cost will be adjusted as provided in the Contract Documents.

### **§ 7.2 TIME OF DELIVERY AND FORM OF BONDS**

§ 7.2.1 The Bidder shall deliver the required bonds to the Owner not later than three days following the date of execution of the Contract. If the Work is to be commenced prior thereto in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this Section 7.2.1.

§ 7.2.2 Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond and Payment Bond. Both bonds shall be written in the amount of the Contract Sum.

§ 7.2.3 The bonds shall be dated on or after the date of the Contract.

§ 7.2.4 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

## **ARTICLE 8 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR**

Unless otherwise required in the Bidding Documents, the Agreement for the Work will be written on AIA Document A101, Standard Form of Agreement Between Owner and Contractor Where the Basis of Payment Is a Stipulated Sum.



**AIA**<sup>®</sup>

# Document A201<sup>™</sup> – 2007

## General Conditions of the Contract for Construction

### for the following PROJECT:

*(Name and location or address)*

Champaign County Interior ADA Improvements  
Brookens Administrative Center, 1776 East Washington St., Urbana, IL 61802  
Champaign County Courthouse, 101 East Main St., Urbana, IL 61801

### THE OWNER:

*(Name, legal status and address)*

Champaign County  
1776 East Washington Street  
Urbana, IL 61802

### THE ARCHITECT:

*(Name, legal status and address)*

Bailey Edward Design, Inc.  
1103 S. Mattis Avenue  
Champaign, IL 61821

### TABLE OF ARTICLES

- 1 GENERAL PROVISIONS
- 2 OWNER
- 3 CONTRACTOR
- 4 ARCHITECT
- 5 SUBCONTRACTORS
- 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
- 7 CHANGES IN THE WORK
- 8 TIME
- 9 PAYMENTS AND COMPLETION
- 10 PROTECTION OF PERSONS AND PROPERTY
- 11 INSURANCE AND BONDS
- 12 UNCOVERING AND CORRECTION OF WORK
- 13 MISCELLANEOUS PROVISIONS
- 14 TERMINATION OR SUSPENSION OF THE CONTRACT
- 15 CLAIMS AND DISPUTES

### ADDITIONS AND DELETIONS:

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

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

Init.

## INDEX

(Topics and numbers in bold are section headings.)

### Acceptance of Nonconforming Work

9.6.6, 9.9.3, **12.3**

Acceptance of Work

9.6.6, 9.8.2, 9.9.3, 9.10.1, 9.10.3, **12.3**

### Access to Work

**3.16**, 6.2.1, 12.1

Accident Prevention

10

Acts and Omissions

3.2, 3.3.2, 3.12.8, 3.18, 4.2.3, 8.3.1, 9.5.1, 10.2.5, 10.2.8, 13.4.2, 13.7, 14.1, 15.2

Addenda

1.1.1, 3.11

Additional Costs, Claims for

3.7.4, 3.7.5, 6.1.1, 7.3.7.5, 10.3, 15.1.4

### Additional Inspections and Testing

9.4.2, 9.8.3, 12.2.1, **13.5**

Additional Insured

11.1.4

### Additional Time, Claims for

3.2.4, 3.7.4, 3.7.5, 3.10.2, 8.3.2, **15.1.5**

### Administration of the Contract

3.1.3, **4.2**, 9.4, 9.5

Advertisement or Invitation to Bid

1.1.1

Aesthetic Effect

4.2.13

### Allowances

**3.8**, 7.3.8

All-risk Insurance

11.3.1, 11.3.1.1

### Applications for Payment

4.2.5, 7.3.9, 9.2, **9.3**, 9.4, 9.5.1, 9.6.3, 9.7, 9.10, 11.1.3

Approvals

2.1.1, 2.2.2, 2.4, 3.1.3, 3.10.2, 3.12.8, 3.12.9, 3.12.10, 4.2.7, 9.3.2, 13.5.1

### Arbitration

8.3.1, 11.3.10, 13.1, 15.3.2, **15.4**

## ARCHITECT

**4**

Architect, Definition of

**4.1.1**

Architect, Extent of Authority

2.4, 3.12.7, 4.1, 4.2, 5.2, 6.3, 7.1.2, 7.3.7, 7.4, 9.2, 9.3.1, 9.4, 9.5, 9.6.3, 9.8, 9.10.1, 9.10.3, 12.1, 12.2.1, 13.5.1, 13.5.2, 14.2.2, 14.2.4, 15.1.3, 15.2.1

Architect, Limitations of Authority and

Responsibility

2.1.1, 3.12.4, 3.12.8, 3.12.10, 4.1.2, 4.2.1, 4.2.2, 4.2.3, 4.2.6, 4.2.7, 4.2.10, 4.2.12, 4.2.13, 5.2.1, 7.4, 9.4.2, 9.5.3, 9.6.4, 15.1.3, 15.2

Architect's Additional Services and Expenses

2.4, 11.3.1.1, 12.2.1, 13.5.2, 13.5.3, 14.2.4

Architect's Administration of the Contract

3.1.3, 4.2, 3.7.4, 15.2, 9.4.1, 9.5

Architect's Approvals

2.4, 3.1.3, 3.5, 3.10.2, 4.2.7

Architect's Authority to Reject Work

3.5, 4.2.6, 12.1.2, 12.2.1

Architect's Copyright

1.1.7, 1.5

Architect's Decisions

3.7.4, 4.2.6, 4.2.7, 4.2.11, 4.2.12, 4.2.13, 4.2.14, 6.3, 7.3.7, 7.3.9, 8.1.3, 8.3.1, 9.2, 9.4.1, 9.5, 9.8.4, 9.9.1, 13.5.2, 15.2, 15.3

Architect's Inspections

3.7.4, 4.2.2, 4.2.9, 9.4.2, 9.8.3, 9.9.2, 9.10.1, 13.5

Architect's Instructions

3.2.4, 3.3.1, 4.2.6, 4.2.7, 13.5.2

Architect's Interpretations

4.2.11, 4.2.12

Architect's Project Representative

4.2.10

Architect's Relationship with Contractor

1.1.2, 1.5, 3.1.3, 3.2.2, 3.2.3, 3.2.4, 3.3.1, 3.4.2, 3.5, 3.7.4, 3.7.5, 3.9.2, 3.9.3, 3.10, 3.11, 3.12, 3.16, 3.18, 4.1.2, 4.1.3, 4.2, 5.2, 6.2.2, 7, 8.3.1, 9.2, 9.3, 9.4, 9.5, 9.7, 9.8, 9.9, 10.2.6, 10.3, 11.3.7, 12, 13.4.2, 13.5, 15.2

Architect's Relationship with Subcontractors

1.1.2, 4.2.3, 4.2.4, 4.2.6, 9.6.3, 9.6.4, 11.3.7

Architect's Representations

9.4.2, 9.5.1, 9.10.1

Architect's Site Visits

3.7.4, 4.2.2, 4.2.9, 9.4.2, 9.5.1, 9.9.2, 9.10.1, 13.5

Asbestos

10.3.1

Attorneys' Fees

3.18.1, 9.10.2, 10.3.3

Award of Separate Contracts

6.1.1, 6.1.2

### Award of Subcontracts and Other Contracts for Portions of the Work

**5.2**

### Basic Definitions

**1.1**

Bidding Requirements

1.1.1, 5.2.1, 11.4.1

Binding Dispute Resolution

9.7, 11.3.9, 11.3.10, 13.1, 15.2.5, 15.2.6.1, 15.3.1, 15.3.2, 15.4.1

### Boiler and Machinery Insurance

**11.3.2**

Bonds, Lien

7.3.7.4, 9.10.2, 9.10.3

### Bonds, Performance, and Payment

7.3.7.4, 9.6.7, 9.10.3, 11.3.9, **11.4**

Init.

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Building Permit

3.7.1

## **Capitalization**

### **1.3**

Certificate of Substantial Completion

9.8.3, 9.8.4, 9.8.5

### **Certificates for Payment**

4.2.1, 4.2.5, 4.2.9, 9.3.3, **9.4**, 9.5, 9.6.1, 9.6.6, 9.7,

9.10.1, 9.10.3, 14.1.1.3, 14.2.4, 15.1.3

Certificates of Inspection, Testing or Approval

13.5.4

Certificates of Insurance

9.10.2, 11.1.3

### **Change Orders**

1.1.1, 2.4, 3.4.2, 3.7.4, 3.8.2.3, 3.11, 3.12.8, 4.2.8, 5.2.3, 7.1.2, 7.1.3, **7.2**, 7.3.2, 7.3.6, 7.3.9, 7.3.10, 8.3.1, 9.3.1.1, 9.10.3, 10.3.2, 11.3.1.2, 11.3.4, 11.3.9, 12.1.2, 15.1.3

**Change Orders**, Definition of

### **7.2.1**

## **CHANGES IN THE WORK**

2.2.1, 3.11, 4.2.8, **7**, 7.2.1, 7.3.1, 7.4, 8.3.1, 9.3.1.1, 11.3.9

**Claims**, Definition of

### **15.1.1**

## **CLAIMS AND DISPUTES**

3.2.4, 6.1.1, 6.3, 7.3.9, 9.3.3, 9.10.4, 10.3.3, **15**, 15.4

Claims and Timely Assertion of Claims

15.4.1

**Claims for Additional Cost**

3.2.4, 3.7.4, 6.1.1, 7.3.9, 10.3.2, **15.1.4**

**Claims for Additional Time**

3.2.4, 3.7.4, 6.1.1, 8.3.2, 10.3.2, **15.1.5**

**Concealed or Unknown Conditions, Claims for**

### **3.7.4**

Claims for Damages

3.2.4, 3.18, 6.1.1, 8.3.3, 9.5.1, 9.6.7, 10.3.3, 11.1.1,

11.3.5, 11.3.7, 14.1.3, 14.2.4, 15.1.6

Claims Subject to Arbitration

15.3.1, 15.4.1

### **Cleaning Up**

### **3.15, 6.3**

Commencement of the Work, Conditions Relating to

2.2.1, 3.2.2, 3.4.1, 3.7.1, 3.10.1, 3.12.6, 5.2.1, 5.2.3, 6.2.2, 8.1.2, 8.2.2, 8.3.1, 11.1, 11.3.1, 11.3.6, 11.4.1, 15.1.4

**Commencement of the Work**, Definition of

### **8.1.2**

**Communications Facilitating Contract**

### **Administration**

3.9.1, **4.2.4**

Completion, Conditions Relating to

3.4.1, 3.11, 3.15, 4.2.2, 4.2.9, 8.2, 9.4.2, 9.8, 9.9.1,

9.10, 12.2, 13.7, 14.1.2

## **COMPLETION, PAYMENTS AND**

## **9**

Completion, Substantial

4.2.9, 8.1.1, 8.1.3, 8.2.3, 9.4.2, 9.8, 9.9.1, 9.10.3, 12.2, 13.7

Compliance with Laws

1.6, 3.2.3, 3.6, 3.7, 3.12.10, 3.13, 4.1.1, 9.6.4, 10.2.2, 11.1, 11.3, 13.1, 13.4, 13.5.1, 13.5.2, 13.6, 14.1.1, 14.2.1.3, 15.2.8, 15.4.2, 15.4.3

Concealed or Unknown Conditions

3.7.4, 4.2.8, 8.3.1, 10.3

Conditions of the Contract

1.1.1, 6.1.1, 6.1.4

Consent, Written

3.4.2, 3.7.4, 3.12.8, 3.14.2, 4.1.2, 9.3.2, 9.8.5, 9.9.1, 9.10.2, 9.10.3, 11.3.1, 13.2, 13.4.2, 15.4.4.2

### **Consolidation or Joinder**

### **15.4.4**

## **CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS**

1.1.4, **6**

**Construction Change Directive**, Definition of

### **7.3.1**

**Construction Change Directives**

1.1.1, 3.4.2, 3.12.8, 4.2.8, 7.1.1, 7.1.2, 7.1.3, **7.3**, 9.3.1.1

Construction Schedules, Contractor's

3.10, 3.12.1, 3.12.2, 6.1.3, 15.1.5.2

**Contingent Assignment of Subcontracts**

**5.4**, 14.2.2.2

**Continuing Contract Performance**

### **15.1.3**

**Contract**, Definition of

### **1.1.2**

## **CONTRACT, TERMINATION OR SUSPENSION OF THE**

**5.4.1.1**, 11.3.9, **14**

Contract Administration

3.1.3, 4, 9.4, 9.5

Contract Award and Execution, Conditions Relating to

3.7.1, 3.10, 5.2, 6.1, 11.1.3, 11.3.6, 11.4.1

Contract Documents, Copies Furnished and Use of

1.5.2, 2.2.5, 5.3

**Contract Documents**, Definition of

### **1.1.1**

**Contract Sum**

3.7.4, 3.8, 5.2.3, 7.2, 7.3, 7.4, **9.1**, 9.4.2, 9.5.1.4, 9.6.7, 9.7, 10.3.2, 11.3.1, 14.2.4, 14.3.2, 15.1.4, 15.2.5

**Contract Sum**, Definition of

### **9.1**

Contract Time

3.7.4, 3.7.5, 3.10.2, 5.2.3, 7.2.1.3, 7.3.1, 7.3.5, 7.4, 8.1.1, 8.2.1, 8.3.1, 9.5.1, 9.7, 10.3.2, 12.1.1, 14.3.2, 15.1.5.1, 15.2.5

**Contract Time**, Definition of

### **8.1.1**

Init.

## CONTRACTOR

### 3

**Contractor**, Definition of

#### 3.1, 6.1.2

**Contractor's Construction Schedules**

#### 3.10, 3.12.1, 3.12.2, 6.1.3, 15.1.5.2

Contractor's Employees

3.3.2, 3.4.3, 3.8.1, 3.9, 3.18.2, 4.2.3, 4.2.6, 10.2, 10.3, 11.1.1, 11.3.7, 14.1, 14.2.1.1

**Contractor's Liability Insurance**

#### 11.1

Contractor's Relationship with Separate Contractors and Owner's Forces

3.12.5, 3.14.2, 4.2.4, 6, 11.3.7, 12.1.2, 12.2.4

Contractor's Relationship with Subcontractors

1.2.2, 3.3.2, 3.18.1, 3.18.2, 5, 9.6.2, 9.6.7, 9.10.2, 11.3.1.2, 11.3.7, 11.3.8

Contractor's Relationship with the Architect

1.1.2, 1.5, 3.1.3, 3.2.2, 3.2.3, 3.2.4, 3.3.1, 3.4.2, 3.5, 3.7.4, 3.10, 3.11, 3.12, 3.16, 3.18, 4.1.3, 4.2, 5.2, 6.2.2, 7, 8.3.1, 9.2, 9.3, 9.4, 9.5, 9.7, 9.8, 9.9, 10.2.6, 10.3, 11.3.7, 12, 13.5, 15.1.2, 15.2.1

Contractor's Representations

3.2.1, 3.2.2, 3.5, 3.12.6, 6.2.2, 8.2.1, 9.3.3, 9.8.2

Contractor's Responsibility for Those Performing the Work

3.3.2, 3.18, 5.3, 6.1.3, 6.2, 9.5.1, 10.2.8

Contractor's Review of Contract Documents

#### 3.2

Contractor's Right to Stop the Work

#### 9.7

Contractor's Right to Terminate the Contract

14.1, 15.1.6

Contractor's Submittals

3.10, 3.11, 3.12.4, 4.2.7, 5.2.1, 5.2.3, 9.2, 9.3, 9.8.2, 9.8.3, 9.9.1, 9.10.2, 9.10.3, 11.1.3, 11.4.2

Contractor's Superintendent

3.9, 10.2.6

Contractor's Supervision and Construction

Procedures

1.2.2, 3.3, 3.4, 3.12.10, 4.2.2, 4.2.7, 6.1.3, 6.2.4, 7.1.3, 7.3.5, 7.3.7, 8.2, 10, 12, 14, 15.1.3

Contractual Liability Insurance

11.1.1.8, 11.2

Coordination and Correlation

1.2, 3.2.1, 3.3.1, 3.10, 3.12.6, 6.1.3, 6.2.1

Copies Furnished of Drawings and Specifications

1.5, 2.2.5, 3.11

Copyrights

1.5, 3.17

Correction of Work

2.3, 2.4, 3.7.3, 9.4.2, 9.8.2, 9.8.3, 9.9.1, 12.1.2, 12.2

**Correlation and Intent of the Contract Documents**

#### 1.2

**Cost**, Definition of

#### 7.3.7

Costs

2.4, 3.2.4, 3.7.3, 3.8.2, 3.15.2, 5.4.2, 6.1.1, 6.2.3, 7.3.3.3, 7.3.7, 7.3.8, 7.3.9, 9.10.2, 10.3.2, 10.3.6, 11.3, 12.1.2, 12.2.1, 12.2.4, 13.5, 14

**Cutting and Patching**

#### 3.14, 6.2.5

Damage to Construction of Owner or Separate Contractors

3.14.2, 6.2.4, 10.2.1.2, 10.2.5, 10.4, 11.1.1, 11.3, 12.2.4

Damage to the Work

3.14.2, 9.9.1, 10.2.1.2, 10.2.5, 10.4, 11.3.1, 12.2.4

Damages, Claims for

3.2.4, 3.18, 6.1.1, 8.3.3, 9.5.1, 9.6.7, 10.3.3, 11.1.1, 11.3.5, 11.3.7, 14.1.3, 14.2.4, 15.1.6

Damages for Delay

6.1.1, 8.3.3, 9.5.1.6, 9.7, 10.3.2

**Date of Commencement of the Work**, Definition of

#### 8.1.2

**Date of Substantial Completion**, Definition of

#### 8.1.3

**Day**, Definition of

#### 8.1.4

Decisions of the Architect

3.7.4, 4.2.6, 4.2.7, 4.2.11, 4.2.12, 4.2.13, 15.2, 6.3, 7.3.7, 7.3.9, 8.1.3, 8.3.1, 9.2, 9.4, 9.5.1, 9.8.4, 9.9.1, 13.5.2, 14.2.2, 14.2.4, 15.1, 15.2

**Decisions to Withhold Certification**

9.4.1, 9.5, 9.7, 14.1.1.3

Defective or Nonconforming Work, Acceptance, Rejection and Correction of

2.3, 2.4, 3.5, 4.2.6, 6.2.5, 9.5.1, 9.5.2, 9.6.6, 9.8.2, 9.9.3, 9.10.4, 12.2.1

Definitions

1.1, 2.1.1, 3.1.1, 3.5, 3.12.1, 3.12.2, 3.12.3, 4.1.1, 15.1.1, 5.1, 6.1.2, 7.2.1, 7.3.1, 8.1, 9.1, 9.8.1

**Delays and Extensions of Time**

3.2, 3.7.4, 5.2.3, 7.2.1, 7.3.1, 7.4, 8.3, 9.5.1, 9.7, 10.3.2, 10.4, 14.3.2, 15.1.5, 15.2.5

Disputes

6.3, 7.3.9, 15.1, 15.2

**Documents and Samples at the Site**

#### 3.11

**Drawings**, Definition of

#### 1.1.5

Drawings and Specifications, Use and Ownership of

#### 3.11

Effective Date of Insurance

8.2.2, 11.1.2

**Emergencies**

10.4, 14.1.1.2, 15.1.4

Employees, Contractor's

3.3.2, 3.4.3, 3.8.1, 3.9, 3.18.2, 4.2.3, 4.2.6, 10.2, 10.3.3, 11.1.1, 11.3.7, 14.1, 14.2.1.1

Equipment, Labor, Materials or  
1.1.3, 1.1.6, 3.4, 3.5, 3.8.2, 3.8.3, 3.12, 3.13, 3.15.1,  
4.2.6, 4.2.7, 5.2.1, 6.2.1, 7.3.7, 9.3.2, 9.3.3, 9.5.1.3,  
9.10.2, 10.2.1, 10.2.4, 14.2.1.1, 14.2.1.2  
Execution and Progress of the Work  
1.1.3, 1.2.1, 1.2.2, 2.2.3, 2.2.5, 3.1, 3.3.1, 3.4.1, 3.5,  
3.7.1, 3.10.1, 3.12, 3.14, 4.2, 6.2.2, 7.1.3, 7.3.5, 8.2,  
9.5.1, 9.9.1, 10.2, 10.3, 12.2, 14.2, 14.3.1, 15.1.3  
Extensions of Time  
3.2.4, 3.7.4, 5.2.3, 7.2.1, 7.3, 7.4, 9.5.1, 9.7, 10.3.2,  
10.4, 14.3, 15.1.5, 15.2.5  
**Failure of Payment**  
9.5.1.3, 9.7, 9.10.2, 13.6, 14.1.1.3, 14.2.1.2  
Faulty Work  
(See Defective or Nonconforming Work)  
**Final Completion and Final Payment**  
4.2.1, 4.2.9, 9.8.2, 9.10, 11.1.2, 11.1.3, 11.3.1, 11.3.5,  
12.3, 14.2.4, 14.4.3  
Financial Arrangements, Owner's  
2.2.1, 13.2.2, 14.1.1.4  
Fire and Extended Coverage Insurance  
11.3.1.1  
**GENERAL PROVISIONS**  
**1**  
**Governing Law**  
**13.1**  
Guarantees (See Warranty)  
**Hazardous Materials**  
10.2.4, 10.3  
Identification of Subcontractors and Suppliers  
5.2.1  
**Indemnification**  
3.17, 3.18, 9.10.2, 10.3.3, 10.3.5, 10.3.6, 11.3.1.2,  
11.3.7  
**Information and Services Required of the Owner**  
2.1.2, 2.2, 3.2.2, 3.12.4, 3.12.10, 6.1.3, 6.1.4, 6.2.5,  
9.6.1, 9.6.4, 9.9.2, 9.10.3, 10.3.3, 11.2, 11.4, 13.5.1,  
13.5.2, 14.1.1.4, 14.1.4, 15.1.3  
**Initial Decision**  
**15.2**  
**Initial Decision Maker, Definition of**  
1.1.8  
Initial Decision Maker, Decisions  
14.2.2, 14.2.4, 15.2.1, 15.2.2, 15.2.3, 15.2.4, 15.2.5  
Initial Decision Maker, Extent of Authority  
14.2.2, 14.2.4, 15.1.3, 15.2.1, 15.2.2, 15.2.3, 15.2.4,  
15.2.5  
**Injury or Damage to Person or Property**  
**10.2.8**, 10.4  
Inspections  
3.1.3, 3.3.3, 3.7.1, 4.2.2, 4.2.6, 4.2.9, 9.4.2, 9.8.3,  
9.9.2, 9.10.1, 12.2.1, 13.5  
Instructions to Bidders  
1.1.1  
Instructions to the Contractor  
3.2.4, 3.3.1, 3.8.1, 5.2.1, 7, 8.2.2, 12, 13.5.2

**Instruments of Service, Definition of**  
**1.1.7**  
Insurance  
3.18.1, 6.1.1, 7.3.7, 9.3.2, 9.8.4, 9.9.1, 9.10.2, 11  
**Insurance, Boiler and Machinery**  
**11.3.2**  
**Insurance, Contractor's Liability**  
**11.1**  
Insurance, Effective Date of  
8.2.2, 11.1.2  
**Insurance, Loss of Use**  
**11.3.3**  
**Insurance, Owner's Liability**  
**11.2**  
**Insurance, Property**  
10.2.5, 11.3  
Insurance, Stored Materials  
9.3.2  
**INSURANCE AND BONDS**  
**11**  
Insurance Companies, Consent to Partial Occupancy  
9.9.1  
Intent of the Contract Documents  
1.2.1, 4.2.7, 4.2.12, 4.2.13, 7.4  
**Interest**  
**13.6**  
**Interpretation**  
1.2.3, 1.4, 4.1.1, 5.1, 6.1.2, 15.1.1  
Interpretations, Written  
4.2.11, 4.2.12, 15.1.4  
Judgment on Final Award  
15.4.2  
**Labor and Materials, Equipment**  
1.1.3, 1.1.6, 3.4, 3.5, 3.8.2, 3.8.3, 3.12, 3.13, 3.15.1,  
4.2.6, 4.2.7, 5.2.1, 6.2.1, 7.3.7, 9.3.2, 9.3.3, 9.5.1.3,  
9.10.2, 10.2.1, 10.2.4, 14.2.1.1, 14.2.1.2  
Labor Disputes  
8.3.1  
Laws and Regulations  
1.5, 3.2.3, 3.6, 3.7, 3.12.10, 3.13, 4.1.1, 9.6.4, 9.9.1,  
10.2.2, 11.1.1, 11.3, 13.1, 13.4, 13.5.1, 13.5.2, 13.6,  
14, 15.2.8, 15.4  
Liens  
2.1.2, 9.3.3, 9.10.2, 9.10.4, 15.2.8  
Limitations, Statutes of  
12.2.5, 13.7, 15.4.1.1  
Limitations of Liability  
2.3, 3.2.2, 3.5, 3.12.10, 3.17, 3.18.1, 4.2.6, 4.2.7,  
4.2.12, 6.2.2, 9.4.2, 9.6.4, 9.6.7, 10.2.5, 10.3.3,  
11.1.2, 11.2, 11.3.7, 12.2.5, 13.4.2  
Limitations of Time  
2.1.2, 2.2, 2.4, 3.2.2, 3.10, 3.11, 3.12.5, 3.15.1, 4.2.7,  
5.2, 5.3, 5.4.1, 6.2.4, 7.3, 7.4, 8.2, 9.2, 9.3.1, 9.3.3,  
9.4.1, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10, 11.1.3, 11.3.1.5,  
11.3.6, 11.3.10, 12.2, 13.5, 13.7, 14, 15  
**Loss of Use Insurance**  
**11.3.3**

Init.

Material Suppliers  
1.5, 3.12.1, 4.2.4, 4.2.6, 5.2.1, 9.3, 9.4.2, 9.6, 9.10.5

**Materials, Hazardous**  
10.2.4, **10.3**

Materials, Labor, Equipment and  
1.1.3, 1.1.6, 1.5.1, 3.4.1, 3.5, 3.8.2, 3.8.3, 3.12, 3.13,  
3.15.1, 4.2.6, 4.2.7, 5.2.1, 6.2.1, 7.3.7, 9.3.2, 9.3.3,  
9.5.1.3, 9.10.2, 10.2.1.2, 10.2.4, 14.2.1.1, 14.2.1.2

Means, Methods, Techniques, Sequences and  
Procedures of Construction  
3.3.1, 3.12.10, 4.2.2, 4.2.7, 9.4.2

Mechanic's Lien  
2.1.2, 15.2.8

**Mediation**  
8.3.1, 10.3.5, 10.3.6, 15.2.1, 15.2.5, 15.2.6, **15.3**,  
15.4.1

**Minor Changes in the Work**  
1.1.1, 3.12.8, 4.2.8, 7.1, **7.4**

**MISCELLANEOUS PROVISIONS**  
**13**

**Modifications, Definition of**  
**1.1.1**  
Modifications to the Contract  
1.1.1, 1.1.2, 3.11, 4.1.2, 4.2.1, 5.2.3, 7, 8.3.1, 9.7,  
10.3.2, 11.3.1

**Mutual Responsibility**  
**6.2**

**Nonconforming Work, Acceptance of**  
9.6.6, 9.9.3, **12.3**  
Nonconforming Work, Rejection and Correction of  
2.3, 2.4, 3.5, 4.2.6, 6.2.4, 9.5.1, 9.8.2, 9.9.3, 9.10.4,  
12.2.1  
Notice  
2.2.1, 2.3, 2.4, 3.2.4, 3.3.1, 3.7.2, 3.12.9, 5.2.1, 9.7,  
9.10, 10.2.2, 11.1.3, 12.2.2.1, 13.3, 13.5.1, 13.5.2,  
14.1, 14.2, 15.2.8, 15.4.1

**Notice, Written**  
2.3, 2.4, 3.3.1, 3.9.2, 3.12.9, 3.12.10, 5.2.1, 9.7, 9.10,  
10.2.2, 10.3, 11.1.3, 11.3.6, 12.2.2.1, **13.3**, 14, 15.2.8,  
15.4.1

**Notice of Claims**  
3.7.4, 10.2.8, **15.1.2**, 15.4

Notice of Testing and Inspections  
13.5.1, 13.5.2

Observations, Contractor's  
3.2, 3.7.4

Occupancy  
2.2.2, 9.6.6, 9.8, 11.3.1.5

Orders, Written  
1.1.1, 2.3, 3.9.2, 7, 8.2.2, 11.3.9, 12.1, 12.2.2.1,  
13.5.2, 14.3.1

**OWNER**  
**2**

**Owner, Definition of**  
**2.1.1**

**Owner, Information and Services Required of the**  
2.1.2, **2.2**, 3.2.2, 3.12.10, 6.1.3, 6.1.4, 6.2.5, 9.3.2,  
9.6.1, 9.6.4, 9.9.2, 9.10.3, 10.3.3, 11.2, 11.3, 13.5.1,  
13.5.2, 14.1.1.4, 14.1.4, 15.1.3

Owner's Authority  
1.5, 2.1.1, 2.3, 2.4, 3.4.2, 3.8.1, 3.12.10, 3.14.2, 4.1.2,  
4.1.3, 4.2.4, 4.2.9, 5.2.1, 5.2.4, 5.4.1, 6.1, 6.3, 7.2.1,  
7.3.1, 8.2.2, 8.3.1, 9.3.1, 9.3.2, 9.5.1, 9.6.4, 9.9.1,  
9.10.2, 10.3.2, 11.1.3, 11.3.3, 11.3.10, 12.2.2, 12.3,  
13.2.2, 14.3, 14.4, 15.2.7

Owner's Financial Capability  
2.2.1, 13.2.2, 14.1.1.4

**Owner's Liability Insurance**  
**11.2**  
Owner's Relationship with Subcontractors  
1.1.2, 5.2, 5.3, 5.4, 9.6.4, 9.10.2, 14.2.2

**Owner's Right to Carry Out the Work**  
**2.4**, 14.2.2

**Owner's Right to Clean Up**  
**6.3**

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

**Owner's Right to Stop the Work**  
**2.3**  
Owner's Right to Suspend the Work  
14.3  
Owner's Right to Terminate the Contract  
14.2

**Ownership and Use of Drawings, Specifications and Other Instruments of Service**  
1.1.1, 1.1.6, 1.1.7, **1.5**, 2.2.5, 3.2.2, 3.11, 3.17, 4.2.12,  
5.3

**Partial Occupancy or Use**  
9.6.6, **9.9**, 11.3.1.5

**Patching, Cutting and**  
**3.14**, 6.2.5

Patents  
3.17

**Payment, Applications for**  
4.2.5, 7.3.9, 9.2, **9.3**, 9.4, 9.5, 9.6.3, 9.7, 9.8.5, 9.10.1,  
14.2.3, 14.2.4, 14.4.3

**Payment, Certificates for**  
4.2.5, 4.2.9, 9.3.3, **9.4**, 9.5, 9.6.1, 9.6.6, 9.7, 9.10.1,  
9.10.3, 13.7, 14.1.1.3, 14.2.4

**Payment, Failure of**  
9.5.1.3, **9.7**, 9.10.2, 13.6, 14.1.1.3, 14.2.1.2

Payment, Final  
4.2.1, 4.2.9, 9.8.2, 9.10, 11.1.2, 11.1.3, 11.4.1, 12.3,  
13.7, 14.2.4, 14.4.3

**Payment Bond, Performance Bond and**  
7.3.7.4, 9.6.7, 9.10.3, **11.4**

**Payments, Progress**  
9.3, **9.6**, 9.8.5, 9.10.3, 13.6, 14.2.3, 15.1.3

**PAYMENTS AND COMPLETION**  
**9**

Payments to Subcontractors  
5.4.2, 9.5.1.3, 9.6.2, 9.6.3, 9.6.4, 9.6.7, 14.2.1.2  
PCB  
10.3.1  
**Performance Bond and Payment Bond**  
7.3.7.4, 9.6.7, 9.10.3, 11.4  
**Permits, Fees, Notices and Compliance with Laws**  
2.2.2, 3.7, 3.13, 7.3.7.4, 10.2.2  
**PERSONS AND PROPERTY, PROTECTION OF 10**  
Polychlorinated Biphenyl  
10.3.1  
**Product Data, Definition of 3.12.2**  
**Product Data and Samples, Shop Drawings**  
3.11, 3.12, 4.2.7  
**Progress and Completion**  
4.2.2, 8.2, 9.8, 9.9.1, 14.1.4, 15.1.3  
**Progress Payments**  
9.3, 9.6, 9.8.5, 9.10.3, 13.6, 14.2.3, 15.1.3  
**Project, Definition of 1.1.4**  
Project Representatives  
4.2.10  
**Property Insurance**  
10.2.5, 11.3  
**PROTECTION OF PERSONS AND PROPERTY 10**  
Regulations and Laws  
1.5, 3.2.3, 3.6, 3.7, 3.12.10, 3.13, 4.1.1, 9.6.4, 9.9.1, 10.2.2, 11.1, 11.4, 13.1, 13.4, 13.5.1, 13.5.2, 13.6, 14, 15.2.8, 15.4  
Rejection of Work  
3.5, 4.2.6, 12.2.1  
Releases and Waivers of Liens  
9.10.2  
Representations  
3.2.1, 3.5, 3.12.6, 6.2.2, 8.2.1, 9.3.3, 9.4.2, 9.5.1, 9.8.2, 9.10.1  
Representatives  
2.1.1, 3.1.1, 3.9, 4.1.1, 4.2.1, 4.2.2, 4.2.10, 5.1.1, 5.1.2, 13.2.1  
Responsibility for Those Performing the Work  
3.3.2, 3.18, 4.2.3, 5.3, 6.1.3, 6.2, 6.3, 9.5.1, 10  
Retainage  
9.3.1, 9.6.2, 9.8.5, 9.9.1, 9.10.2, 9.10.3  
**Review of Contract Documents and Field Conditions by Contractor 3.2**, 3.12.7, 6.1.3  
Review of Contractor's Submittals by Owner and Architect  
3.10.1, 3.10.2, 3.11, 3.12, 4.2, 5.2, 6.1.3, 9.2, 9.8.2  
Review of Shop Drawings, Product Data and Samples by Contractor  
3.12

**Rights and Remedies**  
1.1.2, 2.3, 2.4, 3.5, 3.7.4, 3.15.2, 4.2.6, 5.3, 5.4, 6.1, 6.3, 7.3.1, 8.3, 9.5.1, 9.7, 10.2.5, 10.3, 12.2.2, 12.2.4, 13.4, 14, 15.4  
**Royalties, Patents and Copyrights 3.17**  
Rules and Notices for Arbitration  
15.4.1  
**Safety of Persons and Property 10.2**, 10.4  
**Safety Precautions and Programs**  
3.3.1, 4.2.2, 4.2.7, 5.3, 10.1, 10.2, 10.4  
**Samples, Definition of 3.12.3**  
**Samples, Shop Drawings, Product Data and 3.11**, 3.12, 4.2.7  
**Samples at the Site, Documents and 3.11**  
**Schedule of Values 9.2**, 9.3.1  
Schedules, Construction  
3.10, 3.12.1, 3.12.2, 6.1.3, 15.1.5.2  
Separate Contracts and Contractors  
1.1.4, 3.12.5, 3.14.2, 4.2.4, 4.2.7, 6, 8.3.1, 12.1.2  
**Shop Drawings, Definition of 3.12.1**  
**Shop Drawings, Product Data and Samples 3.11**, 3.12, 4.2.7  
**Site, Use of 3.13**, 6.1.1, 6.2.1  
Site Inspections  
3.2.2, 3.3.3, 3.7.1, 3.7.4, 4.2, 9.4.2, 9.10.1, 13.5  
Site Visits, Architect's  
3.7.4, 4.2.2, 4.2.9, 9.4.2, 9.5.1, 9.9.2, 9.10.1, 13.5  
Special Inspections and Testing  
4.2.6, 12.2.1, 13.5  
**Specifications, Definition of 1.1.6**  
**Specifications**  
1.1.1, 1.1.6, 1.2.2, 1.5, 3.11, 3.12.10, 3.17, 4.2.14  
Statute of Limitations  
13.7, 15.4.1.1  
Stopping the Work  
2.3, 9.7, 10.3, 14.1  
Stored Materials  
6.2.1, 9.3.2, 10.2.1.2, 10.2.4  
**Subcontractor, Definition of 5.1.1**  
**SUBCONTRACTORS 5**  
Subcontractors, Work by  
1.2.2, 3.3.2, 3.12.1, 4.2.3, 5.2.3, 5.3, 5.4, 9.3.1.2, 9.6.7  
**Subcontractual Relations 5.3**, 5.4, 9.3.1.2, 9.6, 9.10, 10.2.1, 14.1, 14.2.1

Submittals  
3.10, 3.11, 3.12, 4.2.7, 5.2.1, 5.2.3, 7.3.7, 9.2, 9.3, 9.8, 9.9.1, 9.10.2, 9.10.3, 11.1.3  
Submittal Schedule  
3.10.2, 3.12.5, 4.2.7  
**Subrogation, Waivers of**  
6.1.1, **11.3.7**  
**Substantial Completion**  
4.2.9, 8.1.1, 8.1.3, 8.2.3, 9.4.2, **9.8**, 9.9.1, 9.10.3, 12.2, 13.7  
**Substantial Completion**, Definition of  
**9.8.1**  
Substitution of Subcontractors  
5.2.3, 5.2.4  
Substitution of Architect  
4.1.3  
Substitutions of Materials  
3.4.2, 3.5, 7.3.8  
**Sub-subcontractor**, Definition of  
**5.1.2**  
Subsurface Conditions  
3.7.4  
**Successors and Assigns**  
**13.2**  
**Superintendent**  
**3.9**, 10.2.6  
**Supervision and Construction Procedures**  
1.2.2, **3.3**, 3.4, 3.12.10, 4.2.2, 4.2.7, 6.1.3, 6.2.4, 7.1.3, 7.3.7, 8.2, 8.3.1, 9.4.2, 10, 12, 14, 15.1.3  
Surety  
5.4.1.2, 9.8.5, 9.10.2, 9.10.3, 14.2.2, 15.2.7  
Surety, Consent of  
9.10.2, 9.10.3  
Surveys  
2.2.3  
**Suspension by the Owner for Convenience**  
**14.3**  
Suspension of the Work  
5.4.2, 14.3  
Suspension or Termination of the Contract  
5.4.1.1, 14  
**Taxes**  
3.6, 3.8.2.1, 7.3.7.4  
**Termination by the Contractor**  
**14.1**, 15.1.6  
**Termination by the Owner for Cause**  
5.4.1.1, **14.2**, 15.1.6  
**Termination by the Owner for Convenience**  
**14.4**  
Termination of the Architect  
4.1.3  
Termination of the Contractor  
14.2.2  
**TERMINATION OR SUSPENSION OF THE CONTRACT**  
**14**

**Tests and Inspections**  
3.1.3, 3.3.3, 4.2.2, 4.2.6, 4.2.9, 9.4.2, 9.8.3, 9.9.2, 9.10.1, 10.3.2, 11.4.1, 12.2.1, **13.5**  
**TIME**  
**8**  
**Time, Delays and Extensions of**  
3.2.4, 3.7.4, 5.2.3, 7.2.1, 7.3.1, 7.4, **8.3**, 9.5.1, 9.7, 10.3.2, 10.4, 14.3.2, 15.1.5, 15.2.5  
Time Limits  
2.1.2, 2.2, 2.4, 3.2.2, 3.10, 3.11, 3.12.5, 3.15.1, 4.2, 5.2, 5.3, 5.4, 6.2.4, 7.3, 7.4, 8.2, 9.2, 9.3.1, 9.3.3, 9.4.1, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10, 11.1.3, 12.2, 13.5, 13.7, 14, 15.1.2, 15.4  
**Time Limits on Claims**  
3.7.4, 10.2.8, **13.7**, 15.1.2  
Title to Work  
9.3.2, 9.3.3  
**Transmission of Data in Digital Form**  
**1.6**  
**UNCOVERING AND CORRECTION OF WORK**  
**12**  
**Uncovering of Work**  
**12.1**  
Unforeseen Conditions, Concealed or Unknown  
3.7.4, 8.3.1, 10.3  
Unit Prices  
7.3.3.2, 7.3.4  
Use of Documents  
1.1.1, 1.5, 2.2.5, 3.12.6, 5.3  
**Use of Site**  
**3.13**, 6.1.1, 6.2.1  
**Values, Schedule of**  
**9.2**, 9.3.1  
Waiver of Claims by the Architect  
13.4.2  
Waiver of Claims by the Contractor  
9.10.5, 13.4.2, 15.1.6  
Waiver of Claims by the Owner  
9.9.3, 9.10.3, 9.10.4, 12.2.2.1, 13.4.2, 14.2.4, 15.1.6  
Waiver of Consequential Damages  
14.2.4, 15.1.6  
Waiver of Liens  
9.10.2, 9.10.4  
**Waivers of Subrogation**  
6.1.1, **11.3.7**  
**Warranty**  
3.5, 4.2.9, 9.3.3, 9.8.4, 9.9.1, 9.10.4, 12.2.2, 13.7  
Weather Delays  
15.1.5.2  
**Work**, Definition of  
**1.1.3**  
Written Consent  
1.5.2, 3.4.2, 3.7.4, 3.12.8, 3.14.2, 4.1.2, 9.3.2, 9.8.5, 9.9.1, 9.10.2, 9.10.3, 11.4.1, 13.2, 13.4.2, 15.4.4.2  
Written Interpretations  
4.2.11, 4.2.12

Written Notice

2.3, 2.4, 3.3.1, 3.9, 3.12.9, 3.12.10, 5.2.1, 8.2.2, 9.7, 9.10, 10.2.2, 10.3, 11.1.3, 12.2.2, 12.2.4, **13.3**, 14, 15.4.1

Written Orders

1.1.1, 2.3, 3.9, 7, 8.2.2, 12.1, 12.2, 13.5.2, 14.3.1, 15.1.2



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## **ARTICLE 1 GENERAL PROVISIONS**

### **§ 1.1 BASIC DEFINITIONS**

#### **§ 1.1.1 THE CONTRACT DOCUMENTS**

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

#### **§ 1.1.2 THE CONTRACT**

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

#### **§ 1.1.3 THE WORK**

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

#### **§ 1.1.4 THE PROJECT**

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

#### **§ 1.1.5 THE DRAWINGS**

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

#### **§ 1.1.6 THE SPECIFICATIONS**

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

#### **§ 1.1.7 INSTRUMENTS OF SERVICE**

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

#### **§ 1.1.8 INITIAL DECISION MAKER**

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

### **§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS**

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

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

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

### § 1.3 CAPITALIZATION

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

### § 1.4 INTERPRETATION

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

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

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

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

### § 1.6 TRANSMISSION OF DATA IN DIGITAL FORM

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

## ARTICLE 2 OWNER

### § 2.1 GENERAL

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

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

### § 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

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

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

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

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

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

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

### § 2.3 OWNER'S RIGHT TO STOP THE WORK

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

### § 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

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

## ARTICLE 3 CONTRACTOR

### § 3.1 GENERAL

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

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

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

## § 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

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

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

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

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

## § 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

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

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

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

## § 3.4 LABOR AND MATERIALS

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

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

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

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

### § 3.5 WARRANTY

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

### § 3.6 TAXES

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

### § 3.7 PERMITS, FEES, NOTICES AND COMPLIANCE WITH LAWS

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

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

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

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

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

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

### § 3.8 ALLOWANCES

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

§ 3.8.2 Unless otherwise provided in the Contract Documents,

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

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

### § 3.9 SUPERINTENDENT

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

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

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

### § 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

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

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

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

### § 3.11 DOCUMENTS AND SAMPLES AT THE SITE

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

### § 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

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

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

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

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

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

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

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

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

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

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

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

### § 3.13 USE OF SITE

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

### § 3.14 CUTTING AND PATCHING

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

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

### § 3.15 CLEANING UP

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

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

### § 3.16 ACCESS TO WORK

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

### § 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

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

### § 3.18 INDEMNIFICATION

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

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

## ARTICLE 4 ARCHITECT

### § 4.1 GENERAL

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

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

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

### § 4.2 ADMINISTRATION OF THE CONTRACT

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

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

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

#### § 4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

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

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

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

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

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

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

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

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

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

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

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

## ARTICLE 5 SUBCONTRACTORS

### § 5.1 DEFINITIONS

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

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

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

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

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

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

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

### § 5.3 SUBCONTRACTUAL RELATIONS

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

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

#### § 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

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

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

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

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

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

#### ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

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

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

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

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

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

##### § 6.2 MUTUAL RESPONSIBILITY

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

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

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

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

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

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

### § 6.3 OWNER'S RIGHT TO CLEAN UP

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

## ARTICLE 7 CHANGES IN THE WORK

### § 7.1 GENERAL

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

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

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

### § 7.2 CHANGE ORDERS

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

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

### § 7.3 CONSTRUCTION CHANGE DIRECTIVES

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

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

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

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

.4 As provided in Section 7.3.7.

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

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

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

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

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

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

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

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

#### § 7.4 MINOR CHANGES IN THE WORK

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

## ARTICLE 8 TIME

### § 8.1 DEFINITIONS

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

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

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

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

### § 8.2 PROGRESS AND COMPLETION

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

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

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

### § 8.3 DELAYS AND EXTENSIONS OF TIME

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

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

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

## ARTICLE 9 PAYMENTS AND COMPLETION

### § 9.1 CONTRACT SUM

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

### § 9.2 SCHEDULE OF VALUES

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

### § 9.3 APPLICATIONS FOR PAYMENT

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

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

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

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

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

#### § 9.4 CERTIFICATES FOR PAYMENT

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

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

#### § 9.5 DECISIONS TO WITHHOLD CERTIFICATION

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

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

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

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

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

### § 9.6 PROGRESS PAYMENTS

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

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

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

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

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

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

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

### § 9.7 FAILURE OF PAYMENT

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount certified by the Architect or awarded by binding

dispute resolution, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, plus interest as provided for in the Contract Documents.

## § 9.8 SUBSTANTIAL COMPLETION

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

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

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

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

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

## § 9.9 PARTIAL OCCUPANCY OR USE

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

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

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

## § 9.10 FINAL COMPLETION AND FINAL PAYMENT

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

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

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

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

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

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

## ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

### § 10.1 SAFETY PRECAUTIONS AND PROGRAMS

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

### § 10.2 SAFETY OF PERSONS AND PROPERTY

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

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and

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

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

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

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

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

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

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

### § 10.2.8 INJURY OR DAMAGE TO PERSON OR PROPERTY

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

### § 10.3 HAZARDOUS MATERIALS

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

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

extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up.

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

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

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

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

#### § 10.4 EMERGENCIES

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

### ARTICLE 11 INSURANCE AND BONDS

#### § 11.1 CONTRACTOR'S LIABILITY INSURANCE

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

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

§ 11.1.2 The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the

Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

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

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

#### § 11.2 OWNER'S LIABILITY INSURANCE

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

#### § 11.3 PROPERTY INSURANCE

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

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

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

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

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

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

### § 11.3.2 BOILER AND MACHINERY INSURANCE

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

### § 11.3.3 LOSS OF USE INSURANCE

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

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

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

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

### § 11.3.7 WAIVERS OF SUBROGATION

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

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

§ 11.3.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Agreement between the Owner and Contractor. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.

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

#### § 11.4 PERFORMANCE BOND AND PAYMENT BOND

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

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

### ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

#### § 12.1 UNCOVERING OF WORK

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

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

#### § 12.2 CORRECTION OF WORK

##### § 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

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

##### § 12.2.2 AFTER SUBSTANTIAL COMPLETION

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

nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4.

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

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

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

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

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

### § 12.3 ACCEPTANCE OF NONCONFORMING WORK

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

## ARTICLE 13 MISCELLANEOUS PROVISIONS

### § 13.1 GOVERNING LAW

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

### § 13.2 SUCCESSORS AND ASSIGNS

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

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

### § 13.3 WRITTEN NOTICE

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

### § 13.4 RIGHTS AND REMEDIES

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

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

### § 13.5 TESTS AND INSPECTIONS

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

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

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

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

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

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

### § 13.6 INTEREST

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

### § 13.7 TIME LIMITS ON CLAIMS

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

## ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

### § 14.1 TERMINATION BY THE CONTRACTOR

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

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

- .2 An act of government, such as a declaration of national emergency that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor promptly, upon the Contractor's request, reasonable evidence as required by Section 2.2.1.

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

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

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

#### § 14.2 TERMINATION BY THE OWNER FOR CAUSE

§ 14.2.1 The Owner may terminate the Contract if the Contractor

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

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

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

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

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

### § 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

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

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

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

### § 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

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

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

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

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

## ARTICLE 15 CLAIMS AND DISPUTES

### § 15.1 CLAIMS

#### § 15.1.1 DEFINITION

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

#### § 15.1.2 NOTICE OF CLAIMS

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

#### § 15.1.3 CONTINUING CONTRACT PERFORMANCE

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

#### § 15.1.4 CLAIMS FOR ADDITIONAL COST

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

#### § 15.1.5 CLAIMS FOR ADDITIONAL TIME

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

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

#### § 15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES

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

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

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

#### § 15.2 INITIAL DECISION

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

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

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

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

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

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

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

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

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

### § 15.3 MEDIATION

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

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

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

### § 15.4 ARBITRATION

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

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

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

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

### § 15.4.4 CONSOLIDATION OR JOINDER

§ 15.4.4.1 Either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration

permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

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

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



DIVISION 0 – BIDDING AND CONTRACT REQUIREMENTS  
Section 00 22 13 – Supplementary Instructions to Bidders

1.1 INSTRUCTIONS TO BIDDERS

- A. Instructions to Bidders for Project consist of the following:
  - 1. AIA Document A701, "Instructions to Bidders" a copy of which is bound in this Project Manual.
  - 2. The following Supplementary Instructions to Bidders that modify and add to the requirements of the Instructions to Bidders.

1.2 SUPPLEMENTARY INSTRUCTIONS TO BIDDERS, GENERAL

- A. The following supplements modify AIA Document A701, "Instructions to Bidders." Where a portion of the Instructions to Bidders is modified or deleted by these Supplementary Instructions to Bidders, unaltered portions of the Instructions to Bidders shall remain in effect.

1.3 ARTICLE 2 - BIDDER'S REPRESENTATIONS

- A. Add Section 2.1.3.1:
  - 1. 2.1.3.1 - The Bidder has investigated all required fees, permits, and regulatory requirements of authorities having jurisdiction and has properly included in the submitted bid the cost of such fees, permits, and requirements not otherwise indicated as provided by Owner.
- B. Add Section 2.1.5:
  - 1. 2.1.5 - The Bidder is a properly licensed Contractor according to the laws and regulations of the local and state jurisdictions and meets qualifications indicated in the Procurement and Contracting Documents.
- C. Add Section 2.1.6:
  - 1. 2.1.6 - The Bidder has incorporated into the Bid adequate sums for work performed by installers whose qualifications meet those indicated in the Procurement and Contracting Documents.

1.4 ARTICLE 3 - BIDDING DOCUMENTS

- A. 3.4 - Addenda:
  - 1. Delete Section 3.4.3 and replace with the following:
    - a. 3.4.3 - Addenda may be issued at any time prior to the receipt of bids.

2. Add Section 3.4.4.1:
  - a. 3.4.4.1 - Owner may elect to waive the requirement for acknowledging receipt of 3.4.4 Addenda as follows:
    - 1) 3.4.4.1.1 - Information received as part of the Bid indicates that the Bid, as submitted, reflects modifications to the Procurement and Contracting Documents included in an unacknowledged Addendum.
    - 2) 3.4.4.1.2 - Modifications to the Procurement and Contracting Documents in an unacknowledged Addendum do not, in the opinion of Owner, affect the Contract Sum or Contract Time.

## 1.5 ARTICLE 4 - BIDDING PROCEDURES

- A. 4.1 - Preparation of Bids:
  1. Add Section 4.1.9:
    - a. 4.1.9 - Owner may elect to disqualify a bid due to failure to submit a bid in the form requested, failure to bid requested alternates or unit prices, failure to complete entries in all blanks in the Bid Form, or inclusion by the Bidder of any alternates, conditions, limitations or provisions not called for.
- B. 4.3 - Submission of Bids:
  1. Add Section 4.3.1.2:
    - a. 4.3.1.2 - Include Bidder's Contractor License Number applicable in Project jurisdiction on the face of the sealed bid envelope.
- C. 4.4 - Modification or Withdrawal of Bids:
  1. Add the following sections to 4.4.2:
    - a. 4.4.2.1 - Such modifications to or withdrawal of a bid may only be made by persons authorized to act on behalf of the Bidder. Authorized persons are those so identified in the Bidder's corporate bylaws, specifically empowered by the Bidder's charter or similar legally binding document acceptable to Owner, or by a power of attorney, signed and dated, describing the scope and limitations of the power of attorney. Make such documentation available to Owner at the time of seeking modifications or withdrawal of the Bid.
    - b. 4.4.2.2 - Owner will consider modifications to a bid written on the sealed bid envelope by authorized persons when such modifications comply with the following: the modification is indicated by a percent or stated amount to be added to or deducted from the Bid; the amount of the Bid itself is not made known by the modification; a signature of the authorized person, along with the time and date of the modification, accompanies the modification. Completion of an unsealed bid form, awaiting final figures from the Bidder, does not require power

of attorney due to the evidenced authorization of the Bidder implied by the circumstance of the completion and delivery of the Bid.

1.6 ARTICLE 5 - CONSIDERATION OF BIDS

A. 5.2 - Rejection of Bids:

1. Add Section 5.2.1:

- a. 5.2.1 - Owner reserves the right to reject a bid based on Owner's and Engineer's evaluation of qualification information submitted following opening of bids. Owner's evaluation of the Bidder's qualifications will include: status of licensure and record of compliance with licensing requirements, record of quality of completed work, record of Project completion and ability to complete, record of financial management including financial resources available to complete Project and record of timely payment of obligations, record of Project site management including compliance with requirements of authorities having jurisdiction, record of and number of current claims and disputes and the status of their resolution, and qualifications of the Bidder's proposed Project staff and proposed subcontractors.

1.7 ARTICLE 6 - POSTBID INFORMATION

A. 6.1 - Contractor's Qualification Statement:

1. Add Section 6.1.1:

- a. 6.1.1 - Submit Contractor's Qualification Statement no later than five days after the bid submittal.

1.8 ARTICLE 7 - PERFORMANCE BOND

A. 7.1 - Bond Requirements:

1. Add Section 7.1.1.1:

- a. 7.1.1.1 – A Performance Bond will be required, in an amount equal to 100 percent of the Contract Sum.

B. 7.2 - Time of Delivery and Form of Bonds:

1. Delete the first sentence of Section 7.2.1 and insert the following:

- a. The Bidder shall deliver the required bonds to Owner no later than 10 days after the date of Notice of Intent to Award and no later than the date of execution of the Contract, whichever occurs first. Owner may deem the failure of the Bidder to deliver required bonds within the period of time allowed a default.

2. Delete Section 7.2.3 and insert the following:

- a. 7.2.3 - Bonds shall be executed and be in force on the date of the execution of the Contract.

1.9 ARTICLE 8 - FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

- A. The form of agreement between Owner and Contractor is included in specifications and is bound in this project manual.

1.10 ARTICLE 9 - EXECUTION OF THE CONTRACT

- A. Add Article 9:

1. 9.1.1 - Subsequent to the Notice of Intent to Award, and within 10 days after the prescribed Form of Agreement is presented to the Awardee for signature, the Awardee shall execute and deliver the Agreement to Owner, in such number of counterparts as Owner may require.
2. 9.1.2 - Owner may deem as a default the failure of the Awardee to execute the Contract and to supply the required bonds when the Agreement is presented for signature within the period of time allowed.
3. 9.1.3 - Unless otherwise indicated in the Procurement and Contracting Documents or the executed Agreement, the date of commencement of the Work shall be the date of the executed Agreement or the date that the Bidder is obligated to deliver the executed Agreement and required bonds to Owner.
4. 9.1.4 - In the event of a default, Owner may declare the amount of the Bid security forfeited and elect to either award the Contract to the next responsible bidder or re-advertise for bids.

END OF DOCUMENT 00 22 13

DIVISION 0 – BIDDING AND CONTRACT REQUIREMENTS  
Section 00 22 44 - Additional Insurance Requirements

1.1 INSURANCE

The Contractor shall purchase and maintain insurance as required in the current edition of the Standard Form of Agreement Between Owner and Contractor where the Basis of Payment is a Stipulated Sum, AIA Document A101 and the General Condition of the Contract for Construction, AIA Document A201 as modified by these specifications, AIA General Conditions and Supplements to the AIA General Conditions, Article 11

- A. All of the above documents shall be thoroughly studied prior to purchases of an insurance policy to cover the Project.
- B. While not limited to the following requirements, the requirements listed below are brought to the Contractors Specific attention.
  - 1) Champaign County, and the Architect/Engineer shall be named as additional insureds on the Commercial General Liability Policy and the Umbrella Liability Policy.
  - 2) Waivers of Subrogation are required for both Property Insurance and for Liability Insurance.

1.2 ADDITIONAL LIABILITY INSURANCE REQUIREMENTS

In addition to the liability insurance requirements noted in Paragraph 1.01 above, the following requirements also apply:

- A. The Contractor shall purchase and maintain a Commercial General Liability Policy which shall include the following coverage areas:
  - 1) Operations of the Contractor - direct liability coverage for the Contractors activities at a permanent location and the Project Site;
  - 2) Operations of Subcontractors - Liability coverage for those entities for which the Contractor has a duty to supervise and stand legally responsible for their conduct;
  - 3) Completed Operations - Liability for property damage and bodily injury and death that occurs after Substantial Completion;
  - 4) Personal Injury - Including but not limited to, libel, slander, defamation of character, wrongful eviction, right of private occupancy, false arrest and detention and other similar personal injuries;
  - 5) Employees as Additional Insured - Include employees and their acts into the coverage;
  - 6) Explosion, Collapse, Underground - Liability coverage for the property of others to include, but not limited to, unknown utilities; and
  - 7) Contractual Liability - coverage for the assumption of others by Contract.
- B. The Commercial General Liability Policy shall name Champaign County, the Architect, the Architect's Consultants, their agents and employees as additional insured.
- C. The Contractor shall purchase and maintain Workers Compensation and Employees Liability Insurance.
- D. The Contractor shall purchase and maintain commercial Automobile Liability Insurance. This policy shall cover Owned, Non-owned and Hired vehicles.
- E. The Contractor shall purchase and maintain Umbrella Liability Coverage to provide higher limits of

liability above those required for General Liability, Employers Liability and Automobile Liability.

- F. The Umbrella Liability Policy shall name Champaign County, the Architect, the Architect's Consultants, their agents and employees as additional insured.
- G. The Contractor shall purchase and maintain Owners Liability Insurance (Owners Protection Liability) which shall cover the Owners liability for all injuries and damages arising from the Project. This policy shall name the Architect and the Architect's Consultants, their agents and employees as additional insured.
- H. Liability limits shall be as specified herein or the maximum exposure as stated in the Government Tort Claims Acts as most recently amended, whichever is higher.
- I. The minimum amount of coverage and the limits of liability shall be as specified below:
  - 1) Claims under workers' or workman's compensation, disability benefit and other similar employee benefit acts which are applicable to the Work to be performed:
    - a. As required by law.
  - 2) Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees:
    - a. \$1,000,000.00
  - 3) Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees:
    - a. \$ 500,000.00
  - 4) Claims for damages insured by usual personal injury liability coverage which are sustained (1) by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor, or (2) by another person:
    - a. \$1,000,000.00
  - 5) Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom:
    - a. \$ 500,000.00
  - 6) Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle:
    - a. \$1,000,000.00
  - 7) Claims involving contractual liability insurance applicable to the Contractor's obligations under Paragraph 3.18 of the General Conditions for the Contract for Construction as modified:
    - a. \$ 500,000.00

1.3 SUBMITTAL REQUIREMENTS

- A. Submit ACORD 25-S form along with the signed Agreement Between Owner and Contractor.
- B. Champaign County shall be listed as Certificate Holder.
- C. Include the following sentence under Special Items:

**"The Certificate Holder is Champaign County, Architect, Architect's Consultants, including their Agents and Employees are named as additional insured's in both the General and Umbrella Liability Policy. Waivers of Subrogation are in effect for both liability and property insurance policies."**

1.4 LOSS OF USE INSURANCE

- A. The Owner, at the Owners option, may purchase and maintain such insurance that will protect the Owner against the loss of use of this property.

END OF SECTION 00 22 44

DIVISION 0 – BIDDING AND CONTRACT REQUIREMENTS  
Section 00 25 13 – Prebid Meeting

1.1 PREBID MEETING

- A. There will be a Prebid meeting as indicated below:
  - 1. Meeting Date: X x, 2016
  - 2. Meeting Time: 10:00 a.m. CST.
  - 3. Location: Brookens Administrative Center, 1776 East Washington Street, Urbana, IL 61802.
  
- B. Bidder Questions: Submit written questions to be addressed at Prebid meeting minimum of two business days prior to meeting.
  
- C. Agenda: Prebid meeting agenda will include review of topics that may affect proper preparation and submittal of bids, including the following:
  - 1. Procurement and Contracting Requirements:
    - a. Instructions to Bidders.
    - b. Bidder Qualifications.
    - c. Bonding.
    - d. Insurance.
    - e. Bid Form and Attachments.
    - f. Bid Submittal Requirements.
    - g. Notice of Award.
  
  - 2. Communication during Bidding Period:
    - a. Obtaining documents.
    - b. Bidder's Requests for Information.
    - c. Bidder's Substitution Request/Prior Approval Request.
    - d. Addenda.
  
  - 3. Contracting Requirements:
    - a. Agreement.
    - b. The General Conditions.
    - c. The Supplementary Conditions.
    - d. Other Owner requirements.
  
  - 4. Construction Documents:
    - a. Scopes of Work.
    - b. Temporary Facilities.
    - c. Use of Site.
    - d. Work Restrictions.
    - e. Unit Price.
    - f. Substitutions following award.

5. Schedule:
    - a. Project Schedule.
    - b. Contract Time.
    - c. Other Bidder Questions.
  6. Site/facility visit or walkthrough.
  7. Post-Meeting Addendum.
- D. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes to attendees of prebid meeting only. Minutes of meeting are issued as Available Information and do not constitute a modification to the Procurement and Contracting Documents. Modifications to the Procurement and Contracting Documents are issued by written Addendum only.
1. Sign-in Sheet: Minutes will include list of meeting attendees.

END OF DOCUMENT 00 25 13

**RETURN WITH BID**

DIVISION 0 - BIDDING & CONTRACT REQUIREMENTS  
Document 00 41 06 – Bid Bond

\_\_\_\_\_  
\_\_\_\_\_  
as Principal, and  
a corporation of the State of \_\_\_\_\_  
as Surety, are held and firmly bound unto the State of Illinois in the amount of ten percent (10%) of the amount of the base bid  
for the payment of which Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns,  
jointly and severally, to this agreement.

Principal has submitted to Obligea a bid to enter into a written contract, for

Project Number: \_\_\_\_\_ Division of Work: \_\_\_\_\_  
in accordance with bidding documents for the project, which contract is by reference made a part hereof and is hereinafter  
referred to as "the Contract".

THE CONDITION OF THIS OBLIGATION is that if Principal, upon acceptance by Obligea of its bid within the period of time  
specified for acceptance, shall comply with all post award requirements as required by the terms of the bid within the time  
specified after date of the Notice of Award, or in the event of the failure to comply with all post award requirements, if Principal  
shall pay Obligea (1) for all costs of procuring the work which exceeds the amount of its bid, or (2) shall pay Obligea the  
amount of this bond as liquidated damages in the event Principal is a sole bidder and after an attempt to secure other bids by  
re-advertising none can be obtained, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

Surety hereby agrees that its obligation shall not be impaired by any extensions of time for Obligea's acceptance or  
compliance with post award requirements. Surety hereby waives notice of such extensions.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
CONTRACTOR  
  
BY \_\_\_\_\_  
SIGNATURE  
  
Title \_\_\_\_\_

\_\_\_\_\_  
SURETY  
  
BY \_\_\_\_\_  
OFFICER OF THE SURETY  
  
Title \_\_\_\_\_

ATTEST:

\_\_\_\_\_  
CORPORATE SECRETARY (Corporations only)

JURAT (Notary's Statement Authenticating Signature)

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_  
I, \_\_\_\_\_

\_\_\_\_\_, a Notary Public in and for said county, do hereby certify that

**(Insert Name of Attorney-In-Fact for SURETY)**

who is personally known to me to be the same person whose name is subscribed to the foregoing instrument on behalf of  
SURETY, appeared before me this day in person and acknowledged respectively, that he/she signed, sealed, and delivered  
said instrument as his/her free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this \_\_\_\_\_ DAY OF \_\_\_\_\_ A.D. 20 \_\_\_\_\_

My commission expires \_\_\_\_\_

Notary Signature \_\_\_\_\_

DIVISION 0 – BIDDING AND CONTRACT REQUIREMENTS  
Section 00 41 13 – Bid Form – Stipulated Sum (Single-Prime Contract)

1.1 BID INFORMATION

- A. Bidder: \_\_\_\_\_.
- B. Project Name: Champaign County Interior ADA Upgrades
- C. Project Location: Brookens Administrative Center, 1776 East Washington St., Urbana, IL 61801  
Champaign County Courthouse, 101 East Main St., Urbana, IL 61801
- D. Owner: Champaign County

1.2 CERTIFICATIONS AND BASE BID

- A. Base Bid, Single-Prime (All Trades) Contract: The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by Bailey Edward Design, Inc., 1103 S. Mattis Avenue, Champaign, IL 61821, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, including all scheduled allowances, necessary to complete the construction of the above-named project, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:

- 1. \_\_\_\_\_ Dollars  
(\$\_\_\_\_\_).

1.3 SUBCONTRACTORS AND SUPPLIERS

- A. The following companies shall execute subcontracts for the portions of the Work indicated:

- 1. Plumbing: \_\_\_\_\_.

1.4 TIME OF COMPLETION (Base Bid only)

- A. The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date specified in a written Notice to Proceed to be issued by Owner and shall fully complete the Work in \_\_\_\_\_ calendar days.

1.5 ACKNOWLEDGEMENT OF ADDENDA

- A. The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:

- 1. Addendum No. 1, dated \_\_\_\_\_.
- 2. Addendum No. 2, dated \_\_\_\_\_.
- 3. Addendum No. 3, dated \_\_\_\_\_.
- 4. Addendum No. 4, dated \_\_\_\_\_.

1.6 SUBMISSION OF BID

A. In submitting the Bid, the under signed agree that this Proposal will not be withdrawn for a period of thirty (30) calendar days from the date of submission. It is understood the right all Bids and to waive informalities and irregularities.

1. Respectfully submitted this \_\_\_\_ day of \_\_\_\_\_, 2016.
2. Submitted By : \_\_\_\_\_  
(Name of bidding firm or corporation).
3. Authorized Signature : \_\_\_\_\_  
(Handwritten signature).
4. Signed By : \_\_\_\_\_  
(Type or print name).
5. Title : \_\_\_\_\_  
(Owner/Partner/President/Vice President).
6. Witness By : \_\_\_\_\_  
(Handwritten signature).
7. Attest : \_\_\_\_\_  
(Handwritten signature).
8. By : \_\_\_\_\_  
(Type or print name).
9. Title : \_\_\_\_\_  
(Corporate Secretary or Assistant Secretary).
10. Street Address: \_\_\_\_\_.
11. City, State, Zip: \_\_\_\_\_.
12. Phone: \_\_\_\_\_.
13. License No.: \_\_\_\_\_.
14. Federal ID No. : \_\_\_\_\_ (Affix Corporate Seal Here).

END OF DOCUMENT 00 41 13

## CONTRACTOR QUALIFICATIONS

Bidder shall submit with bid a list of ten (10) (minimum) similar projects completed by the bidder within the last 5 years in the State of Illinois.

Project \_\_\_\_\_ Location \_\_\_\_\_  
Year Completed \_\_\_\_\_ Contact \_\_\_\_\_  
Owner Phone Number \_\_\_\_\_ Contract Amount \_\_\_\_\_  
Project Details \_\_\_\_\_  
\_\_\_\_\_

Project \_\_\_\_\_ Location \_\_\_\_\_  
Year Completed \_\_\_\_\_ Contact \_\_\_\_\_  
Owner Phone Number \_\_\_\_\_ Contract Amount \_\_\_\_\_  
Project Details \_\_\_\_\_  
\_\_\_\_\_

Project \_\_\_\_\_ Location \_\_\_\_\_  
Year Completed \_\_\_\_\_ Contact \_\_\_\_\_  
Owner Phone Number \_\_\_\_\_ Contract Amount \_\_\_\_\_  
Project Details \_\_\_\_\_  
\_\_\_\_\_

Project \_\_\_\_\_ Location \_\_\_\_\_  
Year Completed \_\_\_\_\_ Contact \_\_\_\_\_  
Owner Phone Number \_\_\_\_\_ Contract Amount \_\_\_\_\_  
Project Details \_\_\_\_\_  
\_\_\_\_\_

Project \_\_\_\_\_

Location \_\_\_\_\_

Year Completed \_\_\_\_\_

Contact \_\_\_\_\_

Owner Phone Number \_\_\_\_\_

Contract Amount \_\_\_\_\_

Project Details \_\_\_\_\_

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Project \_\_\_\_\_

Location \_\_\_\_\_

Year Completed \_\_\_\_\_

Contact \_\_\_\_\_

Owner Phone Number \_\_\_\_\_

Contract Amount \_\_\_\_\_

Project Details \_\_\_\_\_

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Project \_\_\_\_\_

Location \_\_\_\_\_

Year Completed \_\_\_\_\_

Contact \_\_\_\_\_

Owner Phone Number \_\_\_\_\_

Contract Amount \_\_\_\_\_

Project Details \_\_\_\_\_

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Project \_\_\_\_\_

Location \_\_\_\_\_

Year Completed \_\_\_\_\_

Contact \_\_\_\_\_

Owner Phone Number \_\_\_\_\_

Contract Amount \_\_\_\_\_

Project Details \_\_\_\_\_

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Project \_\_\_\_\_

Location \_\_\_\_\_

Year Completed \_\_\_\_\_

Contact \_\_\_\_\_

Owner Phone Number \_\_\_\_\_

Contract Amount \_\_\_\_\_

Project Details \_\_\_\_\_

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Project \_\_\_\_\_

Location \_\_\_\_\_

Year Completed \_\_\_\_\_

Contact \_\_\_\_\_

Owner Phone Number \_\_\_\_\_

Contract Amount \_\_\_\_\_

Project Details \_\_\_\_\_

Project \_\_\_\_\_

Location \_\_\_\_\_

Year Completed \_\_\_\_\_

Contact \_\_\_\_\_

Owner Phone Number \_\_\_\_\_

Contract Amount \_\_\_\_\_

Project Details \_\_\_\_\_

Project \_\_\_\_\_

Location \_\_\_\_\_

Year Completed \_\_\_\_\_

Contact \_\_\_\_\_

Owner Phone Number \_\_\_\_\_

Contract Amount \_\_\_\_\_

Project Details \_\_\_\_\_

Project \_\_\_\_\_

Location \_\_\_\_\_

Year Completed \_\_\_\_\_

Contact \_\_\_\_\_

Owner Phone Number \_\_\_\_\_

Contract Amount \_\_\_\_\_

Project Details \_\_\_\_\_

Project \_\_\_\_\_

Location \_\_\_\_\_

Year Completed \_\_\_\_\_

Contact \_\_\_\_\_

Owner Phone Number \_\_\_\_\_

Contract Amount \_\_\_\_\_

Project Details \_\_\_\_\_



C. PARTNERSHIP

The Partners are as follows (attach additional sheets if necessary):

_____	_____
Name	Address
_____	_____
Name	Address
_____	_____
Name	Address
_____	_____
Name	Address

The business address is: \_\_\_\_\_

D. INDIVIDUAL PROPRIETORSHIP

The business address is: \_\_\_\_\_

Business Telephone: \_\_\_\_\_

My home address is: \_\_\_\_\_

Home Telephone: \_\_\_\_\_

E. Under penalty of perjury \_\_\_\_\_

(Contractor's Name)

Certifies that \_\_\_\_\_ (FEIN / SSN)  
is its correct Federal Taxpayer Identification Number, or in the case of an individual or sole proprietorship, Social Security Number.

**NON-DISCRIMINATION STATEMENT**

The Contractor does not and will not engage in discriminatory practices; the Contractor does not and will not engage in discrimination because of race, sex, age, religion, national origin or sensory, mental, or physical handicap in hiring or firing; and the Contractor is, in fact, an equal opportunity employer.

**NON-COLLUSION STATEMENT**

A. That the only persons or corporations interested with \_\_\_\_\_  
(Name of Bidder)  
in the delivery of the materials and/or services bid upon under the Contract other than its officers,  
directors, shareholders and employees are:

_____ Name	_____ Address

- B. That the said Bid is made without any connection or common interest in the profits with any other persons making any Bid or Proposal for said Work except as listed above.
- C. That this Contract is in all respects fair and entered into without collusion or fraud.
- D. That no employee or any officer of the Owner has any financial interest, directly or indirectly, in the award of this Bid to Bidder except as listed above.
- E. That the Bidder is not barred from bidding on this Contract as a result of violation of either Section 33E-3 (Bid Rigging) or Section 33E-4 (Bid Rotating) of Chapter 38, Illinois Revised Statutes.
- F. The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

**NO DELINQUENT ILLINOIS TAXES STATEMENT**

The undersigned certifies that the Contractor is not delinquent in payment of any tax administered by the Illinois Department of Revenue except that the taxes for which liability for the taxes or the amount of the taxes are being contested, in accordance with the procedure established by the appropriate Revenue Act; or the Contractor has entered into an agreement (2) with the Illinois Department of Revenue for the payment of all such taxes due and is in compliance with the agreement.

**FAMILIARITY WITH LAWS STATEMENT**

I, the undersigned, being duly sworn, do hereby state that \_\_\_\_\_  
(Company Name)  
is familiar with and will comply with all Federal, State and Local laws applicable to the Project, which include, but are not limited to, the Prevailing Wage Act and the Davis-Bacon Act.

**PENDING AND UNCOMPLETED WORK**

I, the undersigned, being duly sworn, do hereby declare that the following is a true and correct statement relating to **all** uncompleted contracts of the undersigned for Federal, State, County, City and private work, including **all** subcontract work; and all pending low BIDS not yet awarded or rejected:

Total Projects Under Contract \_\_\_\_\_

Total Projects with Pending Low Bids \_\_\_\_\_

Total Value of Projects Under Contract and Pending Low Bids \_\_\_\_\_

\_\_\_\_\_  
(Affiant's Signature) (Print Name & Title)

\_\_\_\_\_  
(Company Name)

SUBSCRIBED and SWORN to before me this

\_\_\_\_\_ day of \_\_\_\_\_, 2016

Notary Public

My Commission Expires: \_\_\_\_\_

(SEAL)

**INSTRUCTIONS:** This affidavit is to be completely filled out and executed by the chief officer of the Bidder authorized to submit the affidavit. Attach written explanation where applicable.



- D. Notify the Owner within 10 days after receiving notice under paragraph A.3.b. above from an employee or otherwise receiving actual notice of such conviction.
- E. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program by any employee who is so convicted.
- F. Assist employees in selecting a course of action in the event drug counseling, treatment or rehabilitation is required and a trained referral team is in place.
- G. Make a good faith effort to continue to maintain a drug free workplace through implementation of the Drug Free Workplace Act.

If an individual, the Contractor certifies that it will not engage in the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance in the performance of the Owner's contract.

The Contractor shall, within 30 days after receiving notice from an employee of a conviction of a violation of a criminal drug statute occurring in the workplace:

- A. Take appropriate personnel action against such employee up to and including termination; and
- B. Require the employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State or local health, law enforcement or other appropriate agency.

**Contractor:**

By: \_\_\_\_\_

Title: \_\_\_\_\_

SIGNED and SWORN to before me this

\_\_\_\_ day of \_\_\_\_\_, 2016.

\_\_\_\_\_  
Notary Public

DIVISION 0 - BIDDING & CONTRACT REQUIREMENTS  
Section 00 43 43 – Prevailing Rate of Wages

1. PREVAILING WAGE ACT

- 1.1 Pursuant to Illinois Compiled Statutes 820 ILCS 130/0.01 et seq., these specifications list on the following pages, the Illinois Department of Labor prevailing rate of wages for the county where the contract is being performed and for each craft or type of worker needed to execute the contract.
- 1.2 Contractor shall submit certified payrolls with monthly application for payment.
- 1.3 A Project Labor Agreement is required for this project.
- 1.4 The 2015 prevailing wage rates are still in effect until the Illinois Department of Labor publishes the 2016 rates.

## Champaign County Prevailing Wage for July 2015

(See explanation of column headings at bottom of wages)

Trade Name	RG	TYP	C	Base	FRMAN	M-F>8	OSA	OSH	H/W	Pensn	Vac	Trng
ASBESTOS ABT-GEN		BLD		31.420	32.670	1.5	1.5	2.0	6.300	12.84	0.000	0.900
ASBESTOS ABT-MEC		BLD		22.000	23.000	1.5	1.5	2.0	6.700	6.350	0.000	0.650
BOILERMAKER		BLD		38.000	41.000	2.0	2.0	2.0	7.070	15.99	0.000	0.400
BRICK MASON		BLD		31.320	32.820	1.5	1.5	2.0	7.200	11.57	0.000	0.850
CARPENTER		BLD		35.600	37.850	1.5	1.5	2.0	8.000	10.25	0.000	0.520
CARPENTER		HWY		35.300	37.050	1.5	1.5	2.0	8.000	10.95	0.000	0.520
CEMENT MASON		BLD		31.010	32.760	1.5	1.5	2.0	7.200	9.050	0.000	0.500
CEMENT MASON		HWY		31.630	33.130	1.5	1.5	2.0	7.200	9.050	0.000	0.500
CERAMIC TILE FNSHER		BLD		29.580	0.000	1.5	1.5	2.0	7.200	8.200	0.000	0.000
ELECTRIC PWR EQMT OP		ALL		38.300	45.290	1.5	1.5	2.0	6.150	10.73	0.000	0.380
ELECTRIC PWR GRNDMAN		ALL		26.280	45.290	1.5	1.5	2.0	5.790	7.360	0.000	0.260
ELECTRIC PWR LINEMAN		ALL		42.540	45.290	1.5	1.5	2.0	6.280	11.92	0.000	0.430
ELECTRIC PWR TRK DRV		ALL		27.560	45.290	1.5	1.5	2.0	5.830	7.720	0.000	0.280
ELECTRICIAN		BLD		37.090	39.090	1.5	1.5	2.0	6.100	8.580	0.000	0.550
ELECTRONIC SYS TECH		BLD		30.830	32.580	1.5	1.5	2.0	6.350	7.970	0.000	0.400
ELEVATOR CONSTRUCTOR		BLD		41.690	46.900	2.0	2.0	2.0	13.57	14.21	3.340	0.600
FENCE ERECTOR		ALL		32.210	34.110	1.5	1.5	2.0	8.840	10.02	0.000	0.900
GLAZIER		BLD		32.380	34.380	1.5	2.0	2.0	7.050	8.400	0.000	0.430
HT/FROST INSULATOR		BLD		31.230	32.230	1.5	1.5	2.0	5.790	9.960	0.000	0.250
IRON WORKER		ALL		32.210	34.110	1.5	1.5	2.0	9.240	10.92	0.000	0.900
LABORER		BLD		28.920	30.170	1.5	1.5	2.0	6.300	12.84	0.000	0.800
LABORER		HWY		30.310	31.310	1.5	1.5	2.0	6.300	12.92	0.000	0.800
LATHER		BLD		35.600	37.850	1.5	1.5	2.0	8.000	10.25	0.000	0.520
MACHINIST		BLD		45.350	47.850	1.5	1.5	2.0	7.260	8.950	1.850	0.000
MARBLE FINISHERS		BLD		29.580	0.000	1.5	1.5	2.0	7.200	8.200	0.000	0.000
MARBLE MASON		BLD		31.080	0.000	1.5	1.5	2.0	7.200	8.550	0.000	0.000
MILLWRIGHT		BLD		31.060	33.310	1.5	1.5	2.0	8.000	15.25	0.000	0.520
MILLWRIGHT		HWY		33.060	34.810	1.5	1.5	2.0	8.000	15.67	0.000	0.520
OPERATING ENGINEER		ALL	1	38.600	0.000	1.5	1.5	2.0	8.000	9.500	0.000	0.850
OPERATING ENGINEER		ALL	2	24.750	0.000	1.5	1.5	2.0	8.000	9.500	0.000	0.850
OPERATING ENGINEER		ALL	3	39.600	0.000	1.5	1.5	2.0	8.000	9.500	0.000	0.850
PAINTER		ALL		34.460	35.960	1.5	1.5	2.0	7.200	4.480	0.000	0.600
PAINTER SIGNS		ALL		34.460	35.960	1.5	1.5	2.0	7.200	4.480	0.000	0.600
PILEDRIVER		BLD		36.600	38.850	1.5	1.5	2.0	8.000	10.25	0.000	0.520
PILEDRIVER		HWY		35.600	37.350	1.5	1.5	2.0	8.000	10.25	0.000	0.520

PIPEFITTER	BLD	39.400	41.900	1.5	1.5	2.0	7.000	11.45	0.000	1.020
PLASTERER	BLD	31.000	33.000	1.5	1.5	2.0	7.200	10.77	0.000	0.500
PLUMBER	BLD	39.400	41.900	1.5	1.5	2.0	7.000	11.45	0.000	1.020
ROOFER	BLD	29.950	31.450	1.5	1.5	2.0	9.250	8.400	0.000	0.240
SHEETMETAL WORKER	BLD	35.740	37.740	1.5	1.5	2.0	8.700	13.72	0.000	0.520
SPRINKLER FITTER	BLD	37.120	39.870	1.5	1.5	2.0	8.420	8.500	0.000	0.350
STONE MASON	BLD	31.320	32.820	1.5	1.5	2.0	7.200	11.57	0.000	0.850
<del>SURVEY WORKER</del>	<del>---</del>									
		10.59	0.000	0.800						
TERRAZZO FINISHER	BLD	29.580	0.000	1.5	1.5	2.0	7.200	8.200	0.000	0.000
TERRAZZO MASON	BLD	31.080	0.000	1.5	1.5	2.0	7.200	8.550	0.000	0.000
TILE MASON	BLD	31.080	0.000	1.5	1.5	2.0	7.200	8.550	0.000	0.000
TRUCK DRIVER	ALL 1	34.100	37.770	1.5	1.5	2.0	11.40	5.440	0.000	0.250
TRUCK DRIVER	ALL 2	34.600	37.770	1.5	1.5	2.0	11.40	5.440	0.000	0.250
TRUCK DRIVER	ALL 3	34.820	37.770	1.5	1.5	2.0	11.40	5.440	0.000	0.250
TRUCK DRIVER	ALL 4	35.140	37.770	1.5	1.5	2.0	11.40	5.440	0.000	0.250
TRUCK DRIVER	ALL 5	36.060	37.770	1.5	1.5	2.0	11.40	5.440	0.000	0.250
TRUCK DRIVER	O&C 1	27.280	30.220	1.5	1.5	2.0	11.40	5.440	0.000	0.250
TRUCK DRIVER	O&C 2	27.680	30.220	1.5	1.5	2.0	11.40	5.440	0.000	0.250
TRUCK DRIVER	O&C 3	27.860	30.220	1.5	1.5	2.0	11.40	5.440	0.000	0.250
TRUCK DRIVER	O&C 4	28.110	30.220	1.5	1.5	2.0	11.40	5.440	0.000	0.250
TRUCK DRIVER	O&C 5	28.250	30.220	1.5	1.5	2.0	11.40	5.440	0.000	0.250
TUCKPOINTER	BLD	31.320	32.820	1.5	1.5	2.0	7.200	11.57	0.000	0.850

Legend: RG (Region)  
 TYP (Trade Type - All, Highway, Building, Floating, Oil & Chip, Rivers)  
 C (Class)  
 Base (Base Wage Rate)  
 FRMAN (Foreman Rate)  
 M-F>8 (OT required for any hour greater than 8 worked each day, Mon through Fri.)  
 OSA (Overtime (OT) is required for every hour worked on Saturday)  
 OSH (Overtime is required for every hour worked on Sunday and Holidays)  
 H/W (Health & Welfare Insurance)  
 Pensn (Pension)  
 Vac (Vacation)  
 Trng (Training)

## Explanations

### CHAMPAIGN COUNTY

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day and Veterans Day in some classifications/counties. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration. If in doubt, please check with IDOL.

Oil and chip resealing (O&C) means the application of road oils and liquid asphalt to coat an existing road surface, followed by application of aggregate chips or gravel to coated surface, and subsequent rolling of material to seal the surface.

EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.

ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

CERAMIC TILE FINISHER, MARBLE FINISHER, TERRAZZO FINISHER

Assisting, helping or supporting the tile, marble and terrazzo mechanic by performing their historic and traditional work assignments required to complete the proper installation of the work covered by said crafts. The term "Ceramic" is used for naming the classification only and is in no way a limitation of the product handled. Ceramic takes into consideration most hard tiles.

ELECTRONIC SYSTEMS TECHNICIAN

Installation, service and maintenance of low-voltage systems which utilizes the transmission and/or transference of voice, sound, vision, or digital for commercial, education, security and entertainment purposes for the following: TV monitoring and surveillance, background/foreground music, intercom and telephone interconnect, field programming, inventory control systems, microwave transmission, multi-media, multiplex, radio page, school, intercom and sound burglar alarms and low voltage master clock systems.

Excluded from this classification are energy management systems, life safety systems, supervisory controls and data acquisition systems not intrinsic with the above listed systems, fire alarm systems, nurse call systems and raceways exceeding fifteen feet in length.

SURVEY WORKER - Operated survey equipment including data collectors, G.P.S. and robotic instruments, as well as conventional levels and transits.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION

Class 1. Drivers on 2 axle trucks hauling less than 9 ton. Air compressor and welding machines and brooms, including those pulled by separate units, truck driver helpers, warehouse employees, mechanic helpers, greasers and tiremen, pickup trucks when hauling materials, tools, or workers to and from and on-the-job site, and fork lifts up to 6,000 lb. capacity.

Class 2. Two or three axle trucks hauling more than 9 ton but hauling less than 16 ton. A-frame winch trucks, hydrolift trucks, vector trucks or similar equipment when used for transportation purposes. Fork lifts over 6,000 lb. capacity, winch trucks, four axle combination units, and ticket writers.

Class 3. Two, three or four axle trucks hauling 16 ton or more. Drivers on water pulls, articulated dump trucks, mechanics and working forepersons, and dispatchers. Five axle or more combination units.

Class 4. Low Boy and Oil Distributors.

Class 5. Drivers who require special protective clothing while employed on hazardous waste work.

TRUCK DRIVER - OIL AND CHIP RESEALING ONLY.

This shall encompass laborers, workers and mechanics who drive contractor or subcontractor owned, leased, or hired pickup, dump, service, or oil distributor trucks. The work includes transporting materials and equipment (including but not limited to, oils, aggregate supplies, parts, machinery and tools) to or from the job site; distributing oil or liquid asphalt and aggregate; stock piling material when in connection with the actual oil and chip contract. The Truck Driver (Oil & Chip Resealing) wage classification does not include supplier delivered materials.

OPERATING ENGINEERS - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION

Class 1. Draglines, Derricks, Shovels, Gradalls, Mechanics, Tractor Highlift, Tournadozer, Concrete Mixers with Skip, Tournamixer, Two Drum Machine, One Drum Hoist with Tower or Boom, Cableways, Tower Machines, Motor Patrol, Boom Tractor, Boom or Winch Truck, Winch or Hydraulic Boom Truck, Tournapull, Tractor Operating Scoops, Bulldozer, Push Tractor, Asphalt Planer, Finishing Machine on Asphalt, Large Rollers on Earth, Rollers on Asphalt Mix, Ross Carrier or similar Machine, Gravel Processing Machine, Asphalt Plant Engineer, Paver Operator, Dredging Equipment, or Dredge Engineer, or Dredge Operator, Central Mix Plant Engineer, CMI or similar type machine, Concrete Pump, Truck or Skid Mounted, Engineer or Rock Crusher Plant, Concrete Plant Engineer, Ditching Machine with dual attachment, Tractor Mounted Loaders, Hydro Crane, Standard or Dinkey Locomotives, Scoopmobiles, Euclid Loader, Soil Cement Machine, Back Filler, Elevating Machine, Power Blade, Drilling Machine, including Well Testing, Caissons, Shaft or any similar type drilling machines, Motor Driven Paint Machine, Pipe Cleaning Machine, Pipe Wrapping Machine, Pipe Bending Machine, Apsco Paver, Boring Machine, (Head Equipment Greaser), Barber-Greene Loaders, Formless Paver, (Well Point System), Concrete Spreader, Hydra Ax, Span Saw, Marine Scoops, Brush Mulcher, Brush Burner, Mesh Placer, Tree Mover, Helicopter Crew (3), Piledriver-Skid or Crawler, Stump Remover, Root Rake, Tug Boat Operator, Refrigerating Machine, Freezing Operator, Chair Cart- Self-Propelled, Hydra Seeder, Straw Blower, Power Sub Grader, Bull Float, Finishing Machine, Self-Propelled Pavement Breaker, Lull (or similar type Machine), Two Air Compressors, Compressors hooked in Manifold, Chip Spreader, Mud Cat, Sull-Air, Fork Lifts (except when used for landscaping work), Soil Stabilizer (Seaman Tiller, Bo Mag, Rago Gator, and similar types of equipment), Tube Float, Spray Machine, Curing Machine, Concrete or Asphalt Milling Machine, Snooper Truck-Operator, Backhoe, Farm Tractors (with attachments), 4 Point Lift System (Power Lift or similar type), Skid-Steer (Bob Cat or similar type), Wrecking Shears, Water Blaster.

Class 2. Concrete Mixers without Skips, Rock Crusher, Ditching Machine under 6', Curbing Machine, One Drum Machines without Tower or Boom, Air Tugger, Self-Propelled Concrete Saw, Machine Mounted Post Hole Digger, two to four Generators, Water Pumps or Welding Machines, within 400 feet, Air Compressor 600 cu. ft. and under, Rollers on Aggregate and Seal Coat Surfaces, Fork Lift (when used for landscaping work), Concrete and Blacktop Curb Machine, One Water Pump, Oilers, Air Valves or Steam Valves, One Welding Machine, Truck Jack, Mud Jack, Gunnite Machine, House Elevators when used for hoisting material, Engine Tenders, Fireman, Wagon Drill, Flex Plane, Conveyor, Siphons and Pulsometer, Switchman, Fireman on Paint Pots, Fireman on Asphalt Plants, Distributor Operator on Trucks, Tampers, Self-Propelled Power Broom, Striping Machine (motor driven), Form Tamper, Bulk Cement Plant, Equipment Greaser, Deck Hands, Truck Crane Oiler-Driver, Cement Blimps, Form Grader, Temporary Heat, Throttle Valve, Super Sucker (and similar type of equipment).

Class 3. Power Cranes, Truck or Crawler Crane, Rough Terrain Crane (Cherry Picker), Tower Crane, Overhead Crane.

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 217-782-1710 for wage rates or clarifications.

#### LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

END OF SECTION 00 43 43

DIVISION 1 - GENERAL REQUIREMENTS  
Section 01 11 00 – Project Summary

1. GENERAL

1.1 WORK INCLUDED

A. Contractor shall provide all labor and materials associated with the work of this section, including:

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

1.2 PROJECT INFORMATION

A. Project Identification:

Champaign County Interior ADA Upgrades

1. Brookens Administrative Center, 1776 East Washington Street, Urbana, IL 61802.
2. Champaign County Courthouse, 101 East Main Street, Urbana, IL 61801

B. Owner's Representative: Champaign County.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. Brookens Administrative Center:

1. Work generally includes but is not limited to the following: removal, replacement and/or relocation of plumbing fixtures, accessories, toilet partitions, plumbing, and related work in various toilet room areas for improved barrier free access.

B. Champaign County Courthouse:

1. Work generally includes but is not limited to the following: modifications made to existing access ramps in Court Room 205 and Court Room 220 for improved barrier free access. Existing carpet shall be removed and replaced, and existing wall covering shall be removed, walls prepped, and painted.

2. PRODUCTS

(NOT APPLICABLE)

3. EXECUTION

(NOT APPLICABLE)

END OF SECTION 01 11 00

DIVISION 1 - GENERAL REQUIREMENTS  
Section 01 32 00 - Construction Schedule

1. GENERAL

1.1 REQUIREMENTS INCLUDE:

- A. The General Contractor shall prepare and maintain a detailed project schedule as described below.
- B. The project schedule shall be the Contractor's working schedule; used to execute the work and record and report actual progress. It shall show how the Contractor plans to complete the work within the contract time and meet any contractually specified intermediate milestone dates.

1.2 RELATED REQUIREMENTS

- A. Specified Elsewhere:
  - 1. Section 01 11 00 - Project Summary
  - 2. Section 01 33 23 - Shop Drawings, Product Data and Samples

1.3 FORM OF SCHEDULE

- A. The schedule shall provide sufficient detail and clarity so that the General Contractor can plan and control the work and the Owner and the A/E can readily monitor and follow the progress of all portions of the work. The critical activities must be clearly shown. The degree of detail must be satisfactory to the A/E and the Owner.
- B. The project schedule shall be in the form of a Gantt chart.

1.4 CONTENTS OF SCHEDULE

- A. The schedule must be inclusive of all installation tasks of the work.
- B. Submittal and approval of shop drawings and material samples as well as delivery dates of major equipment shall be included in the project schedule.
- C. Activity duration shall be in whole working days.
- D. There should be at least one activity for each specification section.

1.5 UPDATING

- A. The project schedule shall be updated monthly.
- B. Actual activity completion dates shall be reported and recorded on the schedule.
- C. Progress on uncompleted activities shall be reported.
- D. Projected completion dates and activities shall be reviewed and revised if necessary.

1.6 REPORTS AND SUBMITTALS

- A. Within 30 days of the Authorization to Proceed, the Contractor shall submit the project schedule to the A/E and the Owner.
- B. Five (5) days prior to the pay/progress meeting, the contractor shall submit the current updated schedule to the A/E and the Owner.

1.7 REVIEWS

- A. Payment and reduction of retainage may be denied by the Owner for failure to submit a proper schedule and maintaining work progress according to the project schedule.

2. PRODUCTS

(NOT APPLICABLE)

3. EXECUTION

(NOT APPLICABLE)

END OF SECTION 01 32 00.

DIVISION 1 - GENERAL REQUIREMENTS  
Section 01 33 23 - Shop Drawings, Product Data & Samples

1. GENERAL

1.1 REQUIREMENTS INCLUDE

- A. The Sub-contractor shall make submittals to the General Contractor. The General Contractor shall maintain a master list of submittals.
- B. Submittals shall be complete and legible. Incomplete submittals will be returned and not reviewed.

1.2 GENERAL CONTRACTOR:

- A. Review Sub-contractors' submittals within 5 business days.
  - 1. Verify field dimensions.
  - 2. Verify compliance with Contract requirements.

1.3 RELATED REQUIREMENTS

- A. Specified elsewhere:
  - 1. Submittal specific to each section are further outlined within the technical submittals as such within submittal package. Submittals deemed incomplete or not indication supplied by separate sub, shall be returned without review.

1.4 DEFINITIONS

- A. Shop drawings: Shop drawings are original drawings prepared by Contractor, subcontractor, sub-subcontractor, supplier or distributor, which illustrated some portion of the work, showing fabrication, layout, setting or erection details.
  - 1. Prepared by qualified detailer
  - 2. Identify details by reference to sheet and detail numbers shown on contract drawings
  - 3. Maximum sheet size: 30" x 42"
  - 4. Submit a maximum of (5) copies. Electronic copies of submittals are preferred.
- B. Product data:
  - 1. Manufacturer's standard schematic drawings, edited to fit this project
  - 2. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations and other standard descriptive data.
    - a. Clearly mark each copy to identify pertinent materials, products or models.
    - b. Show dimensions and clearances.
    - c. Show wiring diagrams and controls.
- C. Samples: Physical samples to illustrate materials, equipment or workmanship. Approved samples establish standards by which complete work is judged. Maintain at site as directed. Protect until no longer needed.
  - 1. Office samples: Of sufficient size to clearly illustrate:
    - a. Functional characteristics of product or material.
    - b. Full range of color samples.
    - c. After review, samples may be used on construction of project.

2. Field samples and mock-ups:
  - a. Erect at project site at location approved by the Architect.
  - b. Construct each sample or mock-up complete, including work of all crafts required in finished work.
  - c. Remove as directed.

1.5 SCHEDULE SUBMITTAL

- A. Submit schedule of all exhibits to Architect/Engineer within thirty (30) business days after preconstruction meeting.

1. Prepare schedule in bar chart format, Include:

- a. Exhibit identification
- b. Specification section and page number
- c. Date of submittal to Architect/Engineer
- d. Latest date for final approval
- e. Fabrication time.
- f. Date of Installation

2. Architect/Engineer will review and comment on exhibit schedule and will advise the Contractor as to which submittals require longer review durations.

Submit number of copies of shop drawings, product data and samples which contractor requires for distribution plus (2) copies which will be retained by Architect/Engineer.

- B. Accompany submittals with transmittal letter, in duplicate, containing.

1. Date
2. Project title and number
3. Contractor's name and address.
4. The number of shop drawings, product data and samples submitted.
5. Notification of deviations from Contract.
6. Other pertinent data.

- C. Submittals shall include:

1. Date and revision
2. Project title and number
3. Name of:
  - a. Architect/ Engineer
  - b. Architect/ Engineer consultant
  - c. Subcontractor
  - d. Sub-subcontractor
  - e. Supplier
  - f. Manufacturer
  - g. Separate detailer when pertinent
4. Identification of product or material.
5. Relation to adjacent structure or material.
6. Field dimensions, clearly identified as such.
7. Specification section and page number.
8. Specified standards, such as ASTM number or ANSI.

9. A blank space, (5"x5"), for Architect/Engineer's stamp.
  10. Identification of previously approved deviation(s) from contract documents.
  11. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of field measurements and compliance with Contract.
  12. Space for Contractor's approval stamp.
- D. Electronic Submittals: All submittals may be submitted electronically except for those specifically listing a requirement for paper submittals or physical samples. Identify and incorporate information in each electronic submittal file as follows:
1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item .Only complete submittals will be accepted.
  2. Name file with submittal number or other unique identifier, including revision identifier.
    - a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g.; LNHS\_061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g.; LNHS\_061000.01A)
  3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Using Agency/ Architect/ Engineer.
  4. Transmittal Cover Sheet Form for Electronic Submittals: As described by the Architect and containing all information as indicated above for paper submittals.

## 1.6 RESUBMISSION REQUIREMENTS

- A. Resubmit all shop drawings, product data, and samples as requested by the Contractor and/or A/E.

## 1.7 RESPONSIBILITIES

- A. Review shop drawings, product data and samples prior to submission to the next level of authority. Review Subcontractor's submittals within five (5) business days. Certify review and transmit to Architect.
- B. Verify:
1. Field dimensions.
  2. Field construction criteria.
  3. Catalog numbers and similar data.
  4. Verify compliance with contract documents.
- C. Coordinate each submittal with requirements of:
1. The work.
  2. The contract documents.
  3. The work of other contractors.
  4. The existing conditions indicated to remain.
- D. Contractor's responsibility for errors, omissions or deviation from contract documents in submittals is not relieved by the Architect/Engineer's review of submittals.
- E. Prior to submission, notify the Architect/Engineer in writing of all proposed deviations in submittals from Contract requirements. Substitution of materials or equipment may only be approved by change order.
- F. Do not begin any work which requires submittals without Architect/Engineer's approval.
- G. After Architect/Engineer's review, make response required by A/E's stamp and distribute copies. Indicate by transmittal that copy of approved data has been delivered to installer.

1.8 ARCHITECT/ENGINEER'S RESPONSIBILITIES

- A. Review submittals within fourteen (14) calendar days.
- B. Review for:
  - 1. Design concept of project.
  - 2. Compliance with Contract Documents.
- C. Review all requests for proposed deviations.
- D. Affix stamp, date and initials or signature certifying review of submittal, and with instructions for the Contractor.
- E. Return submittals to sender for response or distribution.

2. PRODUCTS  
(NOT APPLICABLE)

3. EXECUTION  
(NOT APPLICABLE)

END OF SECTION 01 33 23

DIVISION 1 - GENERAL REQUIREMENTS  
Section - 01 35 16 - Remodeling Project Procedures

1. GENERAL

1.1 REQUIREMENTS INCLUDE

A. Each Contractor:

1. Coordinate work of employees and subcontractors.
2. Schedule elements of remodeling and renovation work to expedite completion.
3. Schedule noisy or hazardous work to avoid problems with Owner's operations.
4. In addition to demolition, cut, move or remove existing construction to provide access or to allow remodeling and new work to proceed. Include:
  - a. Repair or remove hazardous or unsanitary conditions.
  - b. Remove abandoned piping, conduit and wiring.
  - c. Remove unsuitable or extraneous materials not marked for salvage, such as abandoned furnishings and equipment, and debris such as rotted wood, brick paving, rusted metals and deteriorated concrete.
  - d. Clean surfaces. Remove surface finishes to install new work and finishes.
5. Patch, repair and refinish existing items to remain, to the specified condition for each material, with a neat transition to adjacent new or restored construction.
6. Note or record existing project conditions before beginning work to minimize later disputes.

1.2 RELATED REQUIREMENTS

A. Specified elsewhere:

1. 01 32 00 - Construction Schedules.
2. 01 51 50 - Use of Existing Facilities
3. 01 54 00 - Construction Aids
4. 01 73 29 - Cutting & Patching
5. 01 74 13 - Construction Cleaning
6. 01 74 23 - Final Cleaning.

1.3 SEQUENCE AND SCHEDULES

A. Submit separate detailed subschedule for alterations work, coordinated with Construction Schedule. Show:

1. Each stage of work; occupancy dates of areas.
2. Date of Substantial Completion for each area of alteration work.
3. Crafts and subcontractors employed in each stage.

1.4 ALTERATIONS, CUTTING AND PROTECTION

- A. Cut finish surfaces such as masonry, tile, plaster or metals, by methods to terminate surfaces in a straight line at a natural point of division.

- B. Protect existing and new work from weather and temperature extremes.
  - 1. Maintain existing interior work above (60) degrees F.
  - 2. Provide weather protection, waterproofing, heat and humidity control to prevent damage to remaining existing work and to new work.
- C. Provide temporary enclosures specified in 01 54 00, to separate work areas from existing building and from areas occupied by Owner, and to provide weather protection.
- D. When indicated by historic nature of existing building items of construction, furnishings and articles having a historic or private value discovered during progress of the work shall remain in the Owner's possession and ownership.
  - 1. Promptly notify Architect/Engineer.
  - 2. Protect items from damage from weather and work.
  - 3. Store items to be retained by Owner in a safe, dry place on site. Dispose of items which Owner releases.

## 2. PRODUCTS

### 2.1 SALVAGED MATERIALS

- A. Salvage sufficient quantities of cut or removed materials to replace damaged work, when material is not readily obtainable on current market.
  - 1. Store salvaged items in a dry, secure place on site.
  - 2. Items not specified for use in repair work but removed as demolition waste shall become the Contractor's responsibility for removal and disposal from the site.
  - 3. Do not use salvaged material in restored work if there are signs of decay or rot. If questions arise regarding salvaged material condition review with the Architect/Engineer.

### 2.2 MATERIALS FOR PATCHING, EXTENDING AND MATCHING

- A. Ensure that work is complete:
  - 1. Provide same materials or types of construction as that in existing structure, to patch, extend or match existing work.

## 3. EXECUTION

### 3.1 REMOVE EXISTING CONSTRUCTION

- A. Temporary Removals:
  - 1. Remove all items as noted on the drawings or otherwise required to complete the work shown.
  - 2. Store all items as noted on the drawings or otherwise required to complete the work shown.
  - 3. Recondition all existing items as noted on the drawings or otherwise required to complete the work shown.
  - 4. Reinstall all as noted on the drawings or otherwise required to complete the work shown.
- B. Remove and dispose of existing items as noted on Drawings.

- 3.2 PERFORMANCE. Patch and extend existing work using skilled craftsmen capable of matching existing quality of workmanship. For patched or extended work, provide quality equal to that specified for new work.
- 3.3 ADJUSTMENTS
- A. Where partitions are removed, patch floors, walls and ceilings with finish materials to match existing as closely as possible.
1. Where removal of partitions results in adjacent spaces becoming one, rework floors and ceilings to provide smooth planes without breaks, steps or bulkheads.
  2. Where extreme change of plane of one inch or more occurs, request instructions from Architect/Engineer.
- B. Trim and refinish doors to clear all floors.
- 3.4 DAMAGED SURFACES
- A. Patch and replace all portions of existing finished surfaces found to be damaged, lifted, discolored or showing other imperfections, with matching material.
1. Provide adequate support prior to patching the finish.
  2. Refinish patched portions of painted or coated surfaces in a manner to produce uniform color and texture over entire surface.
  3. When existing surface cannot be matched, refinish entire surface to nearest intersections or change of direction.
- 3.5 TRANSITION FROM EXISTING TO RESTORED WORK
- A. When restored work abuts or finishes flush with existing work, make a smooth transition. Patched work shall match existing adjacent work in texture and appearance.
1. When finished surfaces are cut in such a way that a smooth transition with restored work is not possible, terminate existing surface in a neat manner along a straight line at a natural line of division, and provide trim appropriate to finished surface.
- 3.6 CLEANING
- A. Perform construction cleaning as specified in 01 74 13 and as follows:
1. Clean User occupied areas daily.
  2. Clean all spillage, overspray or heavy dust collections in User occupied areas immediately.
- B. At completion of work of each craft, clean area and make surfaces ready for work of successive crafts.
- C. At completion of alterations work in each area, provide final cleaning in accord with 01 74 23 and return space to a condition suitable for use of User.

END OF SECTION 01 35 16.

DIVISION 1 - GENERAL REQUIREMENTS  
Section - 01 51 50 - Use of Existing Facilities

1. GENERAL

- 1.1 The project will be constructed at an occupied facility. These requirements supplement the Standard Documents for Construction and other sections of the Project Manual.
- 1.2 The Owner will continually occupy the buildings and property.
- 1.3 REQUIREMENTS INCLUDE - Contractor provide:
  - A. Scheduling
  - B. Security and site regulations
  - C. Entrances
  - D. Construction aids
  - E. Temporary enclosures and barriers
  - F. Fences
  - G. Temporary utilities
  - H. Construction Cleaning
  - I. Storage
  - J. Close-out

2. EXECUTION

2.1 SCHEDULING

- A. Schedule the work to allow the Owner to occupy the building and property with as minimal impact as possible. Submit separate detailed subschedule showing:
  - 1. Each stage of work; occupancy dates of areas.
- B. Schedule noisy or hazardous work to avoid problems with Owner's operations.

2.2 SECURITY AND SITE REGULATIONS

- A. Confer with the Owner's representative and obtain full knowledge of all site rules and regulations affecting work.
- B. Provide control of all persons and vehicles entering and leaving project site. (Reasonable proof of identification and signature to the visitor's log shall be required of the visitors by the contractor's site superintendent.)
- C. Do not take photographs of any kind except with prior written authorization from the Owner.

2.3 ENTRANCES Unless otherwise approved by the Owner, the primary entrance will be from the main entrance.

2.4 CONSTRUCTION AIDS Except as noted, Contractor provide and maintain construction aids and equipment for common use and to facilitate execution of the work.

- A. Designated stairs in existing building may be used by construction personnel:
  - 1. Service stairwells or others as approved by Owner.

2.5 TEMPORARY ENCLOSURES AND BARRIERS - Contractor:

- A. Provide temporary enclosures to separate work areas from existing building and from areas occupied by Owner.
- B. Provide and maintain suitable barriers to prevent unauthorized entry, and to protect the work.

2.6 TEMPORARY UTILITIES

- A. Owner will authorize use of existing facilities or services:
  - 1. Electrical power service.
  - 2. Work, security, safety lighting.
  - 3. Water service.
- B. Make written arrangements with Owner's representative.
- C. Prevent interference with Owner's normal use of system.
- D. Modify, supplement and extend systems to meet temporary utility requirements for project, subject to approval of Architect/Engineer and Owner. Modifications shall be at coordinating contractor's expense.
- E. Contractor requiring facilities or services beyond those available from the Owner shall provide and pay for extension or modification of services to perform the work, and for restoration of services at completion of work.
- F. Contractor shall check existing underground landscape sprinkler system and snow melt system at drive to demonstrate its operational state. This operational state must be maintained throughout the job. Any damage during the project must be repaired by the contractor, unless it can be indisputably proved that the construction forces were not responsible.

2.7 ACCESS ROADS & PARKING AREAS

- A. Limit any loading of existing paved areas to 4000 p.s.i. maximum.
- B. Use of existing parking facilities for construction personnel or for contractor's vehicles or equipment may not be permitted; subject to Owner approval.
- C. Maintain roads, walks and parking areas in a sound, clean condition. Restore to original condition upon work completion prior to Final Acceptance.
- D. Control vehicular parking to preclude interference with public traffic or parking, access by emergency vehicles, Owner's operations or construction operations.
- E. Coordinate any temporary construction vehicle entrance onto the property for deliveries or access with the Owner a minimum of (3) days prior to the necessity.
- F. Equipment with bearing pressure above 4000 psi shall not be allowed on the grounds or paving.

- 2.8 TRAFFIC REGULATION Contractor provide traffic control and directional signs, mounted on barricades or standard posts:
  - A. At each change of direction of a roadway and at parking areas.
  - B. Provide qualified and suitably equipped flaggers when construction operations encroach on traffic lanes, as required for traffic regulation.
  - C. Where contractor requires sidewalk closure to execute scope of work, permits and alternative access for pedestrians shall be provided in the work of this contract.
- 2.9 CONSTRUCTION CLEANING
  - A. Each Contractor provide cleaning and disposal of waste materials, debris and rubbish during construction.
  - B. Coordinating Contractor to supervise and coordinate cleaning operations of all Assigned Contractors.
  - C. Each Contractor provide covered containers for deposit of waste materials, debris and rubbish.
- 2.10 STORAGE Make arrangements with Owner's Representative for any on-site storage of materials and equipment to be installed in project. Protection and security for stored materials and equipment is solely contractor's responsibility.
- 2.11 CLOSEOUT
  - A. Upon completion of need to use existing user-provided facilities, or when directed by Architect/Engineer, restore each to original or specified condition.
  - B. At completion of work in each area, provide final cleaning and return space to a condition suitable for use of Owner.
- 3. EXECUTION  
(NOT APPLICABLE)

END OF SECTION 01 51 50

DIVISION 1 - GENERAL REQUIREMENTS  
Section - 01 54 00 - Construction Aids

1. GENERAL

1.1 REQUIREMENTS INCLUDE

- A. General Contractor: Provide and maintain construction aids and equipment for common use and to facilitate execution of the work:
  - 1. Chutes.
  - 2. Cranes.
  - 3. Hoists.
  - 4. Platforms.
  - 5. Railings.
  - 6. Ramps.
  - 7. Runways.
  - 8. Stairs.
  - 9. Temporary enclosures.

2. PRODUCTS

2.1 MATERIALS. Materials may be new or used. Comply with specified codes and standards.

2.2 CONSTRUCTION AIDS

- A. Designated stairs in existing building may be used by construction personnel:
  - 1. Service stairwell or others as approved by Owner.

B. Do not use elevators in existing building.

2.3 TEMPORARY ENCLOSURES

A. Provide temporary weather-tight enclosure of exterior walls for successive areas of building as work progresses, to provide acceptable working conditions, provide weather protection for materials, allow for effective construction heating, and to prevent entry of unauthorized persons.

- 1. Provide temporary exterior doors with self-closing hardware and padlocks.
- 2. Provide other enclosures, removable, for work and handling of materials.

B. Provide temporary enclosures to separate work areas from existing areas occupied by the Owner.

- 1. Temporary partition and ceiling enclosures.
  - a. Close joints between clean, new sheet materials and seal edges and intersections with existing surfaces to prevent penetration of dust, fumes or moisture.
  - b. In locations where fire protection is required, paint both sides of partitions with noncombustible paint.

3. EXECUTION

3.1 PREPARATION. Consult with Architect/Engineer, review site conditions and factors which affect construction procedures and construction aids, including adjacent properties and public facilities which may be affected by execution of the work.

3.2 REMOVAL

A. Remove temporary materials, equipment and services.

1. When construction needs can be met by authorized use of permanent construction or when authorized by the A/E.

B. Clean and repair damage caused by installation or use of temporary facilities.

C. Restore facilities used for temporary purposes to Specified or original condition.

END OF SECTION 01 54 00.

DIVISION 1 - GENERAL REQUIREMENTS  
Section - 01 56 00 - Barriers

1. GENERAL

1.1 Work Includes:

A. Base Bid:

1. General Contractor provide fencing.
  - a. Open mesh fence. Temporary chain link fence panels, min. 6' in height. Panels shall be wired together with sand bags as supports. Provide wind screen where dust creating activities will occur (such as cutting mortar joints).
2. Maintain fences and barriers during entire construction period. Relocate as construction progresses.
3. Where scaffolding or lifts are required to access overhead work and where these work areas extend over public exit or entry ways provide suitable protection to insure against falling objects onto pedestrian traffic.

2. PRODUCTS

(NOT APPLICABLE)

3. EXECUTION

(NOT APPLICABLE)

END OF SECTION 01 56 00

DIVISION 1 - GENERAL REQUIREMENTS  
Section 01 62 04 – Substitution Procedures

1. GENERAL

1.1 SUMMARY

A. Section Includes:

1. Administrative and procedural requirements for substitutions.

1.2 SUBSTITUTIONS

A. Base Bid shall be in accordance with the Contract Documents.

B. Substitution requests prior to bidding shall be submitted to Architect, in writing, a minimum of ten (10) days prior to bid date.

C. After the end of the bidding period, substitution requests will be considered only in case of:

1. Product unavailability
2. Other conditions beyond the control of the Contractor

D. Substitution Requests: Submit PDF electronic file of each request submitted for consideration. Identify product or fabrication or installation method to be replaced. Submit requests for substitutions on attached form. Submit a separate request form for each substitution. Include Specification Section number and title, and Drawing numbers and titles. Support each request with the following information:

1. Complete data substantiating compliance of proposed substitution with requirements stated in Contract Documents:
  - a. Product identification, including manufacturer's name and address.
  - b. Manufacturer's literature, identifying:
    - 1) Product description
    - 2) Reference standards
    - 3) Performance and test data
2. Itemized comparison of the proposed substitution with product specified, listing significant variations.
3. Data relating to changes in construction schedule.
4. Effects of substitution on separate contracts.
5. List of changes required in other work or products.
6. Accurate cost data comparing proposed substitution with product specified.
  - a. Amount of net change to Contract Sum
7. Designation of required license fees or royalties.
8. Designation of availability of maintenance services sources replacement materials.

E. Substitutions will not be considered for acceptance when:

1. A substitution is indicated or implied on shop drawings or product data submittals without a formal request from the Contractor.
2. Acceptance will require substantial revision of Contract Documents.
3. In judgment of the Architect, the substitution request does not include adequate information necessary for a complete evaluation.
4. Requested directly by a Subcontractor or supplier.

- F. Substitutions for Convenience: Not allowed
- G. Do not order or install substitute products without recommendation of the Architect and acceptance by the Owner/Using Agency.
- H. Architect will determine acceptability of proposed substitutions.
- I. No verbal or written approvals other than by Change Order will be valid.

1.3 CONTRACTOR'S REPRESENTATION

- A. In making formal request for substitution the Contractor represents that:
  - 1. The proposed product has been investigated and it has been determined that it is equivalent, or superior, in all respects to the product specified.
  - 2. The same warranties or bonds will be provided for the substitute product as for the product specified.
  - 3. Coordination and installation of the accepted substitution into the Work will be accomplished and changes as may be required for the Work to be complete will be accomplished.
  - 4. Claims for additional costs caused by substitution which may subsequently become apparent will be waived by the Contractor.
  - 5. Complete cost data is attached and includes related costs under the Contract, but not:
    - a. Costs under separate contracts.
    - b. Architect's costs for redesign or revision of Contact Documents.

1.4 REQUEST FOR SUBSTITUTION FORM

- A. 01 62 04.1 – Substitution Request Form
- B. Substitutions will be considered only when the substitution form is completed and included with the request for substitution submittal and back-up data.

2. PRODUCTS

(NOT APPLICABLE)

3. EXECUTION

(NOT APPLICABLE)

END OF SECTION 01 62 04

DIVISION 1 - GENERAL REQUIREMENTS  
Section 01 62 04.1 – Request for Substitution Form

REQUEST FOR SUBSTITUTION FORM

Note: Use separate form for each material, product, or equipment item.

Date: \_\_\_\_\_ Request No.: \_\_\_\_\_

Project: \_\_\_\_\_

Location: \_\_\_\_\_

Name of material, product, or equipment item submitted as substitution:

\_\_\_\_\_

Name of material, product, or equipment item specified:

\_\_\_\_\_

Specification Section \_\_\_\_\_, Article \_\_\_\_\_, Paragraph \_\_\_\_\_

Qualities that differ from specified product or system: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name of Manufacturer/(Fabricator):

\_\_\_\_\_

Address

\_\_\_\_\_

City, State, and Zip

( \_\_\_\_\_ )  
Telephone

\_\_\_\_\_

Name of Vendor/Supplier \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_  
City, State, and Zip (\_\_\_\_\_) Telephone \_\_\_\_\_

Reason for requesting substitution: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Substitution affects other materials or systems, such as dimensional revisions, redesign of structure, or modifications to other work:

\_\_\_\_\_ No  
\_\_\_\_\_ Yes; describe requirements:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If substitution requires modifications to dimensions indicated on drawings, are such modifications clearly indicated on attached data?

\_\_\_\_\_ Yes  
\_\_\_\_\_ No; if no, explain: \_\_\_\_\_

Substitution has an effect on construction schedule:

\_\_\_\_\_ No  
\_\_\_\_\_ Yes; describe effect on schedule:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Savings or credit to Contract Amount for accepting substitute:

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)  
Written Amount Amount in Figures

The attached data is furnished herewith for evaluation of the substitution:

Product Data \_\_\_\_\_, Drawings \_\_\_\_\_, Samples \_\_\_\_\_, Tests \_\_\_\_\_, Reports \_\_\_\_\_

Other Information \_\_\_\_\_

The undersigned hereby certifies:

1. The proposed substitution has been fully investigated and is equal or superior to specified product.
2. The same or better warranty will be furnished for proposed substitution as for specified material, product or equipment.
3. All changes in the work resulting from the use of this substitution, if approved, will be coordinated and completed in all respects and all costs, including, but not limited to, those for additional services rendered by the Architect are the responsibility of this Contractor at no additional cost to the Contract.

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Signed by

\_\_\_\_\_  
Address

\_\_\_\_\_  
City, State, and Zip

**For Use by Architect:**

- Recommend
- Not Recommended
- Insufficient Data
- Recommend as Noted
- Received Too Late

**For Use by Owner:**

- Approved
- Not Approved
- Approved as Noted

By: \_\_\_\_\_

By: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

END OF FORM

DIVISION 1 - GENERAL REQUIREMENTS  
Section - 01 66 00 - Storage & Protection

1. GENERAL

A. REQUIREMENTS INCLUDE

1. General Contractor make arrangements with Owner for storage of materials and equipment to be installed in project. Protection and security for stored materials and equipment, on and off site is solely contractor's responsibility.

B. OFF-SITE AUTHORIZATION. Payment for materials/equipment stored off-site will be permitted only on prior written authorization.

C. SUBMITTALS.

1. In accordance with 01 33 23, submit:
  - a. Request for allocation of storage space.
  - b. List of materials and equipment to be stored.
  - c. Proposed location for storage.
  - d. Special storage requirements.
  - e. Schedule of anticipated storage dates.

2. PRODUCTS

A. PROTECTIVE MATERIALS

1. For duration of storage period, provide materials which will provide proper protection against the elements or other harmful environmental conditions.

3. EXECUTION

A. LOCATION

1. Where authorized by Owner.
2. Contractor will resolve conflicts in storage requirements of all contractors.

B. PROTECTION

1. Appropriate protection is required as necessary to maintain quality and intent of stored materials.

END OF SECTION 01 66 00

DIVISION 1 - GENERAL REQUIREMENTS  
Section - 01 73 29 - Cutting & Patching

1. GENERAL

1.1 REQUIREMENTS INCLUDE

A. Unless noted otherwise, each contractor shall:

1. Execute cutting (including excavating), filling or patching of work to:
  - a. Install specified work.
  - b. Remove samples of installed work specified for testing.
  - c. Remove and replace defective work.
2. In addition, upon written instructions of Architect/Engineer:
  - a. Uncover work to provide for observation of covered work.
  - b. Remove samples of installed materials for testing.
  - c. Remove work to provide for alteration of existing work.
3. Do not cut or alter work of another contractor without written consent of Architect/Engineer.

1.2 SUBMITTALS

A. Prior to cutting which affects structural members or work of another contractor, submit written notice to Architect/Engineer requesting consent to proceed with cutting, including:

1. Project identification.
2. Description of affected work.
3. Necessity for cutting.
4. Effect on other work, on structural integrity of project.
5. Description of proposed work. Designate:
  - a. Scope of cutting and patching.
  - b. Contractor and Crafts to execute the work.
  - c. Products proposed to be used.
  - d. Extent of refinishing.
6. Alternatives to cutting and patching.
7. Designation of party responsible for cost of cutting and patching.

B. Prior to cutting and patching done on instruction of Architect/ Engineer, submit cost estimate.

C. When conditions of work, or schedule, indicate change of materials or methods, submit recommendation to Architect/Engineer, including:

1. Condition indicating change.
2. Recommendation for alternative materials or methods.
3. Submittals specified for substitutions.

D. Submit written notice to Architect/Engineer, designating time work will be uncovered, to provide for observation.

1.3 PAYMENT FOR COSTS

- A. Costs caused by ill-timed or defective work, or work not conforming to contract documents, including costs for additional services of Architect/Engineer: Party responsible for ill-timed, rejected or non-conforming work.
- B. Work done on instructions of Architect/Engineer (by change order), other than defective or non-conforming work: Owner

2. PRODUCTS

- 2.1 MATERIALS. For replacement of work removed: Comply with specifications for type of work to be performed.

3. EXECUTION

3.1 INSPECTION

- A. Inspect existing conditions of work, including elements subject to movement or damage during:
  - 1. Cutting and patching.
  - 2. Excavating and backfilling.
- B. After uncovering work, inspect conditions affecting installation of new products.

3.2 PREPARATION

- A. Prior to cutting:
  - 1. Provide shoring, bracing and support to maintain structural integrity of project.
  - 2. Provide protection for other portions of the project.
  - 3. Provide protection from elements.

3.3 PERFORMANCE

- A. Execute fitting and adjustment of products to provide finished installation to comply with specified tolerances, finishes.
- B. Execute cutting and demolition by methods which will prevent damage to other work, and will provide proper surfaces to receive installation of repairs and new work.
- C. Restore work which has been cut or removed; install new products to provide completed work in accord with contract documents.
- D. Refinish entire surfaces to provide an even finish.
- E. Continuous surfaces: To nearest intersection(s).
- F. Assembly: Entire refinishing.

END OF SECTION 01 73 29

DIVISION 1 - GENERAL REQUIREMENTS  
Section - 01 74 13 - Construction Cleaning

1. GENERAL

1.1 REQUIREMENTS INCLUDE

A. General Contractor: Supervise and coordinate cleaning operations.

1.2 RELATED REQUIREMENTS

A. Specified elsewhere:

1. Individual Specification Sections: specific cleaning for product or work.
2. Section 01 35 16 – Remodeling Project Procedures: cleaning Owner occupied space.

2. PRODUCTS

2.1 EQUIPMENT

A. As designated in individual specification sections.

3. EXECUTION

3.1 CLEANING

A. As designated in individual specification sections.

3.2 DISPOSAL

- A. Maintain individual disposal units for sorting of debris for recycling and general disposal.
- B. Properly dispose of all contents of dumpsters off site in an environmentally friendly manner and in compliance with local, state and federal regulations.
- C. No burning of debris or materials is acceptable on site.
- D. All hazardous materials shall be disposed of off-site in an EPA approved facility.

END OF SECTION 01 74 13.

DIVISION 1 - GENERAL REQUIREMENTS  
Section - 01 74 23 - Final Cleaning

1. GENERAL

1.1 REQUIREMENTS INCLUDE

A. General Contractor: Provide final cleaning:

1. At completion of work, or at such other times as directed by the Contractor, remove all waste, debris, rubbish, tools, equipment, machinery and surplus materials. Clean all sight exposed surfaces; leave work clean and ready for occupancy.

1.1 RELATED REQUIREMENTS

A. Specified elsewhere:

1. Section 01 74 13 - Construction Cleaning.

2. PRODUCTS

- 2.1 All products shall be environmentally friendly "Green" cleaning products.

3. EXECUTION

3.1 FINAL CLEANING

A. Employ experienced workmen for final cleaning.

- B. Remove grease, dust, dirt, stains, labels, fingerprints, protection and other foreign materials from sight-exposed finished surfaces; polish surfaces so designated to specified finish.

1. In preparation for substantial completion or occupancy, conduct final inspection of sight-exposed surfaces, and of concealed spaces to ensure performance.

C. Repair, patch and touch up marred surfaces to specified finish, to match adjacent surfaces.

- D. Contractor soft broom clean all exposed concrete surfaces clean; other paved areas with soft or stiff broom as directed. Rake clean other surfaces on grounds.

E. Contractor sweep and mop clean all flooring within work space.

F. Contractor to remove snow and ice from access to building(s).

G. Contractor to replace air handling filters if units were operated during construction.

H. Contractor vacuum clean ducts, blowers and coils, when directed by A/E.

- I. Contractor maintain finally cleaned areas until project, or designated portion thereof, is accepted by A/E.

END OF SECTION 01 74 23.

DIVISION 1 - GENERAL REQUIREMENTS  
Section - 01 78 23 - Operating & Maintenance Data

1. GENERAL

1.1 REQUIREMENTS INCLUDE

- A. Each Contractor provide Operating and Maintenance Data in accordance with Article 01 78 23 of the Standard Documents for Construction and the Project Manual to the coordinating contractor.
- B. General Contractor shall assemble the submitted Operations and Maintenance Date, ensure that all submittals are included and complete, and turn over to the Architect for review as one complete bound package, including the record drawings.

2. NUMBER OF REQUIRED SUBMITTALS

- A. Three (3) Copies of the Operation and Maintenance Manuals are required.
- B. One (1) Electronic Copy of the Operation and Maintenance Manuals are required to be submitted on disk

**3. REQUIRED SUBMITTALS**

3.1 Contractor

- A. Section xx xx xx - X
  - 1. Product data
  - 2. Manufacturer's instructions for maintenance, and service and care
  - 3. Shop drawings
  - 4. Warranties & bonds

END OF SECTION 01 78 23.

DIVISION 1 - GENERAL REQUIREMENTS  
Section - 01 78 36 - Extended Warranties & Bonds

1. GENERAL

1.1 REQUIREMENTS INCLUDE

- A. Each Contractor shall warrant their work in accordance with the Standard Documents for Construction. In addition, the following extended Warranties and Bonds shall be provided as specified.
- B. Capital Development Board (CDB) will be the designated agent during the warranty period.

2. EXTENDED WARRANTIES AND BONDS

2.1 Coordinating Contractor:

- A. Section 10 28 00 – Toilet, Bath, and laundry Accessories:
  - 1. Manufacturer to provide a fifteen (15) year warranty against silver spoilage of mirrors.

END OF SECTION 01 78 36.

DIVISION 1 - GENERAL REQUIREMENTS  
01 78 39 - Project Record Documents

1. GENERAL

1.1 REQUIREMENTS INCLUDE

A. General Contractor:

1. At project site, maintain one record copy of:
  - a. Contract drawings, including separate volume(s) of details.
  - b. Project Manual.
  - c. Interpretations and supplemental instructions.
  - d. Addenda.
  - e. Reviewed, approved shop drawings and product data.
  - f. Other modifications to contract.
  - g. Field test records.
  - h. All schedules.
  - i. Correspondence file.
2. Store documents in temporary field office apart from documents used for field construction.
3. Provide files and racks for document storage.
4. File documents in format in accord with Project Manual Table of Contents.
5. Maintain documents in clean, dry, legible condition.
6. Do not use record documents for field construction purposes.
7. Make documents available at all times for inspection by Architect/Engineer.

1.2 RELATED REQUIREMENTS

A. Specified elsewhere:

1. Section 01 33 23 - Shop Drawings, Product Data & Samples.
2. Section 01 78 23 - Operating & Maintenance Data.
3. Section 01 78 36 – Extended Warranties & Bonds Schedule

1.3 RECORDING

- A. Label each document "PROJECT RECORD DOCUMENTS" in 2" high printed letters.
- B. Keep record documents current.
- C. Do not permanently conceal any work until specified information has been recorded.
- D. Contract drawings: Legibly mark to record actual construction:
  1. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.
  2. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.
  3. Field changes of dimension and detail.
  4. Changes made by change order.
  5. Details not on original contract drawings.

- E. Specifications and addenda: Legibly mark up each section to record:
  - 1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
  - 2. Changes made by change order or field order.
  - 3. Other matters not originally specified.
- F. Shop drawings: Maintain as record documents; legibly annotate drawings to record changes made after review.
- G. A/E will periodically review documents to confirm they are up-to-date. Contractor payment may be withheld or reduced if record documents are not current.

1.4 SUBMITTAL

- A. At completion of project, deliver record documents to A/E.
- B. Accompany submittal with transmittal letter, in duplicate, containing:
  - 1. Date.
  - 2. Project title and number.
  - 3. Contractor's name and address.
  - 4. Title and number of each record document.
  - 5. Certification that each document submitted is complete and accurate.
  - 6. Signature of contractor, or his authorized representative.

END OF SECTION 01 78 39.

1. GENERAL

1.1 WORK INCLUDES

- A. Coordinating Contractor shall provide **ALL** labor, materials, equipment and services necessary or incidental to the completion of all work of this section as shown on the drawings and herein specified, including:
  - 1. Selective demolition as noted on the drawings.
  - 2. Providing all required and necessary dust control measures.
  - 3. Handling and proper off site disposal of all removed materials / components.
  - 4. Careful removal and salvage of items shown to be reinstalled with new work
  - 5. Coordination of any / all hazardous materials and their removal / disposal.

1.2 RELATED WORK

- A. Specified elsewhere:
  - 1. Section 01 56 00 Barriers
  - 2. Section 01 73 29 Cutting and Patching

1.3 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and other items of interest or value to the Owner that may be uncovered during demolition remain the property of the Owner.
  - 1. Carefully salvage in a manner to prevent damage and promptly return to the Owner.

1.4 PREINSTALLATION MEETINGS

- A. Pre-demolition Conference: Conduct conference at Project site.
  - 1. Inspect and discuss condition of construction to be selectively demolished.
  - 2. Review structural load limitations of existing structure.
  - 3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
  - 4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolitions operations.
  - 5. Review areas where existing construction is to remain and requires protection.

1.5 INFORMATIONAL SUBMITTALS

- A. Proposed Protection Measures: Submit report, including drawings, that indicates the measures proposed for protecting individuals and property for dust control. Indicate proposed locations and construction of barriers.
- B. Schedule of Selective Demolition Activities: Indicate the following:

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure the Owner's building manager's on-site operations are uninterrupted.
2. Interruption of utility services. Indicate how long utility services will be interrupted.
3. Coordination of shutoff, capping and continuation of utility services.
4. Use of elevator stairs.
5. Coordination of the Owner's continuing occupancy of portions of existing building and of the Owner's partial occupancy of completed work.

#### 1.6 FIELD CONDITIONS

- A. The Owner will occupy building immediately adjacent to selective demolition area. Conduct selective demolition so the Owner's operations will not be disrupted.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Storage or sale of removed items or materials on-site is not permitted.
- E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
  1. Maintain fire-protection facilities in service during selective demolition operations.

#### 1.7 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Detach items from existing construction mark and store them ready for reuse as applicable.
- C. Remove and Recycle: Detach items from existing construction, package them for transport to a recycling facility with good environmental practices.
- D. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.
- E. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

#### 2. PRODUCTS

##### 2.1 MATERIALS

- A. Dust/sound control barriers shall be constructed of full height rigid framing.

### 3. EXECUTION

#### 3.1 EXAMINATION

- A. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- B. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect

#### 3.2 PROTECTION

- A. Protect adjacent materials and surfaces to remain.
- B. Protect walls, ceilings, floors and other existing finish work that are to remain or that are exposed during selective demolition operations.
- C. Provide covered protection over points of entry and exit from the building wherever scaffolding is placed or overhead work is projected to impact the path of travel.

#### 3.3 DEMOLITION

- A. Proper coordination for the shut-off of any utility services and control measures for dust and noise must occur prior to commencement of any demolition work. In confined areas of selective demolition, install and maintain dust and noise control barriers to keep dirt, dust, and noise from being transmitted to adjacent areas. Remove these protection measures after demolition operations are complete.
- B. Maintain and protect **ALL** existing building services to remain which transit the area affected by selective demolition.
- C. Unless otherwise noted, Contractor shall remove all wiring devices, fixtures, controls, circuitry (conduit and wiring), etc., made obsolete by the demolition within or around the building.
- D. Contractor shall relocate **ALL** existing piping, circuitry (conduit and wiring), ductwork, etc., which impedes the demolition and installation of new materials and equipment, unless otherwise noted.
- E. Contractor shall carefully demount and salvage for reinstallation masonry retaining wall components, as noted on the drawings.
  - 1. Mark all components to be salvaged with a notation of where items were removed/where to be reinstalled. Marking shall be in an inconspicuous location and coordinated with the Architect.
  - 2. Provide a plan layout of all removed/salvaged components for record.

#### 3.4 DISPOSAL OF EQUIPMENT AND MATERIALS

- A. The Contractor shall remove all generated trash, recyclables and debris at his or her expense. The Contractor may not place trash and debris in any Owner trash container or facility.

3.5 REMOVED AND REINSTALLED ITEMS:

- A. Clean and repair items to functional condition adequate for intended reuse.
- B. Pack or crate items after cleaning and repairing. Identify contents of containers.
- C. Protect items from damage during transport and storage.
- D. Reinstallation of items in locations indicated shall become the responsibility of the trade aligned with the work activity. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

3.6 EXISTING ITEMS TO REMAIN:

- A. Protect construction indicated to remain against damage and soiling during selective demolition.
- B. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.
- C. Unless noted otherwise, the contractor shall fill and patch all openings created in fire rated construction as a result of this demolition work. Materials and finishes to match that of the original materials and maintain the existing fire resistance rating.

END OF SECTION 02 07 00

DIVISION 6 - WOOD AND PLASTICS  
Section 06 10 00 - Rough Carpentry

1. GENERAL
- 1.1. WORK INCLUDES
  - A. Base Bid:
    1. General Contractor shall provide all labor and materials for:
      - a. All finish wood trim as noted on the Drawings and specified herein.
- 1.2. RELATED WORK
  - A. Specified Elsewhere:
    1. Section 06 20 23 - Finish Carpentry
- 1.3. QUALITY ASSURANCE
  - A. Moisture Content:
    1. Solid lumber and plywood shall be not less than 6% or more than 12% and shall be consistent with the average atmospheric condition at the project location.
    2. All materials shall be so conditioned at the time of manufacture and shall be handled and stored so as to maintain the condition.
    3. In no instance shall any woodwork be stored or installed in any area unless the entire area is broom clean, closed in, and possessing a relative humidity below 50% at 70°F.
- 1.4. SUBMITTALS
  - A. Shop Drawings:
    1. Submit shop drawings for approval, showing plan view, elevations, and end view of all custom millwork; full-size section of all molding and casings profiles; appropriately scaled details of all joinery; notations of special features; wood species.
  - B. Grading Requirements:
    1. Grading shall conform to the applicable grading and workmanship rules of the Associations as listed under Reference Standards, under whose rules the lumber is produced.
    2. Grade and trademark shall be required on each piece of lumber or bundle in lieu of appropriate markings. Each shipment shall be accompanied by a certificate of inspection issued by the association.
- 1.5. REFERENCE STANDARDS
  - A. C.S. 236-66 Commercial Standards: Matte-Formed Wood Particleboard.
  - B. Fed. Spec. LLL-B-810 B, Building Board (Hardboard) Hard-Pressed, Vegetable Fiber.
  - C. Fed. Spec. MM-L-00751, Solid Stock Lumber (Hardwood).
  - D. Fed. Spec. FF-N-105 B and Am-3, Nails, Brads, Staples, and Spikes.
  - E. P.S. 1-74, Product Standards, Construction and Industrial Plywood.
  - F. P.S. 51-71, Product Standards, Hardwood and Decorative Plywood.

G. Association and Institute Publications

1. AWI - Quality Standards, Section 100 - Lumber Grades; Section 200 - Plywood and Particleboard Grades; Section 400 - Casework.
2. HPA - Hardwood Plywood Association.
3. NFPA - National Forest Products Association.
4. APA - American Plywood Association.

2. PRODUCTS

2.1. LUMBER

- A. Lumber Standards: Comply with PS 20 "American Softwood Lumber Standard" and with applicable grading rules of inspection agencies certified by American Lumber Standards Committee's (ALSC) Board of Review.
- B. Grade Stamps: Factory-mark each piece of lumber with grade stamp of inspection agency evidencing compliance with grading rule requirements and identifying grading agency, grade, species, moisture content at time of surfacing, and mill
- C. Provide dressed lumber, S4S, unless otherwise indicated.
- D. Provide seasoned lumber with 19% maximum moisture content at time of dressing and shipment for sizes 2" or less in nominal thickness.
- E. Dimension (Framing) Lumber (Nominal 2" to 4" thick): construction grade or No. 1 grade according to size and species unless drawings require better properties.
- F. Boards (1" thick and less): 15% maximum moisture content, and any of the following species and grades:
  1. Mixed Southern Pine, No. 2 common grade, SPIB
  2. Hem-fir or hem-fir (north), construction or No. 2 common grade; NLGA, WCLIB, or WWPA.
  3. Eastern Softwoods, No. 2 common grade, NELG.
  4. Northern species, No. 2 common grade NLGA.
  5. Western woods, construction or No. 2 common grade; WCLIB or WWPA.
  6. Spruce-pine fir (south) or spruce-pine fir, construction or No. 2 common grade, NEMA, NLGA, WCLIB, or WWPA.

2.2 CONSTRUCTION PANELS

- A. Construction Panel Standards: Comply with DOC PSI except PS2 acceptable for sheathing.
  1. Provide products containing no added urea-formaldehyde.
- B. Trademark: Factory-mark each construction panel with APA trademark evidencing compliance with grade requirements.
- C. Equipment Backer Panels: DOC PSI, exposure 1, C-D plugged, fire retardant treated, not less than ½ inch (12.7mm) thick.

2.3 MISCELLANEOUS MATERIALS

- A. Construction Adhesive: Formulation complying with ASTM D 3498 that is approved for use with type of construction panel indicated by both adhesive and panel manufacturer.
- B. Metal Framing Anchors:

1. Provide products for which model code evaluation/research reports exist that are acceptable to authorities having jurisdiction and that evidence compliance of metal framing anchors for application indicated with the building code in effect for this project.
2. Provide products for which manufacturer publishes allowable design loads that are determined from empirical data or by rational engineering analysis and that are demonstrated by comprehensive testing performed by a qualified independent testing laboratory.
3. Fabricate of steel sheet zinc-coated by hot-dip process on continuous lines prior to fabrication to comply with ASTM A 653/A653M, G60 (Z180).

## 2.4 WOOD TREATMENT

### A. Preservative Treatment:

1. Comply with applicable requirements of AWWA U1: Use category UC 3B. Mark each treated item with the AWPB Quality Mark Requirements. Treat the following:
  - a. All wood items outside building enclosure.

### B. Fire-Retardant Treatment:

1. Pressure treated materials to have a moisture content of 28% or less when tested according to ASTM D 3201 at 90% relative humidity.
  - a. Use all items inside building.

### C. Provide kiln-dry lumber after treatment having a maximum moisture content of 19% and 15% for plywood after treatment.

## 2.5 FASTENERS

### A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.

1. Where carpentry is exposed to weather, in ground or metal contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners of type 304 stainless steel.

### B. Nails, brads, and staples: ASTM F 1667.

### C. Power driven fasteners: NES NER-272.

### D. Wood screws: ASME B18.6.1.

### E. Screws for fastening to cold-formed metal framing: ASTM C 1002 or ASTM C 954, length as recommended by screw manufacturer for material being fastened.

### F. Lag bolts: ASME B18.2.1 (ASME B18.2.3.8M)

### G. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, properly Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and where indicated, flat washers.

### H. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capacity to sustain, without failure, a load equal to six (6) times the load imposed when installed in unit masonry assemblies and equal to four (4) times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.

1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.

3. EXECUTION

3.1. BASIC INSTALLATION

- A. Do not use lumber of material which is unsound, warped, bowed, twisted, improperly treated, not adequately seasoned to too small to fabricate the work with a minimum of joints or the optimum jointing arrangement.
- B. Fit carpentry work to other work. Scribe and cope as required for accurate fit.
- C. Set carpentry work accurately to required levels and lines with members plumb and true.
- D. Securely attach carpentry work to substrates by anchoring and fastening as shown and as required by recognized standards.
- E. Provide washers under bolt heads and nuts in contact with wood.
- F. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting of wood; predrill as required.
- G. Do not drive threaded friction-type fasteners; turn into place. Tighten bolts and lag screws at installation and retighten as required for tight connections prior to closing in or at completion of work.
- H. Set wood framing accurately to required lines and levels. Provide framing members of sizes and on spacings shown, and frame openings as shown or if not shown, comply with the recommendations of the NFPA (National Forest Products Association). Cut, join and tightly fit framing around other work.
- I. Anchor and nail as shown or if not shown, to comply with the recommended nailing schedule and other recommendations of NFPA.
- J. Wood ground, nailers, and blocking:
  - 1. Provide wherever shown and where required for screeding or attachment of other work. Form to shapes and cut as required for trueline and level of work to be attached or screeded.
  - 2. Provide solid wood blocking built into gypsum drywall partitions and walls where shelving, cabinets, toilet partitions, door stops, accessories and similar are secured.
  - 3. Coordinate location with other work. Refer to Shop Drawings of such work, if any.
  - 4. Attach blocking to substrates securely with anchor bolts or other attachment devices as shown and as required to support applied loading.
  - 5. Where pressure-treated wood blocking is secured to a metal substrate, separate blocking from metal substrate with protective membrane the entire contact surface.
  - 6. Countersink bolts and nuts flush with surfaces, unless otherwise indicated.
  - 7. Build into masonry as work progresses, cutting to fit masonry unit size involved.
  - 8. Anchor to formwork before concrete placement.

END OF SECTION 06 10 00

DIVISION 6 – WOOD , PLASTICS & COMPOSITES  
Section 06 20 23 – Interior Finish Carpentry

PART 1 - GENERAL

1.1 WORK INCLUDES

A. Base Bid:

1. Interior trim.
2. Interior plywood paneling.

B. Related Requirements:

1. Section 061000 "Rough Carpentry" for furring, blocking, and other carpentry work not exposed to view.

1.2 DEFINITIONS

A. MDF: Medium-density fiberboard.

B. MDO: Plywood with a medium-density overlay on the face.

1.3 ACTION SUBMITTALS

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

1. Include data for wood-preservative treatment from chemical-treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained. Include chemical-treatment manufacturer's written instructions for finishing treated material.
2. Include data for fire-retardant treatment from chemical-treatment manufacturer and certification by treating plant that treated materials comply with requirements.

B. Samples for Initial Selection: For each type of product involving selection of colors, profiles, or textures.

C. Samples for Verification:

1. For each species and cut of lumber and panel products with non-factory-applied finish, with 1/2 of exposed surface finished, 50 sq. in. (300 sq. cm) for lumber and 8 by 10 inches (200 by 250 mm) for panels.

1.4 INFORMATIONAL SUBMITTALS

A. Evaluation Reports: For fire-retardant-treated wood, from ICC-ES.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber, plywood, and other panels flat with spacers between each bundle to provide air circulation. Protect materials from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.
- B. Deliver interior finish carpentry materials only when environmental conditions meet requirements specified for installation areas. If interior finish carpentry materials must be stored in other than installation areas, store only where environmental conditions meet requirements specified for installation areas.

1.6 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install interior finish carpentry materials until building is enclosed and weatherproof, wet work in space is completed and nominally dry, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Do not install finish carpentry materials that are wet, moisture damaged, or mold damaged.
  - 1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
  - 2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Lumber: DOC PS 20 and the following grading rules:
  - 1. NeLMA: Northeastern Lumber Manufacturers' Association, "Standard Grading Rules for Northeastern Lumber."
  - 2. NHLA: National Hardwood Lumber Association, "Rules for the Measurement and Inspection of Hardwood & Cypress."
  - 3. NLGA: National Lumber Grades Authority, "Standard Grading Rules for Canadian Lumber."
  - 4. SPIB: The Southern Pine Inspection Bureau, "Standard Grading Rules for Southern Pine Lumber."
  - 5. WCLIB: West Coast Lumber Inspection Bureau, Standard No. 17, "Grading Rules for West Coast Lumber."
  - 6. WWPA: Western Wood Products Association, "Western Lumber Grading Rules."
- B. Factory mark each piece of lumber with grade stamp of inspection agency indicating grade, species, moisture content at time of surfacing, and mill.
  - 1. For exposed lumber, mark grade stamp on end or back of each piece.
- C. Softwood Plywood: DOC PS 1.
- D. Hardboard: AHA A135.4.

- E. MDF: ANSI A208.2, Grade 130 made with binder containing no urea-formaldehyde resin].
- F. Particleboard: ANSI A208.1, Grade M-2, made with binder containing no urea-formaldehyde resin.

## 2.2 FIRE-RETARDANT-TREATED MATERIALS

- A. General: For applications indicated, use materials complying with requirements in this article that are acceptable to authorities having jurisdiction, and comply with testing requirements; testing by a qualified testing agency.
- B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Products with a flame-spread index of 25 or less when tested according to ASTM E 84, with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet (3.2 m) beyond the centerline of the burners at any time during the test.
  - 1. Kiln dry lumber and plywood after treatment to a maximum moisture content of 19 and 15 percent respectively.
- C. For exposed items indicated to receive a stained or natural finish, use[ **organic resin**] chemical formulations that do not contain colorants, and provide materials that do not have marks from spacer sticks on exposed face.
- D. Do not use material that does not comply with requirements for untreated material or is warped or discolored.
- E. Identify fire-retardant-treated wood with appropriate classification marking of testing and inspecting agency acceptable to authorities having jurisdiction.
  - 1. For exposed lumber indicated to receive a stained or natural finish, mark end or back of each piece.
  - 2. For exposed plywood indicated to receive a stained or natural finish, mark back of each piece.
- F. Application: All interior lumber and plywood.

## 2.3 INTERIOR TRIM

- A. Hardwood Lumber Trim for Transparent Finish (Stain or Clear Finish):
  - 1. Species and Grade: Match existing trim.
  - 2. Maximum Moisture Content: 13 percent.
  - 3. Finger Jointing: Not allowed.
  - 4. Gluing for Width: Not allowed.
  - 5. Face Surface: Surfaced (smooth).
  - 6. Matching: Selected for compatible grain and color.

## 2.4 PANELING

- A. Hardwood Veneer Plywood Paneling: Hardwood plywood panels complying with HPVA HP-1.

1. Face Veneer Species and Cut: Match existing.
2. Veneer Matching: Match existing.
3. Backing Veneer Species: Same species as face veneer.
4. Construction: Veneer core.
5. Thickness: 1/8 inch (3.2 mm)].
6. Panel Size: Match existing panel size.
7. Glue Bond: Type II (interior).
8. Finish: See Section 09 91 00 – Interior Painting.

## 2.5 MISCELLANEOUS MATERIALS

- A. Fasteners for Interior Finish Carpentry: Nails, screws, and other anchoring devices of type, size, material, and finish required for application indicated to provide secure attachment, concealed where possible.
- B. Low-Emitting Materials: Adhesives shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- C. Glue: Aliphatic-resin, polyurethane, or resorcinol wood glue recommended by manufacturer for general carpentry use.
  1. Wood glue shall have a VOC content of 30 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- D. Paneling Adhesive: Comply with paneling manufacturer's written recommendations for adhesives.
  1. Adhesive shall have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- E. Multipurpose Construction Adhesive: Formulation complying with ASTM D 3498 that is recommended for indicated use by adhesive manufacturer.
  1. Adhesive shall have a VOC content of 70 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

## 2.6 FABRICATION

- A. Back out or kerf backs of the following members except those with ends exposed in finished work:
  1. Interior standing and running trim except shoe and crown molds.
  2. Wood-board paneling.
- B. Ease edges of lumber less than 1 inch (25 mm) in nominal thickness to 1/16-inch (1.5-mm) radius and edges of lumber 1 inch (25 mm) or more in nominal thickness to 1/8-inch (3-mm) radius.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.
- B. Examine finish carpentry materials before installation. Reject materials that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Clean substrates of projections and substances detrimental to application.
- B. Before installing interior finish carpentry, condition materials to average prevailing humidity in installation areas for a minimum of 24 hours.

#### 3.3 INSTALLATION, GENERAL

- A. Do not use materials that are unsound, warped, improperly treated or finished, inadequately seasoned, too small to fabricate with proper jointing arrangements, or with defective surfaces, sizes, or patterns.
- B. Install interior finish carpentry level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.
  - 1. Scribe and cut interior finish carpentry to fit adjoining work. Refinish and seal cuts as recommended by manufacturer.
  - 2. Where face fastening is unavoidable, countersink fasteners, fill surface flush, and sand unless otherwise indicated.
  - 3. Install to tolerance of 1/8 inch in 96 inches (3 mm in 2438 mm) for level and plumb. Install adjoining interior finish carpentry with 1/32-inch (0.8-mm) maximum offset for flush installation and 1/16-inch (1.5-mm) maximum offset for reveal installation.
  - 4. Coordinate interior finish carpentry with materials and systems in or adjacent to it. Provide cutouts for mechanical and electrical items that penetrate interior finish carpentry.

#### 3.4 STANDING AND RUNNING TRIM INSTALLATION

- A. Install with minimum number of joints practical, using full-length pieces from maximum lengths of lumber available. Do not use pieces less than 24 inches (610 mm) long, except where necessary. Stagger joints in adjacent and related standing and running trim. Miter at returns, miter at outside corners, and cope at inside corners to produce tight-fitting joints with full-surface contact throughout length of joint. Use scarf joints for end-to-end joints. Plane backs of casings to provide uniform thickness across joints where necessary for alignment.
  - 1. Match color and grain pattern of trim for transparent finish (stain or clear finish) across joints.
  - 2. Install trim after gypsum-board joint finishing operations are completed.

3. Install without splitting; drill pilot holes before fastening where necessary to prevent splitting. Fasten to prevent movement or warping. Countersink fastener heads on exposed carpentry work and fill holes.

### 3.5 PANELING INSTALLATION

- A. Plywood Paneling: Select and arrange panels on each wall to minimize noticeable variations in grain character and color between adjacent panels. Leave 1/4-inch (6-mm) gap to be covered with trim at top, bottom, and openings. Install with uniform tight joints between panels.
  1. Attach panels to supports with manufacturer's recommended panel adhesive and fasteners. Space fasteners and adhesive as recommended by panel manufacturer.
  2. Conceal fasteners to greatest practical extent.
  3. Arrange panels with grooves and joints over supports. Fasten to supports with nails of type and at spacing recommended by panel manufacturer. Use fasteners with prefinished heads matching groove color.

### 3.6 ADJUSTING

- A. Replace interior finish carpentry that is damaged or does not comply with requirements. Interior finish carpentry may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing. Adjust joinery for uniform appearance.

### 3.7 CLEANING

- A. Clean interior finish carpentry on exposed and semiexposed surfaces. Restore damaged or soiled areas and touch up factory-applied finishes, if any.

### 3.8 PROTECTION

- A. Protect installed products from damage from weather and other causes during construction.
- B. Remove and replace finish carpentry materials that are wet, moisture damaged, and mold damaged.
  1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
  2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 06 20 23

DIVISION 9 - FINISHES  
Section 09 68 16 – Carpet Tile

1. GENERAL
- 1.1 WORK INCLUDES
  - A. Base Bid:
    1. General Contractor shall provide all labor and materials for:
      - a. General carpet tile as indicated on the Drawings and as specified herein.
- 1.2 RELATED WORK
  - A. Specified elsewhere:
    1. Section 06 20 23 – Interior Finish Carpentry
- 1.3 SUBMITTALS
  - A. Product Data: Submit manufacturer's data on carpet and carpeting materials, showing that materials comply with requirements of specifications.
    1. Submit printed data on adhesives demonstrating conformance with specification requirements for approval of carpets material manufacturer and maximum VOC.
  - B. Samples:
    1. Submit three (3) full size samples of each color and pattern of carpet tile demonstrating extreme range.
    2. Submit samples of each carpet edge guard strip, at least six (6) inches long.
- 1.4 QUALITY ASSURANCE
  - A. Installer: Engage a carpet installation firm, which has at least five (5) years successful experienced in carpet installations similar in size and type to the carpeting requirements of this project.
  - B. Flammability:
    1. Provide only carpet which has been tested and passed the critical radiant flux test, ASTM E 648 as follows:
      - a. Not less than 0.45 watts per sq. cm.
  - C. Color Matching: Provide carpet goods from same dye lot.
- 1.5 PROJECT CONDITIONS
  - A. Inspection: Installer must examine the substrate and the conditions under which the work is to be installed, and notify the contractor in writing of conditions under which the work is to be installed, and notify the contractor in writing of conditions detrimental to the proper and timely completion of the work. Start of work will evidence acceptance of conditions.
  - B. General: Comply with the Carpet and Rug Institute's "Standard for Installation Specification of Commercial Carpet" CRI 104, Section 7.2, "Site Conditions; Temperature and Humidity" and Section 7.12 "Ventilation".
  - C. Environmental Limitations: Do not install carpet until wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at the levels indicated for project when occupied for its intended use.

1.6 DELIVERY, STORAGE, HANDLING

- A. Comply with the Carpet and Rug Institute's "Standard for Installation Specification of Commercial Carpet" CRI 104, Section 5 "Storage and Handling".

1.7 EXTRA MATERIALS

- A. Furnish extra materials that match and are from same production runs as products installed and that are packaged with protective covering for storage and identified with labels describing contents.
1. Carpet Tiles: Furnish quantity of full size units equal to three (3) boxes or 3 percent of total amount installed, whichever is greater, for each type, composition, color, pattern, and size.
  2. All extra materials are to be delivered to the Owner in full boxes. Round quantities up as required.

2. PRODUCTS

2.1 CARPET MATERIALS

- A. Carpet: Refer to Finish Plans
- B. Basis of Design Products: Subject to compliance with requirements, and availability, provide following basis of design products, or comparable products:
1. Carpet 1 (CPT-1)
    - a. Basis of Design: Moving Floors Collection, by Karastan.
      - 1) Product Type: Tile
      - 2) Construction: Tufted
      - 3) Surface Texture: Textured Patterned Loop
      - 4) Gauge: 1/12 (47.00 rows per 10cm)
      - 5) Density: 12,929
      - 6) Weight Density: 439,586
      - 7) Stitches Per Inch: 11.0 (43.31 per 10 cm)
      - 8) Finished Pile Thickness: .104" (2.64 mm)
      - 9) Dye Method: Solution Dyed
      - 10) Backing Material: EcoFlex NXT
      - 11) Fiber Type: Duracolor Premium Nylon
      - 12) Fiber Technology: Duracolor by LEES Stain Resistant System, passes GSA requirements for permanent stain resistant carpet.
      - 13) Face Weight: 34.0 oz. per sq. yd. (1153 g/m<sup>2</sup>)
      - 14) Size: 24" x 24" (06096 m x 06096m)
      - 15) Soil Release Technology: Sentry Soil Protection
    2. Carpet 2 – 4 (CPT-2 – 4)
      - a. Basis of Design: 146500250H, by Interface FLOR
      - b. Color: As schedule per the Finish Legend on Drawings.
        - 1) Backing System: GlasBac RE Tile
        - 2) Construction: Tufted Textured Loop
        - 3) Yarn System: Post Consumer Type 6,6 nylon
        - 4) Dye Method: 100% Solution dyed
        - 5) Tufted Yarn Weight: 18 oz. / square yard
        - 6) Pile Density: 6416

3. Carpet 5 (CPT-5) (Vestibules)
  - a. Basis of Design: Super Flor, by Interface FLOR.
  - b. Color and Pattern: As schedule per the Finish Legend on Drawings.
    - 1) Backing System: Graphlar Tile
    - 2) Construction: Hair Tile (Needlepunch)
    - 3) Yarn System: 82.5% nylon; 17.5% polyester
    - 4) Tufted Yarn Weight: 41 oz.
    - 5) Pile Height: .165 in.
    - 6) Pile Density: 8945

## 2.2 CARPET ACCESSORY MATERIALS

- A. Carpet Edge Bars: Vinyl designed to conceal and retain carpet edges unless otherwise shown.
- B. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided by or recommended by the manufacturer of the materials to be adhered.
- C. Adhesive: Water and mildew resistant, non-staining, as recommended by carpet manufacturer.
- D. Miscellaneous Materials: Provide the types of seaming tape, thread, nails, adhesives, and other accessory items recommended by the carpet manufacturer and installer for the conditions of installation and use.

## 3. EXECUTION

### 3.1 PREPARATION

- A. Comply with the Carpet and Rug Institute's "Standard for Installation Specification of Commercial Carpet" CRI 104, Section 7.3 "Site Conditions; Floor Preparation" and carpet manufacturer's written installation instructions for preparing substrates indicated to receive carpet installation.
- B. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, and depressions in substrates.
- C. Remove substances that may interfere with bond.
- D. Measure each space to receive carpeting, as a basis of supplying, cutting and seaming the carpet. Do not scale the Architect's drawings or calculate sizes from dimensions shown.
- E. Vacuum substrate immediately prior to carpet installation, and remove all deleterious substances, which would interfere with the installation or be harmful to the work, level minor imperfections smooth with non-reemulsifiable latex underlayment.
- F. Remove carpet from containers and allow to acclimate to space before installation.

### 3.2 INSTALLATION

- A. General:
  1. Comply with manufacturer's instructions and recommendations.
  2. Extend carpet under open-bottomed and raised-bottom obstructions, and under removable flanges of obstructions. Extend carpet into closets and alcoves of rooms indicated to be carpeted, unless another floor finish is indicated for such spaces. Extend carpet under all movable furniture and equipment, unless otherwise indicated.
  3. Install carpet edge guard at every location where edge of carpet is exposed to traffic, except where another device, such as an expansion joint cover system or threshold, is indicated with an integral carpet binder bar.

B. Carpet Tile:

1. Comply with the Carpet and Rug Institute's "Standard for Installation Specification of Commercial Carpet" CRI 104, Section 14 "Carpet Modules (tile)".
2. Install in exact accordance with manufacturer's recommendations.
3. Provide strippable adhesive over entire back of tile.

3.3 CLEANING AND PROTECTION

- A. Remove debris from installation, carefully sorting pieces to be saved from scraps to be disposed of.
- B. Perform the following operations immediately after installing carpet:
  1. Remove excess adhesive, seam sealer, and other surface blemishes using cleaner recommended by carpet manufacturer.
  2. Remove yarns that protrude from carpet surface.
  3. Vacuum carpet using commercial machine with face-beater element.
- C. Protect installation during the remainder of the construction period in accordance with the Carpet and Rug Institute's "Standard for Installation Specification of Commercial Carpet" CRI 104 Section 16, so that carpet will be in undamaged and unsoiled condition at the time of acceptance.
  1. Replace damaged carpet.

END OF SECTION 09 68 16

DIVISION 9 - FINISHES  
Section 09 91 00 – Painting

1. GENERAL

1.1 WORK INCLUDES

A. Base Bid:

1. General Contractor shall provide all labor and materials for:
  - a. Painting and finishing of interior exposed items and surfaces indicated on Drawings.
  - b. Staining of finish wood trim and touch-up of existing wood trim affected by alterations.
  - c. The following categories of Work are not included as part of field-applied painting operations.
    - (1) Pre-Finished Items: Unless otherwise indicated, do not include painting when factory-finishing or installer-finishing is specified for such items as toilet enclosures, lockers, prefinished partition systems, acoustic material, plastic laminate-faced casework, and finished mechanical and electrical equipment, including light fixtures, switchgear and distribution cabinets.
    - (2) Concealed Surfaces: Unless otherwise indicated, painting is not required on surfaces such as walls or ceilings in concealed areas and generally inaccessible areas, furred areas, and pipe spaces.
    - (3) Finished Metal Surfaces: Unless otherwise indicated, metal surfaces of anodized aluminum, stainless steel, chromium plate, copper, bronze and similar finished materials will not require finish painting.

1.2 RELATED WORK

A. Specified elsewhere:

1. Section 06 20 23 – Interior Finish Carpentry

1.3. QUALITY ASSURANCE

- A. Single Source Responsibility: Provide primers and other undercoat paint produced by same manufacturer as finish coats, for each painting system. Use only thinners approved by paint manufacturer, and use only within recommended limits.
- B. Coordination of Work: Review other sections of these specifications in which prime paints are to be provided to ensure compatibility of total coatings systems for various surfaces. Upon request from other trades, furnish information or characteristics of finish materials provided for use, to ensure that compatible prime coats are used.

1.4. SUBMITTALS

- A. Product Data: Submit manufacturer's technical information, including paint label analysis and application instructions for each material proposed for use.
- B. Samples: The Architect/Engineer will select and schedule finish colors and tones. Contractor shall submit samples for Architect/Engineer's review of color and texture only. Compliance with all other requirements is the exclusive responsibility of the Contractor. Provide a listing of material and

application for each coat of each finish sample.

#### 1.5. DEFINITIONS

- A. "Paint" as used herein means all coating systems materials, including primers, emulsions, enamels, stains, sealers and fillers, and other applied materials whether used as prime, intermediates or finish coats.
- B. Surface preparation, priming and coats of paint specified are in addition to shop-priming and surface treatment specified under other sections of work.
- C. Surfaces to be painted: Except where natural finish of material is specifically noted as a surface not to be painted, paint exposed surfaces whether or not colors are designated in "schedules". Where items or surfaces are not specifically mentioned, paint the same as similar adjacent materials or areas. If color of finish is not designated, Architect/Engineer will select these from standard colors or finishes available.

#### 1.6. PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver products in manufacturer's original containers with labels intact and seals unbroken. Identify containers by manufacturer's name of product or specification number and color number or identification.
- B. Store materials in a well ventilated location assigned specifically for this purpose. Receiving, opening, and mixing of materials shall be done in this location.
- C. Keep storage space clean and neat. Remove solvent or paint saturated rags and clothes after each day's work.

#### 1.7. PROJECT/SITE CONDITIONS

- A. Interior painting shall not be performed until the ambient temperature of the area in which the work occurs is at least 50°F. Application of clear sealers and varnish shall not be performed until the ambient temperature is at least 65°F.
- B. Protect surfaces which are in close proximity of the area being painted or finished. Provide and place drop cloths or other suitable protective coverings as required for protection of surfaces. Clean, repair, and restore damaged and defaced surfaces to their original condition.
- C. Review painting specifications thoroughly so as to have full knowledge and understanding of the products and materials specified, number of coats, and the surface to which the materials are to be applied. Employ techniques, tools, skilled mechanics, and accessories which will produce the intended results.
- D. Do not paint over any code-required labels, such as Underwriters' Laboratories and Factory Mutual, or any equipment identification, performance rating, name or nomenclature plates.
- E. Do not paint sprinklers, face plates, receptacles and similar installed equipment.

1.8 SAFETY PRECAUTIONS

- A. The existing paint within project limits has NOT been tested for lead or asbestos. Contractor shall take all necessary precautions to ensure health and safety of all persons engaged in removing and disposing of paint and residues generated from removal. All precautions necessary shall be taken to avoid contamination of building, soils, bodies of water, water table, atmosphere and other environmental elements and in compliance with all applicable laws and regulations.

2. PRODUCTS

2.1 MATERIALS

- A. Material Quality: Provide best quality grade of various types of coatings as regularly manufactured by acceptable paint materials manufacturer. Materials not displaying manufacturer's identification as a standard, best-grade product will not be acceptable.
- B. Federal Specifications establish minimum acceptable quality for paint materials. Provide written certification from paint manufacturer that materials provided meet or exceed these minimums, when named products are not used.
- C. Manufacturer's products which comply with coating qualitative requirements of applicable Federal Specifications, yet differ in quantitative requirements, may be considered for use when acceptable to Architect/Engineer. Furnish material data and manufacturer's certificate of performance to Architect/Engineer for any proposed substitutions.
- D. Color Pigments: Pure, non-fading, applicable types to suite surfaces and service indicated.

2.2 MANUFACTURERS AND PRODUCTS

- A. Manufacturers and products of the various types of materials and systems required are listed hereinafter in Part 3 under the PAINT SYSTEMS SCHEDULE.

3. EXECUTION

3.1 INSPECTION.

- A. Examine surfaces scheduled to receive paint and finishes for conditions that will adversely affect execution, permanence, or quality of work and which cannot be put into an acceptable condition through preparatory work as included in Article 3.2.
- B. Notify Engineer/Architect of such conditions.
- C. Do not proceed with surface preparation or coating application until conditions are suitable.

3.2 PREPARATION OF SURFACES

- A. Protection:
  - 1. Prior to all surface preparation and paint operations, completely mask, remove, or otherwise adequately protect all hardware, accessories, machined surfaces, plates, and similar items

in contact with painted surfaces but not scheduled to receive paint.

- B. Ferrous Metal Surfaces / Door Frames
  - 1. Lightly sand and thoroughly clean with solvents or wire brushing until free of dirt, oil, grease, or other contaminants.
- C. Galvanized Metal Surfaces
  - 1. Thoroughly clean with solvents or wire brushing until free of dirt, oil, grease, or other contaminants.
- D. Other Metal Surfaces
  - 1. Thoroughly clean with solvents or wire brushing until free of dirt, oil, grease, or other contaminants.
- E. Gypsum Board
  - 1. Clean dirt, dust, and foreign material from surface before priming.
- F. Concrete Block
  - 1. Thoroughly clean with wire brushing until free of dirt, flaking paint, or other contaminants.
- G. Existing Wood
  - 1. Thoroughly clean and lightly sand smooth with sand paper.
  - 2. Brush and wipe entire area clean of dirt and sand particles immediately prior to staining.

### 3.3 APPLICATION

- A. General Requirements:
  - 1. Do not apply initial coating until moisture content of surface is within limitations recommended by paint manufacturer.
  - 2. Apply paint, enamel, and varnish with suitable brushes, rollers, or spraying equipment.
    - a. Rate of application shall not exceed that as recommended by paint manufacturer for the surface involved.
    - b. Keep brushes, rollers, and spraying equipment clean, dry, and free from contaminants and suitable for the finish required.
    - c. Apply materials under adequate illumination, evenly spread and smoothly flowed on to avoid runs, sags, holidays, brushmarks, air bubbles, and excessive roller stipple.
    - d. Painting and finishing shall be completed prior to installation of electrical device cover plates.
  - 3. Comply with recommendation of product manufacturer for drying time between succeeding coats.
  - 4. Vary slightly the color of successive coats.
  - 5. Enamel or varnish finish applied to wood or metal shall be sanded with fine sandpaper and then cleaned between coats to produce an even, smooth finish.
  - 6. Buff penetrating sealer and oil type finishes after each coat.
  - 7. Where materials which hold glass are to be painted, paint finish coats after glazing, carrying paint over glazing material and to the glass in a neat straight line.
  - 8. Apply stain finishes continuously over the length of members to provide even coloration without lap marks.

9. Apply first coat of scheduled finish to concealed surfaces of millwork and trim members which are exposed to exterior elements.
10. Number of coats
  - a. The number of coats required are indicated on Paint Finish Schedules. The coats as scheduled are field applied coats and are supplemental to shop coats.
  - b. Provide complete coverage and hide. When color, stain, dirt, or undercoats show through final coat of paint, provide additional coats, at no additional cost, until the paint film is of uniform finish, color, appearance, and coverage.
11. Inspection
  - a. Do not apply additional coats until completed coat has been inspected.
  - b. Only inspected coats of paint will be considered in determining number of coats applied.

### 3.4 PAINT SYSTEM SCHEDULE

- A. Provide the following finish coating systems for the various conditions and locations. Products listed are for the assistance of the Contractor in establishing the type and quality of the materials required, and are not necessarily restrictive.

### 3.5 INTERIOR PAINT SYSTEMS

- A. Gypsum Wall Board (Eggshell Finish): Apply to all new and existing gypsum wallboard and plaster surfaces called for to be painted, unless some other finish is specifically designated.

Basis of Design:

Prime Coat: Benjamin Moore, Ultra Spec 500 Interior Latex Primer N534 (MPI Listed, Categories 50, 50-X, 149, 149-X)  
2 Finish Coats: Benjamin Moore, Ultra Spec 500 Interior Latex Eggshell Finish N536

- B. Existing Concrete Masonry Units (Semi-gloss): Apply to *existing* painted masonry and concrete surfaced called for to be painted, unless some other finish is specifically designated.

Basis of Design:

Prime Coat: Benjamin Moore, Ultra Spec 500 Interior Latex Primer N534 (MPI Listed, Categories 50, 50-X, 149, 149-X)  
2 Finish Coats: Benjamin Moore, Ultra Spec 500 Interior Latex Semi-Gloss Finish N539

- C. Ferrous Metal: Apply to new and existing ferrous metal surfaces (new and existing hollow metal doors, door and lite frames, metal fin tube heating covers, existing steel ceiling grid, existing steel structure and decking).

Basis of Design:

Prep for new surfaces: Lightly sand and clean surfaces.  
Prep for existing surfaces: Chemically- or heat-stripped existing paint from existing door frames to bare metal.  
Prime Coat: None.  
2 Finish Coats: Benjamin Moore, Super Spec HP D.T.M. Alkyd Semi-Gloss #P24 (MPI Listed, Category 81).

- D. Wood Surfaces (Stain): Apply to new and existing wood surfaces as indicated

Basis of Design:

Prime Coat: Benjamin Moore Semi-Transparent Stain  
2 Finish Coats: Benjamin Moore Benwood Urethan Finish

- E. Epoxy on Existing Concrete Masonry Units: Apply to existing masonry at wet locations as indicated.

Basis of Design:

Prime Coat: Benjamin Moore, Ultra Spec 500 Interior Latex Primer N534 (MPI Listed, Categories 50, 50-X, 149, 149-X)  
2 Finish Coats: Benjamin Moore, Super Spec HP Acrylic Epoxy Coating P43-86 Semi-Gloss (MPI Listed, Category 215)

3.6 REINSTALLATION OF REMOVED ITEMS

- A. Reinstallation of removed items:  
1. Following completion of painting in each space, promptly reinstall all items removed for painting.

3.7 CLEANING

- A. Touch up and restore finish where damaged.  
B. Remove spilled, splashed, or splattered paint from all surfaces.  
C. Do not mar surface finish of item being cleaned.  
D. Leave storage space clean and in condition required for equivalent spaces in project.  
E. Remove from premises rubbish and accumulated materials of whatever nature not caused by others and leave work in clean, orderly, and acceptable condition.

3.8 SCHEDULE OF COLORS

- A. Refer to Finish Legend on the Drawings for selected colors.

END OF SECTION 09 91 00

DIVISION 10 - SPECIALTIES  
Section 10 28 00 - Toilet Accessories

1. GENERAL
- 1.1 WORK INCLUDES
  - A. Base Bid:
    1. General Contractor shall provide all labor and materials for:
      - a. Installation of all toilet accessories listed herein.
- 1.2 RELATED WORK
  - A. Specified Elsewhere:
    1. 06 10 00 - Rough Carpentry
    2. 09 91 00 - Painting
    3. 10 28 50 - Compartments & Cubicles
- 1.3 SUBMITTALS
  - A. Shop Drawings:
    1. Submit shop drawings and/or brochures for all items describing details of construction, fabrication, installation, materials, and finishes.
2. PRODUCTS
- 2.1 MANUFACTURERS
  - A. Acceptable Manufacturers:
    1. Bobrick Washroom Equipment Co.
    2. American Specialties, Inc.
    3. Bradley Corp.
- 2.2 MATERIALS (Basis of Design: Bobrick unless noted otherwise)
  - A. Toilet Tissue Holder – Model: B-2892
    1. Surface mounted for two rolls
    2. Stainless steel, satin finish
    3. One (1) per toilet stall and staff toilet and at locations shown on Drawings
  - B. Soap Dispenser – Owner provided; Owner Installed
  - C. Grab Bars – Model: B-5806
    1. 1-1/2-inch diameter
    2. stainless steel with peened grip and satin finish
    3. snap flanged ends with concealed mounting
    4. Provide lengths and configurations indicated on Drawings; at minimum provide one (1) 42" at side wall, one (1) 12" and one (1) 18" bar at back wall and, one (1) 18" bar at side wall at every accessible stall and staff toilet.

3. EXECUTION

3.1 INSPECTION

- A. Check areas to receive surface mounted units for conditions that would affect quality and execution of Work.
- B. Check all wall systems before finish wall material or surface is applied to be sure that all blocking in wall is installed for surface mounted units. Where recessed units are required verify proper openings in masonry walls are provided.
- C. Verify spacing of plumbing fixtures and toilet partitions that affect installation of accessories.
- D. Do not begin installation of toilet and bath accessories until openings and surfaces are acceptable.

3.2 INSTALLATION

- A. Drill holes to correct size and locate so that they are concealed by item, within a 1/4 inch tolerance.
- B. Mount surface mounted accessories to backup with approved anchors, plumb, and aligned.
  - 1. Fasten items to building construction as required to provide a secure permanent installation.
  - 2. Contractor shall use spacing and sizes of bolts, screws, etc., which will develop the full strength of the members being fastened. Thus failure due to overstressing must occur in the members before occurring in the fastenings.
  - 3. Fastenings to concrete shall be by anchor bolts embedded in concrete, or by self-drilling masonry anchors.
  - 4. Fastenings to unit masonry shall be by anchor bolts embedded in masonry joints, or self-drilling masonry anchors into solid masonry units or hollow units grouted full. Toggle bolts not permitted.
- C. Mount all units to concealed mounting plates installed on wall with Allen head screws.
- D. Check all manufacturers' installation instructions for exact method of anchoring and installing all items.

3.3 ADJUST AND CLEAN

- A. Adjust accessories for proper operation.
- B. After completion of installation, clean and polish all exposed surfaces.

END OF SECTION 10 28 00

DIVISION 10 - SPECIALTIES  
Section 10 28 50 - Compartments & Cubicles

1. GENERAL
- 1.1 WORK INCLUDES
  - A. Base Bid:
    1. General Contractor shall provide all labor and materials for:
      - a. Metal toilet compartments
      - b. All accessories as required for their installation
- 1.2 RELATED WORK
  - A. Specified elsewhere:
    1. 06 10 00 - Rough Carpentry
    2. 10 28 00 - Toilet Accessories
- 1.3 SUBMITTALS
  - A. Provide shop drawings describing details of construction, fabrication, design, size, finishes, and attachment to adjacent materials.
  - B. Submit color charts for color selection by Architect.
- 1.4 QUALITY ASSURANCE
  - A. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication, where possible.
  - B. Regulatory Requirements:
    1. Comply with requirements of authorities having jurisdiction and applicable requirements for accessibility such as operating force, grasping and turning.
2. PRODUCTS
- 2.1 MANUFACTURERS
  - A. Manufacturer: Subject to compliance with specification requirements, and availability, provide products by one of the following:
    1. Phenolic Core Units with Melamine Facing:
      - a. American Sanitary Partition Corp.
      - b. Ampco Products, Inc.
      - c. General Partitions Manufacturing Corp.
      - d. Global Partitions
      - e. Metpar Steel Products Corp.
- 2.2 MATERIALS
  - A. Basic Requirements: Provide materials which have been selected for surface flatness and smoothness. Exposed surfaces which exhibit pitting, seam marks, roller marks, stains, discolorations, telegraphing of core material, or other imperfections on finished units are not acceptable.

- B. Doors and panels shall be 1" thick, constructed of two sheets of 22-gauge, galvanized, stretcher-leveled quality Steel formed and bonded under pressure with a non-toxic adhesive to a resin-impregnated, sound-deadening honeycomb core.
- C. Stiles: Floor-Anchored stiles furnished with expansion shields and threaded rods.
  - 1. Leveling Devices: 7 gauge, 3/16 inches thick, corrosion-resistant, chromate-treated, double zinc-plated steel angle leveling bar bolted to stile; furnished with 3/8 inch diameter threaded rods, hex nuts, lock washers, flat washers, spacer sleeves, expansion anchors, and shoe retainers.
  - 2. Stile Shoes: One-piece, 22 gauge, 18-8, Type 304 stainless steel, 4 inch height; tops with 90 degree return to stile. One-piece shoe capable of adapting to 3/4 inch or 1 inch stile thickness and capable of being fastened (by clip) to stiles starting at wall line.
- D. Mounting Brackets: 18 gauge stainless steel and extend full height of panel.
  - 1. U-Channels: Secure panels to stiles
  - 2. Angle Brackets: Secure stiles-to-walls and panels-to-walls.
- E. Hardware and Accessories: Manufacturer's design complying with accessibility requirements heavy duty operating hardware and accessories of stainless steel.
- F. Anchorages and Fasteners: Exposed fasteners of stainless steel, chromium-plated steel or brass, finished to match hardware, with theft-resistant-type heads and nuts. For concealed anchors, use hot-dip galvanized, cadmium-plated, or other rust-resistant protective-coated steel.

### 2.3 FABRICATION

- A. Basic Requirements: Furnish units with cutouts, drilled holes, and internal reinforcement to receive partition-mounted hardware, accessories, and grab bars, as indicated.
- B. Door Dimensions: Unless otherwise indicated, furnish 24-inch-wide in-swing doors for ordinary toilet stalls and 32-inch-wide (clear opening) out-swinging doors or stalls equipped for wheelchair use.
- C. Overhead-Braced Compartments: Furnish galvanized steel supports and leveling bolts at stiles as recommended by manufacturer to suit floor conditions. Make provisions for setting and securing continuous, extruded, aluminum, antigrip, overhead bracing at top of each stile. Provide shoe at each stile to conceal supports and leveling mechanism.
- D. Wall-Hung Urinal Screens: Furnish panel units in sizes indicated, of same construction and finish as partition system panels.
- E. Hardware: Furnish hardware for each compartment to comply with accessibility requirements as follows:
  - 1. Hinges: Continuous and adjustable to hold door open at any angle up to 90 degrees. Provide gravity type, spring-action cam type, or concealed torsion rod type.
  - 2. Latch and Keeper: Manufacturer's standard latch unit, designed for accessibility requirements, with combination rubber-faced door strike and keeper.
  - 3. Coat Hook: Manufacturer's standard unit, combination hook and rubber-tipped bumper, sized to prevent door hitting mounted accessories.
  - 4. Door Pull: Manufacturer's standard unit designed for accessibility requirements for out-swinging doors. Provide pulls on both faces of handicapped compartment doors.

2.4 FINISH

- A. Facing Color: As indicated, or if not indicated, as selected by Architect from manufacturer's full line of colors, or color combinations.

3. EXECUTION

3.1 INSPECTION

- A. Examine the areas and conditions under which work of this section will be installed.
- B. Correct conditions detrimental to the proper and timely completion of the work.
- C. Do not proceed until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General:

- 1. Install partitions rigid, straight, plumb, and level.
- 2. Provide clearance of not more than 1/2-inch between stile and panels and not more than one (1) inch between panels and wall.
- 3. Secure panels to wall using continuous type brackets.
- 4. Locate wall brackets so that holes for wall anchors occur in masonry joints.
- 5. Secure panels to supporting walls with manufacturer's recommended devices.

B. Partitions:

- 1. Level, tighten, and plumb installation.
- 2. Adjust bottom of door level with bottom of stile when door is in closed position.

C. Hardware:

- 1. Install and lubricate hinges on in-swing doors to hold open approximately 30 degrees from closed position when unlatched.
- 2. Install and lubricate hinges on out-swing doors to return to closed position.
- 3. Adjust and align hardware to uniform clearance of vertical edges of doors not exceeding 3/16 inch.

3.3 COORDINATION

- A. Properly coordinate with all other trades as required to ensure adequate provision of anchorage of the work of this Section.

3.4 ADJUSTMENTS AND CLEANING

- A. Perform final adjustments to stile leveling devices, doors, and hardware just prior to final inspection.
- B. Clean exposed surfaces free of oil and touch up minor scratches and other finish imperfections using materials and methods recommended by manufacturer.

END OF SECTION 10 28 50

**SECTION 22 05 00  
COMMON WORK RESULTS FOR PLUMBING**

**PART 1 – GENERAL**

**1.01 SCOPE OF WORK**

- A. Base Bid: It is the intent of these specifications to provide complete and workable plumbing systems as shown on the accompanying plans and as specified herein except such parts as are specifically exempted herein. Provide all necessary supervision, coordination, labor, materials, equipment, fixtures, drayage, hoisting, tools, transportation, plant services and facilities, machinery and connections to utilities for the installation of complete and operable plumbing systems. If details or special conditions are required in addition to those shown on drawings, provide all material and equipment usually furnished with such systems or required to complete their installation, whether noted in plans and specification or not.
- B. Materials and labor shall be new (unless noted otherwise), first class and workmanlike and shall be subject at all times to the A/E's inspections, tests and approval from the commencement until the acceptance of the completed work.
- C. The layout shown on the drawings is necessarily diagrammatic but shall be followed as closely as other work will permit. The drawings provide design intent. The Contractor shall verify all dimensions at the site and be responsible for their accuracy.
- D. Because of the scale of the Drawings, certain basic items, such as, pipe fittings, duct fittings, access panels, and sleeves, may not be shown. Where such items are required by Code or by other Sections, or where required for proper installation of the Work, such items shall be included, whether shown or not.
- E. In the event of any inconsistencies between the specifications, drawings, contract documents, applicable laws, statutes, ordinances, building codes, rules and regulations, the contractor shall provide the better quality or greater quantity of work and comply with or conform its work to the most stringent legal or contractual requirements.
- F. 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.
- G. Equipment Specification may not deal individually with minute items required, such as, components, parts, controls, and devices which may be required to produce the equipment performance specified or as required to meet the equipment warranties. Where such items are required to make the system operational, they shall be included by the supplier of the equipment at no additional cost, whether or not specifically called for.

**1.02 SECTION INCLUDES**

- A. This section includes information common to two or more technical plumbing specification sections or items that are of a general nature, not conveniently fitting into other technical sections.
  - 1. Submittals
  - 2. Construction Verification Checklists
  - 3. Functional Performance Tests
  - 4. Reference Standards
  - 5. Quality Assurance
  - 6. Lead Free Requirements
  - 7. Guarantee
  - 8. Operation And Maintenance Instructions
  - 9. Record Documents
  - 10. Continuity Of Existing Services
  - 11. Protection Of Finished Surfaces
  - 12. Sealing And Firestopping
  - 13. Off Site Storage
  - 14. Regulatory Requirements

15. Certificates And Inspections
16. Coordination
17. Demolition And Existing Requirements
18. Request And Certification For Payment
19. Sleeves And Openings
20. Omissions
21. Definitions
22. Project/Site Conditions
23. Work Sequence And Scheduling
24. Salvage Materials
25. Training
26. Access Panels And Doors
27. Identification
28. Bedding And Backfill
29. Demolition
30. Excavation And Backfill
31. Concrete Work
32. Cutting And Patching
33. Lintels
34. Building Access
35. Equipment Access
36. Lubrication
37. Housekeeping And Clean Up
38. Sheeting, Shoring And Bracing
39. Dewatering
40. Rock Excavation
41. Surface Restoration

### **1.03 RELATED WORK**

- A. Applicable provisions of Division 1 govern work under this section.
- B. This section applies to all Division 22 sections of plumbing.
- C. Section 01 91 13 – Commissioning Requirements

### **1.04 SUBMITTALS**

- A. Submit shop drawings for equipment under each section per requirements listed in that section, as well as per Division 1.
- B. Submit for all equipment and systems as indicated in the respective specification sections, marking each submittal with that specification section number. Mark general catalog sheets and drawings to indicate specific items being submitted and proper identification of equipment by name and/or number, as indicated in the contract documents. Failure to do this may result in the submittal(s) being returned to the Contractor for correction and resubmission. Do not submit hard copies of web pages. Failing to follow these instructions does not relieve the Contractor from the requirement of meeting the project schedule.
- C. On request from the A/E, the successful bidder shall furnish additional drawings, illustrations, catalog data, performance characteristics, etc.
- D. Submittals shall be grouped to include complete submittals of related systems, products, and accessories in a single submittal. Mark dimensions and values in units to match those specified. Include wiring diagrams of electrically powered equipment.
- E. The submittals must be approved before fabrication is authorized.
- F. Provide electronic copies of all submittals for review.
- G. Before submitting electrically powered equipment, verify that the electrical power and control requirements for the equipment are in agreement with the motor starter schedule on the electrical drawings. Include a statement on the shop drawing transmittal to the architect/engineer that the equipment submitted and the motor starter schedule is in agreement or indicate any discrepancies.
- H. Not more than two weeks after award of contract but before any shop drawings are submitted, contractor to submit the following plumbing system data sheet. List piping material type for each

piping service on the project, ASTM number, schedule or pressure class, joint type, manufacturer and model number where appropriate. List valves and specialties for each piping service, fixture and equipment with manufacturer and model number. The approved plumbing system data sheet(s) will be made available to the owner's project representative for their use on this project.

Plumbing System Data Sheet:

Item	Pipe Service/Sizes	Manufacturer/Model No.	Remarks
Pipe			
Fittings			
Unions			
Valves:			
Pipe Specialties			
Hangers & Supports			
Insulation			
Plumbing Specialties			
Plumbing Fixtures			
Plumbing Equipment			

- I. Shop drawing submittals are to be bound, labeled, contain the project manual cover page and a material index list page showing item designation, manufacturer and additional items supplied with the installation. Submit for all equipment and systems as indicated in the respective specification sections, marking each submittal with that specification section number. Mark general catalog sheets and drawings to indicate specific items being submitted and proper identification of equipment by name and/or number, as indicated in the contract documents. Include wiring diagrams of electrically powered equipment.
- J. Submit sufficient quantities of data sheets and shop drawings to allow the following distribution:
  - 1. Operating and Maintenance Manuals 2 copies
  - 2. Owner 1 copy
  - 3. Architect/Engineer 2 copies

#### **1.05 CONSTRUCTION VERIFICATION CHECKLISTS**

- A. Contractor is responsible for utilizing the construction verification checklists supplied under these specifications in accordance with the procedures defined for construction verification checklists in Section 01 91 13 – Commissioning Requirements.

#### **1.06 FUNCTIONAL PERFORMANCE TESTS**

- A. Contractor is responsible for utilizing the functional performance test procedures supplied under these specifications in accordance with the procedures defined for functional performance test procedures in Section 01 91 13 – Commissioning Requirements.

#### **1.07 REFERENCE STANDARDS**

- A. Abbreviations of standards organizations referenced in this and other sections are as follows:
  - 1. ABMA American Boiler Manufacturers Association
  - 2. ACPA American Concrete Pipe Association
  - 3. AGA American Gas Association
  - 4. ANSI American National Standards Institute
  - 5. ARI Air Conditioning and Refrigeration Institute
  - 6. ASME American Society of Mechanical Engineers
  - 7. ASPE American Society of Plumbing Engineers
  - 8. ASSE American Society of Sanitary Engineering
  - 9. ASTM American Society for Testing and Materials
  - 10. AWWA American Water Works Association
  - 11. AWS American Welding Society
  - 12. CISPI Cast Iron Soil Pipe Institute
  - 13. CGA Compressed Gas Association
  - 14. CS Commercial Standards, Products Standards Sections, Office of Eng. Standards Service, NBS
  - 15. EPA Environmental Protection Agency

- 16. FS Federal Specifications, Superintendent of Documents, U.S. Government Printing Office
  - 17. GAMA Gas Appliance Manufacturers Association
  - 18. IAPMO International Association of Plumbing & Mechanical Officials
  - 19. IEEE Institute of Electrical and Electronics Engineers
  - 20. ISA Instrument Society of America
  - 21. MICA Midwest Insulation Contractors Association
  - 22. MSS Manufacturer's Standardization Society of the Valve & Fitting Industry, Inc.
  - 23. NBS National Bureau of Standards
  - 24. NEC National Electric Code
  - 25. NEMA National Electrical Manufacturers Association
  - 26. NFPA National Fire Protection Association
  - 27. NSF National Sanitation Foundation
  - 28. PDI Plumbing and Drainage Institute
  - 29. STI Steel Tank Institute
  - 30. UL Underwriters Laboratories Inc.
- B. Standards referenced in this section:
- 1. ACI 614 Recommended Practice for Measuring, Mixing and Placing of Concrete
  - 2. ASTM D1557 Standard Test Method for Moisture-Density Relations of Soils
  - 3. ASTM E814 Standard Test Method for Fire Tests of Through-Penetration Fire Stops
  - 4. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials
  - 5. UL1479 Fire Tests of Through-Penetration Firestops
  - 6. UL723 Surface Burning Characteristics of Building Materials

#### **1.08 QUALITY ASSURANCE**

- A. Substitution of Materials: Refer to Division 1 for equals and substitutions.
- 1. Where the following conflicts with Division 1, the requirements of Division 1 shall govern.
  - 2. If the Contractor wishes to submit an alternate to the named manufacturers for any equipment, he may submit a voluntary alternative minimum 7 days prior to bid, stating the manufacturer's name, model number, written, detailed product data.
  - 3. Where materials or equipment are specified by name the proposed material or equipment must be identical to the specified material or equipment in all characteristics of quality, function and serviceability, regardless of application in the Project and, in addition, when the Architect deems that aesthetic significance is important, the equal material or equipment must be identical in all characteristics of visual appearance, design, color and texture. Any proposed equal shall be submitted to Architect/Engineer for prior approval, which Architect/Engineer may approve or disapprove in its sole discretion. Work performed or constructed with unapproved equals is at Contractor's risk and any required correction of work incorporating unapproved equals shall be at Contractor's sole cost and expense.
  - 4. In all instances, Contractor shall assume full responsibility for proof of equality of the statute to the equipment hereinafter specified. All data and information necessary for proof of equality, function and space requirements shall be prepared and accompany the submittal of the substitution to the Architect/Engineer. Approval by the Architect/Engineer of equipment other than the specified does NOT relieve Contractor of this responsibility.
- B. All products and materials used are to be new, undamaged, clean and in good condition. Existing products and materials are not to be reused unless specifically indicated.
- C. Where equipment or accessories are used which differ in arrangement, configuration, dimensions, ratings, or engineering parameters from those indicated on the contract documents, the contractor is responsible for all costs involved in integrating the equipment or accessories into the system, including, but not limited to, coordination with other trades and any required changes by other trades and for obtaining the intended performance from the system into which these items are placed.

#### **1.09 LEAD FREE REQUIREMENTS**

- A. All materials that contact potable water shall be lead free. Lead free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content  $\leq 0.25\%$  per the Federal Safe Drinking Water Act as amended January 4<sup>th</sup> 2011 Section 1417.

- B. This requirement applies to all of the subsequent Plumbing Specification Sections and Plumbing Drawings and supersedes any part or model number that may conflict with this requirement.

#### **1.10 GUARANTEE**

- A. Refer to Division 1 for guarantees and warranties. In addition to the requirements in Division 1, this Contractor shall meet the following requirements.
- B. 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.
- C. 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.
- D. Contractor further guarantees to replace and make good at his own expense, including travel time, 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.

#### **1.11 OPERATION AND MAINTENANCE INSTRUCTIONS**

- A. Refer to Division 1 for all operations and maintenance instructions.
- B. In addition to the general content specified under Division 1 supply the following additional documentation:
  - 1. Copies of all approved submittals along with approval letters
  - 2. Records of tests performed to certify compliance with system requirements
  - 3. Manufacturer's wiring diagrams for electrically powered equipment
  - 4. Certificates of inspection by regulatory agencies
  - 5. Valve schedules
  - 6. Lubrication instructions, including list/frequency of lubrication
  - 7. Parts lists for fixtures, equipment, valves and specialties.
  - 8. Manufacturers' installation, operation and maintenance recommendations for fixtures, equipment, valves and specialties.
  - 9. Additional information as indicated in the technical specification sections

#### **1.12 RECORD DOCUMENTS**

- A. Refer to Division 1 for record documents.
- B. In addition to the general content specified under Division, follow the following procedures.
  - 1. During the progress of the work, Contractor shall maintain a current (daily) record set of the drawings and specifications, indicating thereon all work installed at variance with such Contract Documents including, without limitation, work covered by Addenda, Field Work Orders, Change Orders and Engineers additional instructions, interpretations and clarification. All changes or deviations from the original layout of the work and all critical dimensions of buried or concealed work shall be recorded. It shall be Contractor's responsibility to assure that said record sets are complete, accurate and up-to-date, Engineer shall have the right to inspect and review such record sets.
  - 2. At the completion of the work, Contractor shall indicated on record sets all record changes and such additional details necessary or appropriate to provide a complete reference document for use by Engineer. If variations and details cannot be shown clearly thereon, the Contractor shall prepare supplemental drawings adequate to impart the information. The foregoing drawings collectively shall constitute the "Record" drawings for the work.
  - 3. All indication on "Record" drawings shall be executed in a legible manner at Contractor's cost, using methods and legend presentations compatible with the overall scheme of the record drawings with respect to scale, drawing sheet sizes and sequential indexing. All changes shall be marked clearly in red and clouded.
  - 4. Engineer may review Contractor's "Record" drawings and notify Contractor of observed discrepancies or deviations. Contractor shall promptly correct discrepancies, deviations or illegible markups at Contractor's expense and resubmit revised drawings for Engineer review.
  - 5. Contractor shall provide final electronic record drawings to the Owner through the Engineer.

6. Engineer will provide final electronic record drawings to the Owner based on Contractor's markups.

**1.13 CONTINUITY OF EXISTING SERVICES**

- A. Do not interrupt or change existing services without prior written approval from the Owner's Project Representative. When interruption is required, coordinate scheduling of down-time with the Owner to minimize disruption to his activities. Unless specifically stated, all work involved in interrupting or changing existing services is to be done during normal working hours.
- B. Each Contractor shall thoroughly familiarize himself with existing systems which will affect and be affected by relocation of existing equipment and installation of new lines and equipment. They shall plan installation of their work so that interruptions of services to any building or portion thereof will be a minimum and such interruptions shall occur only when system is not required, if possible. If not possible, each Contractor shall insure the operation of services by whatever means possible, such as, installing bypasses, capping of services or providing temporary service. Each interruption shall be for as short a duration as possible.
- C. No extra costs will be paid to the Contractor for such outages which must occur outside of regular weekly working hours.
- D. This Contractor shall restore any circuit interruption as a result of this work to proper operation as soon as possible. Note that institutional operations are on a seven day week schedule.

**1.14 PROTECTION OF FINISHED SURFACES**

- A. Refer to Division 1.

**1.15 SEALING AND FIRESTOPPING**

- A. Sealing and firestopping of sleeves/openings between piping, etc. and the sleeve or structural opening shall be the responsibility of the contractor whose work penetrates the opening. The contractor responsible shall hire individuals skilled in such work to do the sealing and fireproofing. These individuals hired shall normally and routinely be employed in the sealing and fireproofing occupation.
- B. Contractor shall request current life safety drawings from Architect/Owner.

**1.16 OFF SITE STORAGE**

- A. If payment will be requested for approved offsite stored material, then the Contractor shall complete an "Offsite Storage Agreement" which is available from the Owner. Prior approval by Owner's personnel for offsite storage will be needed. No material will be accepted for offsite storage unless submittals for the material have been approved.

**1.17 REGULATORY REQUIREMENTS**

- A. Comply with requirements of Wisconsin Administrative Code and local Authority Having Jurisdiction (AHJ) regarding materials and installation.

**1.18 CERTIFICATES AND INSPECTIONS**

- A. Refer to Division 1 for permits, regulations, utilities and taxes.
- B. Obtain and pay for all required local or State installation inspections except those provided by the Architect/Engineer in accordance with State code. Deliver originals of these certificates to the Owner. Include copies of the certificates in the Operating and Maintenance Instructions.
- C. Coordinate and provide inspections as required by the Authority Having Jurisdiction over the site.

**1.19 COORDINATION**

- A. Refer to Division 1 for coordination. In addition to the requirements specified under Division 1, the following requirements apply.
- B. It shall be the responsibility of each Contractor to coordinate and consult with each other to determine space requirements and to determine that adequate space for servicing is provided for all equipment whether furnished by the Contractor or others. The General Contractor shall have final decision on all space priority conflicts among Contractors. All space priority conflicts shall be brought to the attention of the Architect/Engineer and Owner's Representative.

- C. Each Contractor shall thoroughly familiarize himself with existing systems which will affect and be affected by relocation of existing equipment and installation of new lines and equipment. They shall plan installation of their work so that interruptions of services to any building or portion thereof will be a minimum, and such interruptions shall occur only when system is not required, if possible. If not possible, each Contractor shall insure the operation of services by whatever means possible, such as, installing bypasses, capping of services, or providing temporary service. Each interruption shall be for as short a duration as possible.
- D. Cooperation among all Contractors shall be required. Any Work that is installed without cooperating or coordinating with other Contractors and is in conflict shall be removed and reinstalled at that particular Contractor's cost. No cost additions to the Project will be considered due to a Contractor's lack of participation in the cooperation and coordination process. The following list of items of Work shall be the priority of order for all Contractors:
  - 1. Structure
  - 2. Recessed light fixtures
  - 3. Gravity-flow systems for sanitary, storm, steam and steam condensate piping
  - 4. Ductwork and appurtenances
  - 5. Electrical and low voltage cable tray
  - 6. Plumbing vent piping
  - 7. Fire protection (sprinkler system)
  - 8. HVAC piping
  - 9. Medical gas piping
  - 10. Gas piping, process piping and domestic water
  - 11. Electrical conduit and low voltage conduit
  - 12. Control air lines or conduit
- E. The above list, in descending order, is the precedence assigned the Work items for space priority. Gravity-flow systems have first priority.
- F. Exception: Plumbing lines below or behind plumbing fixtures shall have precedence over all other work. Electrical conduit above or below switchgear, panelboards and control panels shall have precedence over all other work. Do not install any fluid conveying piping over electrical or elevator equipment.
- G. 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.
- H. Any installed work that is not coordinated and interferes with another contractor's work shall be removed or relocated at the installing contractor's expense.
- I. Prior to start of Construction, the General Contractor shall schedule a meeting with all of the Contractors responsible for the work items listed above. The purpose of the meeting is to introduce the coordination program and to determine its implementation in relation to the progress schedule.
- J. At the initial Coordination Meeting, the Mechanical Contractor / Ventilating Contractor shall provide to the General Contractor outline drawings at 1/4" scale indicating column centerlines, interior partition locations, and ceiling heights. The General Contractor shall verify all information shown on these drawings and relay any changes in the information to the Ventilation Contractor to be reflected on the Drawings. The Ventilating Contractor, with reference and consideration to the Structural, Heating, Electrical, Fire Protection, and Plumbing Drawings, shall draw to scale his proposed installation showing duct sizes, equipment layouts, and dimensions from column lines and from finished floors to bottom of ducts. Ductwork shall be maintained as tightly as possible to the underside of floor slabs and/or beams. For congested areas the Ventilating Contractor shall, in addition, prepare Drawings in section view. During this phase of the program, it shall be the Electrical Contractor's responsibility to furnish the Ventilating Contractor with recessed lighting installation and clearance requirements. This information shall be outlined on the Drawings by the Ventilating Contractor.
- K. The ductwork layouts shall be produced in sequence as mandated by the Project Schedule. The earliest area indicated in the Schedule shall receive the first effort, etc.
- L. When the Ductwork Drawings for the earliest scheduled area have been completed (time limitation as determined at the initial coordination meeting), the Ventilating Contractor shall provide the General Contractor with one set of drawings for each participant in the effort. The General Contractor will distribute the drawings to the participating Contractors for their use in drawing thereon the major

components of their proposed installation using the general scheme shown on the Contract Drawings as a guide.

- M. The major components to be indicated include (but are not limited to) the following:
1. Structure
  2. Roof drain leaders
  3. Above 3" waste piping
  4. Sprinkler mains
  5. Heating hot water mains
  6. Chilled water mains
  7. Conveying systems
  8. Significant conduit runs
  9. Cable trays
  10. Contract ceiling heights
  11. Soffits
  12. Access points
  13. Fire wall penetrations
  14. Steam and condensate mains
  15. Gas, water, and process piping
- N. Information delineated shall be distance from column centerlines, pipe/equipment size, and distance from finished floor to bottom of pipe/equipment and hangers. Included on the Drawings shall be piping layout with hanger locations and hanger point loads. This information shall be developed satisfactorily enough to allow the Structural Engineer to verify the adequacy of the structural system for the projected loads. The hanger locations may have to be moved depending on the structural system review. No hanger shall be fabricated and/or installed until the hanger locations are reviewed and accepted by the Architect/Engineer.
- O. Within a period not to exceed two weeks after distribution of the drawings, the General Contractor will schedule a meeting with the Architect/Engineer and participating Contractors at which time areas of conflict shall be resolved. The drawings shall be overlaid to identify areas of conflict. All parties shall then cooperate in resolving the conflicts. Records of the agreements shall be entered on the Ventilating Contractor's drawings, acknowledged by all participants by signature in space provided for this purpose, and two copies distributed to all involved parties. All coordination drawing preparation and reproduction costs shall be borne by the Ventilating Contractor. The above drawings, review, and coordination process shall be repeated until all areas on the Project have been coordinated.
- P. In the event a Contractor fails to cooperate in the Coordination Program, they shall be held responsible for all costs incurred for adjustments to the work of others made necessary to accommodate the uncooperative Contractor's installations.

#### **1.20 DEMOLITION AND EXISTING REQUIREMENTS**

- A. Existing active services: water, gas, medical gas, steam, ventilation, compressed or control air, sanitary waste, sanitary vent, storm electric, and any other building systems when encountered shall be protected against damage. Where existing services are to be abandoned, the services shall be removed back to the point of origin and removed from the site unless otherwise directed by the Owner's Representative.
- B. 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 Owner and Architect/Engineer. The submittal shall designate priority order, service or utility affected, date of cutover, and time of day to start and finish.
- C. Bidders should inspect the site to become familiar with conditions of the site which will affect the Work. Bidders should verify points of connection with utilities, routing of outside piping to include required clearances from any existing structures, or other obstacles.
- D. Extra payment will not be allowed for changes in the Work required because of the successful bidder's failure to make this inspection.

#### **1.21 REQUEST AND CERTIFICATION FOR PAYMENT**

- A. Within 10 days after Notice to Proceed, the successful bidder will submit to the Owner's Project Representative in a form prescribed by Division 1, a cost breakdown of the proposed values for work

performed which, if approved by the owner, will become the basis for construction progress and monthly payments. The cost breakdown items shall reflect actual work progress stages as closely as feasible.

- B. In addition, if payment is requested for approved off-site stored material, then that material shall be listed as a line item in the request and certification for payment cost breakdown.

#### **1.22 SLEEVES AND OPENINGS**

- A. Openings required in new or existing construction that may be necessary for the installation of new work shall be provided by the respective contractor and all patching and repairing shall be done by workmen competent in the trade required, at the expense of the respective contractor. The respective 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.

#### **1.23 OMISSIONS**

- A. No later than ten (10) days before bid opening, the Contractor shall call the attention of the A/E to any materials or apparatus the Contractor believes to be inadequate and to any necessary items of work omitted.

#### **1.24 DEFINITIONS**

- A. Wherever the words “the Contractor”, “this Contractor” or “Plumbing Contractor” appear in this division, they refer to the Contractor for Plumbing 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.

#### **1.25 PROJECT/SITE CONDITIONS**

- A. Install Work in locations shown on Drawings, unless prevented by Project conditions.
- B. Prepare drawings showing proposed rearrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission of A/E before proceeding.
- C. Tools, materials and equipment shall be confined to areas designated by the Owner’s project representative.

#### **1.26 WORK SEQUENCE AND SCHEDULING**

- A. Install work in phases to accommodate Owner's occupancy requirements. During the construction period coordinate schedule and operations with Owner's Construction Representatives.

#### **1.27 SALVAGE MATERIALS**

- A. No materials removed from this project shall be reused (except as specifically noted below). All materials removed shall become the property of and shall be disposed of by the Contractor.

#### **1.28 TRAINING**

- A. Refer to Section 01 91 13 - Commissioning Requirements for training requirements.
- B. The contractor shall have the following responsibilities:
  - 1. Provide a training plan sixty days before the planned training covering the following elements:
    - a. Equipment
    - b. Intended audience
    - c. Location of training
    - d. Objectives
    - e. Subjects covered (description, duration of discussion, special methods, etc.)
    - f. Duration of training on each subject
    - g. Instructor for each subject
    - h. Methods (classroom lecture, manufacturer’s quality video, site walk-through, actual operational demonstrations, written handouts, etc.).

2. Provide designated owner personnel with comprehensive orientation and training in the understanding of the systems and the operation and maintenance of each piece of equipment that makes up the system.
  3. Training shall normally start with classroom sessions followed by hands-on demonstration/training on each piece of equipment.
  4. During any demonstration, should the system fail to perform in accordance with the requirements of the O&M manual or sequence of operations, the system shall be repaired or adjusted as necessary and the demonstration repeated at another scheduled time, if necessary.
  5. The appropriate trade or manufacturer's representative shall provide the instructions on each major piece of equipment. Practical building operating expertise as well as in-depth knowledge of all modes of operation of the specific piece of equipment are required. More than one party may be required to execute the training.
  6. The controls contractor shall attend sessions other than the controls training, as specified, to discuss the interaction of the controls system as it relates to the equipment being discussed.
  7. The training sessions shall follow the outline in the table of contents of the operation and maintenance manual and illustrate whenever possible the use of the O&M manuals for reference.
  8. Training shall include:
    - a. Use of the printed installation, operation and maintenance instruction material included in the O&M manuals.
    - b. A review of the written O&M instructions emphasizing safe and proper operating requirements, preventative maintenance, special tools needed and spare parts inventory suggestions. The training shall include startup, operation in all modes possible, shutdown, seasonal changeover and any emergency procedures.
    - c. Discussion of relevant health and safety issues and concerns.
    - d. Discussion of warranties and guarantees.
    - e. Common troubleshooting problems and solutions.
    - f. Explanatory information included in the O&M manuals.
    - g. Discussion of any peculiarities of equipment installation or operation.
    - h. Classroom sessions shall include the use of overhead projections, slides, video/audio-taped material as might be appropriate.
    - i. Hands-on training shall include startup, operation in all modes possible, including manual, shut-down, alarms, power failure and any emergency procedures, and preventative maintenance for all pieces of equipment.
  9. The contractor shall fully explain and demonstrate the operation, function and overrides of any local packaged controls not controlled by the central control system.
- C. Video recording of the training sessions will be provided by the contractor and added to the O&M manuals. In addition, factory training videos identifying key troubleshooting, repair, service and/or replacement techniques shall be provided and reviewed with the owner.
- D. Provide a minimum of 16 hours of instruction.
- E. Provide additional training as specified in other specification sections for specific equipment.

## **PART 2 – PRODUCTS**

### **2.01 ACCESS PANELS AND DOORS**

- A. Lay-in Ceilings:
  1. Removable lay-in ceiling tiles in 2 X 2 foot or 2 X 4 foot configuration provided under Division 9 are sufficient; no additional access provisions are required unless specifically indicated.
- B. Concealed Spline Ceilings:
  1. Removable sections of ceiling tile held in position with metal slats or tabs compatible with the ceiling system used will be provided under Division 9.
- C. Metal Pan Ceilings:
  1. Removable sections of ceiling tile held in position by a pressure fit will be provided under Division 9.
- D. Plaster Walls and Ceilings:

1. 16 gauge frame with not less than a 20 gauge hinged door panel, prime coated steel for general applications, stainless steel for use in toilets, showers, and similar wet areas, concealed hinges, screwdriver operated cam latch for general applications, key lock for use in public or secured areas, UL listed for use in fire rated partitions if required by the application. Use the largest size access opening possible, consistent with the space and the item needing service; minimum size is 12" by 12".

**2.02 IDENTIFICATION**

- A. Manufacturers: EMED Company, W.H. Brady, Seton Nameplate Company, Thor Enterprises, Carlton, MSI Marking Services.
- B. Engraved Name Plates:
  1. White letters on a black background, 1/16 inch thick plastic laminate, beveled edges, screw mounting.
- C. Snap-Around Pipe Markers:
  1. One-piece, preformed, vinyl construction, snap-around or strap-around pipe markers with applicable labeling and flow direction arrows, 3/4" min. size for lettering. Provide nylon ties on each end of pipe markers.
- D. Valve Tags:
  1. Round brass tags with 1/2 inch numbers, 1/4 inch system identification abbreviation, 1-1/4 inch minimum diameter, with brass jack chains, brass "S" hooks or one piece nylon ties around the valve stem.
- E. Underground Warning Tape:
  1. Detectable underground warning tape, 5.0 mil overall thickness, 6" width, .0035" thick aluminum foil core with polyethylene jacket bonded to both sides. Color code tape and print caution along with name of buried service in bold letters on face of tape.
  2. Underground Tracer Wire:
  3. All underground non-metallic sewers/mains and water services/mains shall be provided with tracer wire installations. Tracer wire shall be continuous solid copper or steel plastic coated with split bolt or compression-type connectors.

**2.03 BEDDING AND BACKFILL**

- A. Bedding up to a point 12" inches above the top of the pipe shall be thoroughly compacted sand or crushed stone chips meeting the following gradations:
 

Gradation for Bedding Sand		Gradation for Crushed Stone Chip Bedding	
Sieve Size	% Passing (by Wt.)	Sieve Size	% Passing (by Wt.)
1 inch	100	1/2 inch	100
No. 16	45 - 80	No. 4	75 - 100
No. 200	2 - 10	No. 100	10 - 25
- B. Backfill above the bedding in lawn areas shall be thoroughly compacted excavated material free of large stones, organic, perishable, and frozen materials.
- C. Backfill above the bedding under existing and future utilities, paving, sidewalks, curbs, roads and buildings shall be granular materials, pit run sand, gravel, or crushed stone, free from large stones, organic, perishable and frozen materials.

**2.04 SLEEVES AND OPENINGS**

- A. General:
  1. Pipe sleeves shall be constructed of standard weight ASTM A53 or ASME B36.10 steel with an anchor plate constructed of A36/A36M steel welded to the pipe. The sleeve shall be sized a minimum of 1" larger than piping insulation diameter. The entire assembly shall be hot-dip galvanized after fabrication.
  2. Duct sleeves and piping sleeves passing through interior walls shall be constructed of 24 gauge galvanized steel minimum thickness.
- B. Sleeves Through Below Grade Walls:
  1. Provide steel pipe sleeve, ASTM A53, pressure sealing with membrane clamp ring, gasket, water stop ring, external rings, and nitrile rubber link seals. The assembly shall be hot-dip galvanized after fabrication.

- a. Seals: Modular mechanical type seals, consisting of interlocking nitrile rubber links shaped to continuously fill the annular space between the pipe and the sleeve and electrically isolate the carrier pipe from the steel sleeve.
  - b. Sealing Element: Polychloroprene rubber material compounded to resist aging, ozone, sunlight, hydrocarbon gases, water, and chemical action.
  - c. Hardware: Type 300 series stainless steel fasteners. Threads rolled to produce smooth uniform threads and unbroken flow lines.
  - d. Compression Plates: Fiberglass-reinforced polyester plastic, injection molded for high physical properties, dielectric strength and non-cold flow creep characteristics, having high resistance to acidic and alkaline soils.
2. For sleeves located 15 feet or more below grade provide cast iron sleeve ASTM A74 with compression seals.

## **2.05 SEALING AND FIRESTOPPING**

- A. Fire and/or Smoke Rated Penetrations:
  1. Manufacturers: 3M, Hilti, Rectorseal, STI/SpecSeal, Tremco.
  2. All firestopping systems shall be provided by the same manufacturer.
  3. Fire stop systems shall be UL listed or tested by an independent testing laboratory approved by the Owner and the Authority Having Jurisdiction (AHJ).
  4. Submittals: Contractor shall submit product data for each firestop system. Submittals shall include product characteristics, performance and limitation criteria, test data, MSDS sheets, installation details and procedures for each method of installation applicable to this project. For non-standard conditions where no UL tested system exists, submit manufacturer's drawings for UL system with known performance for which an engineering judgment can be based upon.
  5. Use a product that has a rating not less than the rating of the wall or floor being penetrated. Reference architectural drawings for identification of fire and/or smoke rated walls and floors.
  6. Use firestop putty, caulk sealant, intumescent wrapstrips, intumescent firestop collars, firestop blocks, firestop mortar or a combination of these products to provide a UL listed system for each application required for this project. Provide mineral wool backing where specified in manufacturer's application detail.
  7. All sealants shall meet the intent of LEED® VOC requirements, <250 g/L VOC contents (less H<sub>2</sub>O and exempt solvents).
- B. Non-Rated Penetrations:
  1. Pipe Penetrations Through Below Grade Walls: In exterior wall openings below grade, use a modular mechanical type seal consisting of interlocking synthetic rubber links shaped to continuously fill the annular space between the uninsulated pipe and the cored opening or a water-stop type wall sleeve. The operating bolts of the mechanical type seal shall be accessible from the interior of the building.
  2. Pipe Penetrations: At pipe penetrations of non-rated interior partitions, floors and exterior walls, use urethane caulk in annular space between pipe insulation and sleeve. For non-rated drywall, plaster or wood partitions where sleeve is not required use urethane caulk in annular space between pipe insulation and wall material.

## **PART 3 – EXECUTION**

### **3.01 DEMOLITION**

- A. Perform all demolition as indicated on the drawings to accomplish new work. Where demolition work is to be performed adjacent to existing work that remains in an occupied area, construct temporary dust partition to minimize the amount of contamination of the occupied space. Where pipe is removed and not reconnected with new work, cap ends of existing services as if they were new work. Coordinate work with the Owner to minimize disruption to the existing building occupants.
- B. All pipe, fixtures, equipment, wiring and associated conduit, insulation and similar items demolished, abandoned, or deactivated are to be removed from the site by the Contractor except as specifically noted otherwise. All designated equipment is to be turned over to the owner for their use at a place and

- time so designated. Maintain the condition of material and/or equipment that is indicated to be reused equal to that existing before work began.
- C. All contractors requiring the personnel/ material hoist and or temporary construction elevator (i.e. new elevators, temporarily protected) at times other than outlined in the temporary facilities specifications will make arrangements directly with the general contractor. The general contractor is responsible for all coordination and scheduling of the use of any hoisting equipment so the flow of the project is smoothly maintained and all workers have access to the work areas to perform their work and deliver material to the areas needed according to the project schedule.
  - D. If any contractor's work requires the removal and replacement of any finished materials including but not limited to such materials as ceiling tiles, wall finishes, cabinets, doors, flooring, windows, etc. after those items are installed, each contractor will be responsible, at no additional cost to the owner, to replace any damaged, soiled or lost materials with new materials to match the existing materials and those materials damaged.

### **3.02 EXCAVATION AND BACKFILL**

- A. Perform all excavation and backfill work necessary to accomplish indicated plumbing systems installation. Excavate to bottom of pipe and structure bedding, 4" in stable soils, 6" in rock or wet trenches and 8" in unstable soil. Finish bottoms of excavations to true, level surface.
- B. Tunnel or remove sidewalk and curb in areas of excavation to the nearest joint. Remove pavements, curbs and gutters to neat and straight lines to the limits of removal. Make sawcut lines parallel to existing joints, or parallel or perpendicular to pavement edges to form a neat patch. Carefully remove remaining pavement within the sawcut area. Leave existing base materials between the area disturbed by the work and the sawcut line undisturbed by the sawcutting, pavement removal, or pavement replacement processes.
- C. Strip topsoil from area to be excavated, free from subsoil and debris, and store for later respreading.
- D. At no time place excavated materials where they will impede surface drainage unless such drainage is being safely rerouted away from the excavation.
- E. Excavate whatever materials are encountered as required to place at the elevations shown, all pipe, manholes, and other work. Remove debris and rubbish from excavations before placing bedding and backfill material.
- F. Remove surplus excavated materials from site.
- G. Verify the locations of any water, drainage, gas, sewer, electric, telephone or steam lines which may be encountered in the excavation. Underpin and support all lines. Cut off service connections encountered which are to be removed at the limits of the excavation and cap.
- H. Provide and maintain all fencing, barricades, signs, warning lights, and/or other equipment necessary to keep all excavation pits and trenches and the entire subgrade area safe under all circumstances and at all times. No excavation shall be left unattended without adequate protection.
- I. Elevations shown on the plans are subject to such revisions as may be necessary to fit field conditions. No adjustment in compensation will be made for adjustments up to two (2) feet above or below the grades indicated on the plans.
- J. Install lines passing under foundations with minimum of 1-1/2 inch clearance to concrete and insure there is no disturbance of bearing soil.
- K. Bed pipe up to a point 12" above the top of the pipe. Take care during bedding, compaction and backfill not to disturb or damage piping.
- L. Mechanically compact bedding and backfill to prevent settlement. The initial compacted lift to not exceed 24" compacted to 95% density per Modified Proctor Test (ASTM D-1557). Subsequent lifts under pavements, curbs, walks and structures are not to exceed 12" and be compacted to 95% density per Modified Proctor Test. In all other areas where construction above the excavation is not anticipated within 2 years, mechanically compact backfill in lifts not exceeding 24" to 90% density per Modified Proctor Test. Route the equipment over each lift of the material so that the compaction equipment contacts all areas of the surface of the lift.

### **3.03 CONCRETE WORK**

- A. Cast-in-place concrete within the building will be performed by the Division 3 Contractor unless otherwise noted. Provide all layout drawings, anchor bolts, metal shapes, and/or templates required to be cast into concrete or used to form concrete for support or installation of plumbing piping, fixtures,

specialties and equipment. Coordinate locations of equipment, pipe penetrations in wet areas, etc. with the Division 3 Contractor.

- B. Plumbing related cast-in-place concrete on the exterior of the building to be provided by this Contractor in conformance with requirements of Division 3. This includes piping thrust restraints, pipe supports, hydrant supports, manholes, catch basins, grease traps, septic tanks, distribution boxes, valve pits, meter pits, cleanout cover pads, yard hydrant pads, etc.

### **3.04 CUTTING AND PATCHING**

- A. Refer to Division 1 for cutting and patching. In addition to the requirements in Division 1:
- B. Each Contractor shall coordinate the placing of openings in the new structure as required for the installation of each Contractor's work.
- C. Each Contractor shall furnish to the General Contractor the accurate locations and sizes for required openings in the new work, but this shall not relieve each Contractor of the responsibility of checking to assure that properly sized openings are provided. When additional patching is required due to the Contractor's failure to inspect this work, then the Contractor shall make arrangements for the patching required to properly close the openings to include patch painting, and the Contractor shall pay any additional cost incurred in this respect.
- D. If cutting and patching of the new structure is made necessary due to the Contractor's failure to install piping, ducts, sleeves, or equipment on schedule, or due to the Contractor's failure to furnish on schedule the information required for the leaving of openings, then it shall be the Contractor's responsibility to make arrangements and obtain approval from the General Contractor and Architect/Engineer for this cutting and patching, and the Contractor shall pay any additional cost incurred in this respect. The Contractor shall also reimburse the Owner for any additional costs incurred to the Architect/Engineer for additional services caused by the Contractor in this respect.
- E. The Contractor shall provide cutting and patching and patch painting in the existing structure as required for the installation of his Work and shall furnish lintels and supports as required for openings. Cutting of structural support members will not be permitted without prior approval of the Architect/Engineer. Extent of cutting shall be minimized; use core drills, power saws, or other machines which will provide neat, minimum openings. Patching shall match adjacent materials and surfaces and shall be performed by craftsmen skilled in the respective craft required.

### **3.05 LINTELS**

- A. All steel lintels required for opening in existing and/or new masonry walls shall be provided under section 05 50 00 – Metal Fabrications. ( This contractor shall design, fabricate, and install all lintels required in masonry walls for duct and pipe penetrations. Contractor shall submit design drawings of lintels with professional engineers seal and signature prior to installation.

### **3.06 BUILDING ACCESS**

- A. Arrange for the necessary openings in the building to allow for admittance or removal of all apparatus. When the building access was not previously arranged and must be provided by this contractor, restore any opening to its original condition after the apparatus has been brought into the building.

### **3.07 EQUIPMENT ACCESS**

- A. Install all piping, conduit and accessories to permit access to equipment for maintenance and service. Coordinate the exact location of wall and ceiling access panels and doors with the General Contractor, making sure that access is available for all equipment and specialties. Access doors in general construction are to be furnished by the Plumbing Contractor and installed by the General Contractor.
- B. Provide color coded thumb tacks or screws, depending on the surface, for use in accessible ceilings which do not require access panels.

### **3.08 COORDINATION**

- A. Coordinate all work with other contractors prior to installation. Any work that is not coordinated and that interferes with other contractor's work shall be removed or relocated at the installing contractor's expense.
- B. Verify that all devices are compatible for the type of construction and surfaces on which they will be used.

### **3.09 IDENTIFICATION**

- A. Identify interior piping not less than once every 30 feet, not less than once in each room, adjacent to each access door or panel, and on both side of the partition where accessible piping passes through walls or floors. Place flow directional arrows at each pipe identification location.
- B. Identify all exterior buried piping for entire length with underground warning tape except for sewer piping which is routed in straight lines between manholes or cleanouts. Place tape 6"-12" below finished grade along entire length of pipe. Extend tape to surface at building entrances, meters, hydrants and valves. Where existing underground warning tape is broken during excavation, replace with new tape identifying appropriate service and securely spliced to ends of existing tape.
- C. Identify valves with brass tags bearing a system identification and a valve sequence number. Identify medical gas and vacuum valves with brass tags and wall or cabinet mounted color coded engraved nameplate with the following "(Type of Gas) Shutoff Valve for (Location or Zone)". Valve tags are not required at a terminal device unless the valves are greater than ten feet from the device, located in another room or not visible from device. Provide a typewritten valve schedule and pipe identification schedule indicating the valve number and the equipment or areas supplied by each valve and the symbols used for pipe identification; locate schedules in mechanical room and in each Operating and Maintenance manual. Schedule in mechanical room to be framed under clear plastic.

### **3.10 LUBRICATION**

- A. Lubricate all bearings with lubricant as recommended by the manufacturer before the equipment is operated for any reason. Once the equipment has been run, maintain lubrication in accordance with the manufacturer's instructions until the work is accepted by the Owner. Maintain a log of all lubricants used and frequency of lubrication; include this information in the Operating and Maintenance Manuals at the completion of the project.

### **3.11 SLEEVES AND OPENINGS**

- A. General:
  - 1. Sleeves are not required for piping and ducts passing through interior non-rated drywall, plaster, or wood partitions and interior poured concrete walls that have been saw cut or core drilled.
  - 2. Pack annular space between sleeves and pipe or ducts with fiberglass insulation and seal.
  - 3. Piping sleeves that pass through fire rated floors, walls, or ceilings shall be provided with a UL listed fire stop material meeting UL 1479 to seal the opening between the pipe and the pipe sleeve to maintain the fire rating.
  - 4. Provide escutcheon plates on piping to cover sleeve and insulation in finished areas.
  - 5. Refer to Division 1, General Requirements for additional information on sleeves and openings.
- B. Sleeves Through Floors/Ceilings:
  - 1. Sleeves shall be installed to extend 1 inch above finished floor with a watertight sealant between floor and sleeve in all mechanical rooms and wet rooms listed below.
  - 2. If a sleeve is not provided, provide 1-1/2 inch angle ring with urethane caulk between the angle and the floor and seal at the corners to form a watertight seal.
    - a. Wet Locations:
      - 1) Mechanical Rooms
      - 2) Parking Ramps
      - 3) Sanitary pumping stations
      - 4) Swimming pool equipment rooms
      - 5) Chemical storage and hazardous waste storage rooms
      - 6) Food service/kitchen areas (behind/under equipment, cabinets, tables, etc.)

### **3.12 SEALING AND FIRESTOPPING**

- A. The Contractor shall refer to building life safety drawings for all smoke and fire rates in addition to the mechanical drawings. Any discrepancies shall be brought to the attention of the Architect/Engineer before final addendum.
- B. Fire And/Or Smoke Rated Penetrations:
  - 1. Install approved product in accordance with the manufacturer's instructions where pipes penetrate a fire/smoke rated surface. When pipe is insulated, use a product which maintains the integrity of the insulation and vapor barrier.

2. Where firestop mortar is used to infill large fire-rated floor openings that could be required to support weight, provide permanent structural forming. Firestop mortar alone is not adequate to support any substantial weight.
- C. Non-Rated Partitions:
1. In exterior wall openings below grade, assemble rubber links of mechanical seal to the proper size for the pipe and tighten in place, in accordance with manufacturer's instructions.
  2. At all interior partitions and exterior walls, pipe penetrations are required to be sealed. Apply sealant to both sides of the penetration in such a manner that the annular space between the pipe sleeve or cored opening and the pipe or insulation is completely blocked.

### **3.13 HOUSEKEEPING AND CLEAN UP**

- A. The Contractor shall clean up and remove from the premises, on a daily basis, all debris and rubbish resulting from its work and shall repair all damage to new and existing equipment resulting from its work. When job is complete, this Contractor shall remove all tools, excess material and equipment, etc., from the site.

### **3.14 SHEETING, SHORING AND BRACING**

- A. Provide shoring, sheet piling and bracing in conformance with the Building Code to prevent earth from caving or washing into the excavation. Shore and underpin to properly support adjacent or adjoining structures. Abandon in place shoring, sheet piling and underpinning below the top of the pipe, or, if approved in advance by the engineer, maintained in place until other permanent support approved by the engineer is provided.

### **3.15 DEWATERING**

- A. Provide, operate and maintain all pumps and other equipment necessary to drain and keep all excavation pits, trenches and the entire subgrade area free from water under all circumstances. Obtain general permit from the Wisconsin Department of Natural Resources district office for discharge of construction dewatering effluent. Obtain well permit from the Wisconsin Department of Natural Resources district office for dewatering wells discharging more than 70 GPM. Comply with permit requirements.

### **3.16 ROCK EXCAVATION**

- A. Remove rock encountered in the excavation to a minimum dimension of six (6) inches outside the pipe. Rock excavation includes all hard, solid rock in ledges, bedded deposits and unstratified masses, all natural conglomerate deposits so firmly cemented as to present all the characteristics of solid rock; which material is so hard or so firmly cemented that in the opinion of the Engineer it is not practical to excavate and remove same with a power shovel except after thorough and continuous drilling and blasting. Rock excavation includes rock boulders of 1/2 cubic yard or more in volume.
- B. Rock excavation will be computed on the basis of the depth of rock removed and a trench width two (2) feet larger than the outside diameter of the pipe where one (1) pipe is laid in the trench and three (3) feet larger than the combined outside diameter where two (2) pipes are laid in the trench. Include 6" pipe and structure bedding in rock excavation. Include rock excavation shown on the plans in the Base Bid.

### **3.17 SURFACE RESTORATION**

- A. Completely restore the surface of all disturbed areas to a like condition of the surface prior to the work. Level off all waste disposal areas and clean up all areas used for the storage of materials or the temporary deposit of excavated earth. Remove all surplus material, tools and equipment.
- B. Lawns: Topsoil with 4" of clean, friable, fertile topsoil, free from debris, lumps, rocks, roots, plants and seeds. Grade surfaces to match adjacent elevations. Rake smooth, free of lumps and debris. Sod with good quality nursery sod, uniform, dense, free from weeds and consisting of approximately 60% Kentucky blue grass and the balance perennial rye, fescue and white clover. Place sod with joints staggered and abutting. Maintain lawn areas for one month after installation. OT will be responsible for necessary watering and mowing. Do necessary weeding, repair, reseeding or resodding until uniform catch is obtained.
- C. Curb and Gutter: Concrete curb and gutter conforming to local requirements.

- D. Sidewalk and Walkways: Non-reinforced concrete conforming to local requirements, thickness to match existing, cross slope of one-fourth inch per foot, scored into squares approximately equal to width.
- E. Bituminous Concrete Pavements: 4" thick crushed stone base course and two pass bituminous concrete pavement, first course 1-1/2" binder, second course 1-1/2" surface.

END OF SECTION

**SECTION 22 05 23  
GENERAL DUTY VALVES FOR PLUMBING PIPING**

**PART 1 – GENERAL**

**1.01 SCOPE OF WORK**

- A. Base Bid: Unless noted otherwise, the Plumbing Contractor shall provide all labor and materials for a complete system in this specification section.

**1.02 SECTION INCLUDES**

- A. This section includes valve specifications for all Plumbing systems except where indicated under Related Work.
  - 1. Water System Valves
    - a. Ball Valves
    - b. Swing Check Valves

**1.03 RELATED WORK**

- A. Applicable provisions of Division 1 govern work under this section.
- B. Section 22 11 00 – Facility Water Distribution
- C. Section 22 13 00 – Facility Sanitary Sewerage

**1.04 SUBMITTALS**

- A. Refer to Section 22 05 00 – Common Work Results for Plumbing, Submittals. In addition to the general content specified under Section 22 05 00 – Common Work Results for Plumbing, supply the following submittals:
  - 1. Water System Valves
    - a. Ball Valves
    - b. Swing Check Valves
- B. Schedule of all valves indicating type of service, dimensions, materials of construction, and pressure/temperature ratings for all valves to be used on the project. Temperature ratings specified are for continuous operation.

**1.05 QUALITY ASSURANCE**

- A. Substitution of Materials: Refer to Division 1.

**1.06 DESIGN CRITERIA**

- A. ANSI Z21.22 - Relief Valves and Automatic Gas Shutoff Devices for Hot Water Supply Systems.
- B. ASSE 1003 - Water Pressure Reducing Valves for Domestic Water Supply Systems.
- C. Where valve types (ball, butterfly, etc.) are specified for individual plumbing services (i.e. domestic water, gas, etc.), each valve type shall be of the same manufacturer unless prior written approval is obtained from the Owner.
- D. Valves to be line size unless specifically noted otherwise.

**1.07 OPERATION AND MAINTENANCE DATA**

- A. All operations and maintenance data shall comply with the submission and content requirements specified in Section 22 05 00 – Common Work Results for Plumbing.
- B. In addition to the general content specified in Section 22 05 00 – Common Work Results for Plumbing, supply the following additional documentation:

**PART 2 - PRODUCTS**

**2.01 WATER SYSTEM VALVES**

- A. Manufacturers: Apollo, Asco, Conbraco, Crane, Hammond, Jomar, Lunkenheimer, Milwaukee Valve, Nibco, Stockham, Watts

- B. All water system valves to be rated at not less than 125 water working pressure at 240 degrees F unless noted otherwise.
- C. Ball Valves:
  - 1. Two or three piece bronze body; sweat ends, stainless steel ball; glass filled Teflon seat; Teflon packing and threaded packing nut; blowout-proof stem; 600 psig WOG. Provide valve stem extensions for valves installed in all piping with insulation.
  - 2. 2" and smaller: Nibco, S-585-70-66
  - 3. 3": Nibco G-590-Y-66
- D. Swing Check Valves:
  - 1. 3" and smaller: Bronze body, sweat ends, Y-pattern, regrindable bronze seat, renewable bronze disc, Class 125, suitable for installation in a horizontal or vertical line with flow upward. Crane 1342, Hammond IB941, Nibco S413B, Watts CVYS
  - 2. 4" and larger: Cast iron body, flanged ends, bronze trim, bolted cap, renewable bronze seat and disc, Class 125, non-asbestos gasket, suitable for installation in a horizontal or vertical line with flow upward. Crane 373, Hammond IR1124, Milwaukee F2974, Nibco F918B, Watts Series 411

### **PART 3 – EXECUTION**

#### **3.01 GENERAL**

- A. Properly align piping before installation of valves. Install and test valves in strict accordance with valve manufacturer's installation recommendations. Do not support weight of piping system on valve ends.
- B. Mount valves in locations which allow access for operation, servicing and replacement.
- C. Provide valve handle extensions for all valves installed in insulated piping.
- D. Install all valves with the stem in the upright or horizontal position. If possible, install butterfly valves with the stem in the horizontal position. Valves installed with the stems down will not be accepted.
- E. Prior to flushing of piping systems, place all valves in the full-open position.

#### **3.02 SHUT OFF VALVES**

- A. Install shut-off valves at each piece of equipment, at each branch take-off from mains for isolation or repair and elsewhere as indicated.

#### **3.03 SWING CHECK VALVES**

- A. Install swing check valves in recirculation branch lines and elsewhere as indicated. Provide weighted swing check valves at sanitary sump pump discharges.

END OF SECTION

**SECTION 22 05 29**  
**HANGERS AND SUPPORTS FOR PLUMBING PIPING AND EQUIPMENT**

**PART 1 – GENERAL**

**1.01 SCOPE OF WORK**

- A. Base Bid: Unless noted otherwise, the Plumbing Contractor shall provide all labor and materials for a complete system in this specification section.

**1.02 SECTION INCLUDES**

- A. This section includes specifications for supports of all plumbing equipment and materials as well as piping system anchors.
  - 1. Pipe Hangers And Supports
  - 2. Pipe Hanger Rods

**1.03 RELATED WORK**

- A. Applicable provisions of Division 1 shall govern work under this section.
- B. Section 01 91 13 – Commissioning Requirements
- C. Section 03 10 00 – Concrete Formwork for equipment pads
- D. Section 03 30 00 – Cast-in-Place Concrete for equipment pads
- E. Section 22 07 00 – Plumbing Insulation for insulation protection at support devices

**1.04 SUBMITTALS**

- A. Refer to Section 22 05 00 – Common Work Results for Plumbing. In addition to the general content specified under Section 22 05 00 – Common Work Results for Plumbing, supply the following submittals:
  - 1. Pipe Hangers And Supports
  - 2. Pipe Hanger Rods
- B. Schedule of all hanger and support devices indicating attachment methods and type of device for each pipe size and type of service.
- C. All submittals are to comply with submission and content requirements specified within Section 22 05 00 – Common Work Results for Plumbing.

**1.05 REFERENCE STANDARDS**

- A. MSS SP-58 Pipe Hangers and Supports - Materials, Design and Manufacture
- B. MSS SP-69 Pipe Hangers and Supports - Selection and Application

**1.06 QUALITY ASSURANCE**

- A. Substitution of Materials: Refer to Division 1.

**1.07 DESCRIPTION**

- A. Provide all supporting devices as required for the installation of plumbing equipment and materials. All supports and installation procedures are to conform to the latest requirements of the ANSI Code for building piping.
- B. Do not hang any plumbing item directly from a metal deck or run piping so its rests on the bottom chord of any truss or joist.
- C. Fasteners depending on soft lead for holding power or requiring powder actuation will not be accepted.
- D. Support apparatus and material under all conditions of operation, variations in installed and operating weight of equipment and piping, to prevent excess stress, and allow for proper expansion and contraction.
- E. Protect insulation at all hanger points; see Related Work above.

**1.08 DESIGN CRITERIA**

- A. Materials and application of pipe hangers and supports shall be in accordance with MSS Standard Practice SP-58 and SP-69 unless noted otherwise.

- B. Piping connected to pumps, compressors, or other rotating or reciprocating equipment is to have vibration isolation supports for a distance of one hundred pipe diameters or three supports away from the equipment, whichever is greater. Standard pipe hangers/supports as specified in this section are required beyond the 100 pipe diameter/3 support distance.

**PART 2 – PRODUCTS**

**2.01 PIPE HANGERS AND SUPPORTS**

- A. Manufacturers: Anvil, B-Line, Grinnell, Pate, Piping Technology, Roof Products & Systems.
- B. Hangers for Pipe Sizes 1/2" through 2":
  - 1. Carbon steel, adjustable swivel ring.
  - 2. Carbon steel, adjustable clevis, standard.
- C. Copper Pipe Supports:
  - 1. All supports, fasteners, clamps, etc. directly connected to copper piping shall be copper plated or polyvinylchloride coated. Where steel channels are used, provide isolation collar between supports/clamps/fasteners and copper piping.

**2.02 PIPE HANGER RODS**

- A. Steel Hanger Rods:
  - 1. Threaded both ends, threaded one end, or continuous threaded, complete with adjusting and lock nuts.
  - 2. Size rods for individual hangers and trapeze support as indicated in the following schedule.
  - 3. Total weight of equipment, including valves, fittings, pipe, pipe content, and insulation, are not to exceed the limits indicated.

Maximum Load (Lbs.) (650°F Maximum Temp.)	Rod Diameter (inches)
610	3/8
1130	1/2
1810	5/8
2710	3/4
3770	7/8
4960	1
8000	1-1/4

**PART 3 – EXECUTION**

**3.01 INSTALLATION**

- A. Size, apply and install supports and anchors in compliance with manufacturers recommendations.
- B. Install supports to provide for free expansion of the piping system. Support all piping from the structure using concrete inserts, beam clamps, ceiling plates, wall brackets, or floor stands. Fasten ceiling plates and wall brackets securely to the structure and test to demonstrate the adequacy of the fastening.
- C. Coordinate hanger and support installation to properly group piping of all trades.
- D. Where piping can be conveniently grouped to allow the use of trapeze type supports, use standard structural shapes or continuous insert channels for the supporting steel. Where continuous insert channels are used, pipe supporting devices made specifically for use with the channels may be substituted for the specified supporting devices provided that similar types are used and all data is submitted for prior approval.
- E. Size and install hangers and supports, except for riser clamps, for installation on the exterior of piping insulation. Where a vapor barrier is not required, hangers may be installed either on the exterior of pipe insulation or directly on piping.
- F. Perform welding in accordance with standards of the American Welding Society.

**3.02 HANGER AND SUPPORT SPACING**

- A. Install hangers to provide minimum 1/2 inch space between finished covering and adjacent work.
- B. Place a hanger within 12 inches of each horizontal elbow, valve, strainer, or similar piping specialty item.
- C. Use hangers with 1-1/2 inch minimum vertical adjustment.
- D. Support riser piping independently of connected horizontal piping.
- E. Adjust hangers to obtain the slope specified in the piping section of these specifications.
- F. Space hangers for pipe as follows:

Pipe Material	Pipe Size	Max. Horiz. Spacing	Max. Vert. Spacing
Cast Iron	2" and larger	5'-0"	15'-0"
Copper	1/2" through 3/4"	5'-0"	10'-0"
Copper	1" through 1-1/4"	6'-0"	10'-0"
Copper	1-1/2" through 2-1/2"	8'-0"	10'-0"
Copper	3"	10'-0"	10'-0"
Copper	4" and larger	12'-0"	10'-0"
Ductile Iron	All	10'-0"	20'-0"
Steel	1/2" through 1-1/4"	7'-0"	15'-0"
Steel	1-1/2" through 6"	10'-0"	15'-0"
Steel	8" through 12"	14'-0"	20'-0"
Steel	14" and over	20'-0"	20'-0"
Plastic	Drain and Vent	4'-0"	10'-0"
Plastic	1" or less	32"	4'-0"
Plastic	1-1/4" and over	4'-0"	6'-0"
Plastic	Pure Water 1-1/2" or less	Continuous	5'-0"

**3.03 RISER CLAMPS**

- A. Support vertical piping with clamps secured to the piping and resting on the building structure or secured to the building structure below at each floor.

**3.04 CONCRETE INSERTS AND CONTINUOUS INSERT CHANNELS**

- A. Select size based on the manufacturer's stated load capacity and weight of material that will be supported. Locate continuous insert channels on 6'-0" maximum centers and 2'-0" from corners. Furnish inserts to the General Contractor for placement in concrete formwork. Use inserts for suspending hangers from reinforced concrete slabs and sides of reinforced concrete beams. Provide hooked rod to concrete reinforcement section for inserts carrying pipe over 4 inch size. Where concrete slabs form finished ceiling, provide inserts that are flush with the slab surface.

**3.05 ANCHORS**

- A. Install where indicated on the drawings and details. Where not specifically indicated, install anchors at ends of principal pipe runs and at intermediate points in pipe runs between expansion loops. Make provisions for preset of anchors as required to accommodate both expansion and contraction of piping.

END OF SECTION

**SECTION 22 07 00  
PLUMBING INSULATION**

**PART 1 – GENERAL**

**1.01 SCOPE OF WORK**

- A. Base Bid: Unless noted otherwise, the Plumbing Contractor shall provide all labor and materials for a complete system in this specification section.

**1.02 SECTION INCLUDES**

- A. This section includes insulation specifications for plumbing piping and equipment.
  - 1. Insulation
    - a. Rigid Fiberglass Insulation
  - 2. Covers and Jackets
    - a. PVC Fitting Covers and Jackets
    - b. Metal Jackets
  - 3. Insulation Inserts And Pipe Shields
  - 4. Accessories

**1.03 RELATED WORK**

- A. Applicable provisions of Division 1 govern work under this section.
- B. Section 01 91 13 – Commissioning Requirements
- C. Section 22 05 00 – Common Work Results for Plumbing
- D. Section 22 05 29 – Hangers and Supports for Plumbing Piping and Equipment
- E. Section 22 13 00 – Facility Sanitary Sewerage
- F. Section 22 14 00 – Facility Storm Drainage
- G. Section 22 30 00 – Plumbing Equipment
- H. Section 22 50 00 – Pool and Fountain Plumbing Systems
- I. Section 22 67 00 – Processed Water Systems for Laboratory and Healthcare Facilities

**1.04 SUBMITTALS**

- A. Refer to Section 22 05 00 – Common Work Results for Plumbing, Submittals. In addition to the general content specified under Section 22 05 00 – Common Work Results for Plumbing, supply the following submittals:
  - 1. Insulation
    - a. Rigid Fiberglass Insulation
  - 2. Covers and Jackets
    - a. PVC Fitting Covers and Jackets
    - b. Metal Jackets
  - 3. Insulation Inserts And Pipe Shields
  - 4. Accessories
- B. Submit a schedule of all insulating materials to be used on the project, including adhesives, fastening methods, fitting materials along with material safety data sheets and intended use of each material. Include manufacturer's technical data sheets indicating density, thermal characteristics, jacket type, and manufacturer's installation instructions.

**1.05 REFERENCE STANDARDS**

- A. ASTM B209 Aluminum and Aluminum Alloy Sheet and Plate
- B. ASTM C165 Test Method for Compressive Properties of Thermal Insulations
- C. ASTM C177 Heat Flux and Thermal Transmission Properties
- D. ASTM C195 Mineral Fiber Thermal Insulation Cement
- E. ASTM C240 Cellular Glass Insulation Block
- F. ASTM C302 Density of Preformed Pipe Insulation
- G. ASTM C303 Density of Preformed Block Insulation
- H. ASTM C449 Mineral Fiber Hydraulic Setting Thermal Insulation Cement

- I. ASTM C518 Heat Flux and Thermal Transmission Properties
- J. ASTM C533 Calcium Silicate Block and Pipe Thermal Insulation
- K. ASTM C534 Preformed Flexible Elastomeric Thermal Insulation
- L. ASTM C547 Mineral Fiber Preformed Pipe Insulation
- M. ASTM C552 Cellular Glass Block and Pipe Thermal Insulation
- N. ASTM C553 Mineral Fiber Blanket and Felt Insulation
- O. ASTM C578 Preformed, Block Type Cellular Polystyrene Thermal Insulation
- P. ASTM C591 Preformed Rigid Cellular Polyurethane Thermal Insulation
- Q. ASTM C610 Expanded Perlite Block and Thermal Pipe Insulation
- R. ASTM C612 Mineral Fiber Block and Board Thermal Insulation
- S. ASTM C921 Properties of Jacketing Materials for Thermal Insulation
- T. ASTM C1136 Flexible Low Permeance Vapor Retarders for Thermal Insulation
- U. ASTM E84 Surface Burning Characteristics of Building Materials
- V. MICA National Commercial & Industrial Insulation Standards
- W. NFPA 225 Surface Burning Characteristics of Building Materials
- X. UL 723 Surface Burning Characteristics of Building Materials

**1.06 QUALITY ASSURANCE**

- A. Substitution of Materials: Refer to Division 1.
- B. Label all insulating products delivered to the construction site with the manufacturer's name and description of materials.

**1.07 OPERATION AND MAINTENANCE DATA**

- A. All operations and maintenance data shall comply with the submission and content requirements specified in Section 22 05 00 – Common Work Results for Plumbing.
- B. In addition to the general content specified in Section 22 05 00 – Common Work Results for Plumbing, supply the following additional documentation:

**1.08 DESCRIPTION**

- A. Furnish and install all insulating materials and accessories as specified or as required for a complete installation. The following types of insulation are specified in this section:
  - 1. Pipe Insulation
  - 2. Equipment Insulation
- B. Install all insulation in accordance with the latest edition of MICA (Midwest Insulation Contractors Association) Standard and manufacturer's installation instructions. Exceptions to these standards will only be accepted where specifically modified in these specifications, or where prior written approval has been obtained from the Owner's Project Representative.

**1.09 DEFINITIONS**

- A. Concealed: shafts, furred spaces, space above finished ceilings, utility tunnels and crawl spaces. All other areas, including walk-through tunnels, shall be considered as exposed.

**PART 2 – PRODUCTS**

**2.01 MATERIALS**

- A. Materials or accessories containing asbestos will not be accepted.
- B. Use composite insulation systems (insulation, jackets, sealants, mastics, and adhesives) that have a flame spread rating of 25 or less and smoke developed rating of 50 or less, with the following exceptions:
  - 1. Insulation which is not located in an air plenum may have a flame spread rating not over 25 and a smoke developed rating no higher than 150.

**2.02 INSULATION AND JACKETS**

- A. Manufacturers: Armstrong, Certainteed Manson, Childers, Dow, Extol, Halstead, H.B. Fuller, Imcoa, Knauf, Owens-Corning, Pittsburgh Corning, Rubatex, Johns-Mansville, or approved equal.

- B. Insulating materials shall be fire retardant, moisture and mildew resistant, and vermin proof. Insulation shall be suitable to receive jackets, adhesives and coatings as indicated.
- C. Rigid Fiberglass Insulation:
  - 1. Minimum nominal density of 3 lbs. per cu. ft., and thermal conductivity of not more than 0.23 at 75 degrees F, minimum compressive strength of 25 PSF at 10% deformation, rated for service to 450 degrees F.
  - 2. White kraft reinforced foil vapor barrier all service jacket, factory applied to insulation with a self-sealing pressure sensitive adhesive lap, maximum permeance of .02 perms and minimum beach puncture resistance of 50 units.
- D. PVC Fitting Covers and Jackets:
  - 1. White PVC film, gloss finish one side, semi-gloss other side, FS LP-535D, Composition A, Type II, Grade GU. Ultraviolet inhibited indoor/outdoor grade to be used where exposed to high humidity, ultraviolet radiation, in kitchens or food processing areas or installed outdoors. Jacket thickness to be .02 inch (20 mil).
- E. Metal Jackets:
  - 1. .016 inch thick aluminum or .010 inch thick stainless steel with safety edge.

### 2.03 **INSULATION INSERTS AND PIPE SHIELDS**

- A. Manufacturers: B-Line, Pipe Shields, Value Engineered Products
- B. Construct inserts with calcium silicate, minimum 140 psi compressive strength. Piping 12" and larger, supplement with high density 600 psi structural calcium silicate insert. Provide galvanized steel shield. Insert and shield to be minimum 180 degree coverage on bottom of supported piping and full 360 degree coverage on clamped piping. On roller mounted piping and piping designed to slide on support, provide additional load distribution steel plate.
- C. Where contractor proposes shop/site fabricated inserts and shields, submit schedule of materials, thicknesses, gauges and lengths for each pipe size to demonstrate equivalency to pre-engineered pre-manufactured product described above. On low temperature systems, extruded polystyrene may be substituted for calcium silicate provided insert and shield length and gauge are increased to compensate for lower insulation compressive strength.
- D. Precompressed 20# density molded fiberglass blocks, Hamfab, of same thickness as adjacent insulation may be substituted for calcium silicate inserts with one 1"x 6" block for piping through 2-1/2" and three 1" x 6" blocks for piping through 4". Submit shield schedule to demonstrate equivalency to pre-engineered/pre-manufactured product described above.
- E. Wood blocks will not be accepted.

### 2.04 **ACCESSORIES**

- A. All products shall be compatible with surfaces and materials on which they are applied, and be suitable for use at operating temperatures of the systems to which they are applied.
- B. Adhesives, sealants, and protective finishes shall be as recommended by insulation manufacturer for applications specified.
- C. Insulation bands to be 3/4 inch wide, constructed of aluminum or stainless steel. Minimum thickness to be .015 inch for aluminum and .010 inch for stainless steel.
- D. Tack fasteners to be stainless steel ring grooved shank tacks.
- E. Staples to be clinch style.
- F. Insulating cement to be ANSI/ASTM C195, hydraulic setting mineral wool.
- G. Finishing cement to be ASTM C449.
- H. Fibrous glass or canvas fabric reinforcing shall have a minimum untreated weight of 6 oz./sq. yd.
- I. Bedding compounds to be non-shrinking and permanently flexible.
- J. Vapor barrier coatings to be non-flammable, fire resistant, polymeric resin.
- K. Fungicidal water base coating (Foster 40-20) to be compatible with vapor barrier coating.

## PART 3 – EXECUTION

### 3.01 **INSTALLATION**

- A. Install insulation, jackets and accessories in accordance with manufacturer's instructions and under ambient temperatures and conditions recommended by manufacturer. Surfaces to be insulated must be clean and dry.
- B. Do not insulate systems or equipment which are specified to be pressure tested or inspected, until testing, inspection and any necessary repairs have been successfully completed.
- C. Install insulation with smooth and even surfaces. Poorly fitted joints or use of filler in voids will not be accepted. Cover and seal exposed fiberglass insulation when insulation is terminated, no raw fiberglass insulation is allowed. Provide neat and coated terminations at all nameplates, uninsulated fittings, or at other locations where insulation terminates. Install with longitudinal joints facing wall or ceiling.
- D. Install fabric reinforcing without wrinkles. Overlap seams a minimum of 2 inches.
- E. Use full-length material (as delivered from manufacturer) wherever possible. Scrap piecing of insulation or pieces cut undersize and stretched to fit will not be accepted.
- F. Insulation shall be continuous through sleeves and openings. Vapor barriers shall be maintained continuous through all penetrations.
- G. Provide a complete vapor barrier for insulation on the following systems:
  - 1. Cold water (potable and non-potable)
  - 2. Storm Water
  - 3. Equipment piping with a surface temperature below 65 degrees F

### 3.02 **PIPING, VALVE AND FITTING INSULATION**

- A. General:
  - 1. Install insulation with butt joints and longitudinal seams closed tightly. Provide minimum 2" lap on jacket seams and 2" tape on butt joints, firmly cemented with lap adhesive. Additionally secure with staples along seams and butt joints. Coat staples with vapor barrier mastic on systems requiring vapor barrier.
  - 2. Water supply piping insulation shall be continuous throughout the building and installed adjacent to and within building walls to a point directly behind the fixture that is being supplied.
  - 3. Install insulation continuous through pipe hangers and supports with hangers and supports on the exterior of insulation. Where a vapor barrier is not required, hangers and supports may be attached directly to piping with insulation completely covering hanger or support and jacket sealed at support rod penetration. Where riser clamps are required to be attached directly to piping requiring vapor barrier, extend insulation and vapor barrier jacketing/coating around riser clamp.
- B. Insulation Inserts and Pipe Shields:
  - 1. Provide insulation inserts and pipe shields at all hanger and support locations. Inserts may be omitted on 3/4" and smaller copper piping provided 12" long 22 gauge pipe shields are used.
- C. Fittings and Valves:
  - 1. Fittings, valves, unions, flanges, couplings and specialties may be insulated with factory molded or built up insulation of the same thickness as adjoining insulation. Cover insulation with fabric reinforcing and mastic or where temperatures do not exceed 150 degrees, PVC fitting covers. Secure PVC fitting covers with tack fasteners and 1-1/2" band of mastic over ends, throat, seams or penetrations. On systems requiring vapor barrier, use vapor barrier mastic.
- D. Protective Jackets:
  - 1. Provide a protective PVC jacket for the following insulated piping:\_\_\_\_\_
  - 2. Lap seams and joints a minimum of 2 inches and continuously seal with welding solvent recommended by jacket manufacturer. Lap slip joint ends 4" without fasteners where required to absorb expansion and contraction. For sections where vapor barrier is not required and jacket requires routine removal, tack fasteners may be used.
  - 3. Provide a protective metal jacket for the following insulated piping:\_\_\_\_\_
  - 4. Lap seams a minimum of 2 inches. Secure with metal bands for end to end joints, and rivets or sheet metal screws for longitudinal joints. Rivets, screws, and bands to be constructed of the same material as the jacket. Locate seams on bottom for exterior applications.
  - 5. Provide a protective covering of 2 coats of indoor/outdoor vapor barrier mastic with fabric reinforcing for the following insulated piping:\_\_\_\_\_
- E. Pipe Insulation Schedule:
  - 1. Provide insulation on new and existing remodeled piping as indicated in the following schedule:

Service	Insulation Types	Insulation Thickness by Pipe Size				
		1" and smaller	1-1/4" to 2"	2-1/2" to 4"	5" to 6"	8" and larger
Hot Water Supply	Rigid Fiberglass	1"	1"	1.5"	1.5"	1.5"
Hot Water Return	Rigid Fiberglass	1"	1"	1.5"		
Cold Water	Rigid Fiberglass	0.5"	0.5"	1"	1"	1"

3.04 **CONSTRUCTION VERIFICATION CHECKLISTS**

- A. Contractor is responsible for utilizing the construction verification checklists supplied under these specifications in accordance with the procedures defined for construction verification checklists.

END OF SECTION

**SECTION 22 11 00  
FACILITY WATER DISTRIBUTION**

**PART 1 - GENERAL**

**1.01 SCOPE OF WORK**

- A. Base Bid: Unless noted otherwise, the Plumbing Contractor shall provide all labor and materials for a complete system in this specification section.

**1.02 SECTION INCLUDES**

- A. This section contains specifications for plumbing pipe and pipe fittings for this project.
  - 1. Domestic Water
  - 2. Dielectric Unions And Flanges
  - 3. Unions And Flanges
  - 4. Press Fitting Pipe Connections
  - 5. Mechanical Grooved Pipe Connections
  - 6. Piping System Leak Tests

**1.03 RELATED WORK**

- A. Applicable provisions of Division 1 govern work under this section.
- B. Section 22 05 29 – Hangers and Supports for Plumbing Piping and Equipment

**1.04 SUBMITTALS**

- A. Refer to Section 22 05 00 – Common Work Results for Plumbing, Submittals. In addition to the general content specified under Section 22 05 00 – Common Work Results for Plumbing, supply the following submittals:
  - 1. Domestic Water
  - 2. Dielectric Unions And Flanges
  - 3. Unions And Flanges
  - 4. Press Fitting Pipe Connections
  - 5. Mechanical Grooved Pipe Connections
  - 6. Piping System Leak Tests
- B. Schedule from the contractor indicating the ASTM or AWWA specification number of the pipe being proposed along with its type and grade if known at the time of submittal, and sufficient information to indicate the type and rating of fittings for each service.
- C. Statement from manufacturer on letterhead that pipe furnished meets the ASTM or AWWA specification contained in this section.

**1.05 REFERENCE STANDARDS**

- A. ANSI A21.4 Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water
- B. ANSI A21.11 Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
- C. ANSI A21.51 Ductile-Iron Pipe, Centrifugally Cast
- D. ANSI B16.3 Malleable Iron Threaded Fittings
- E. ANSI B16.4 Cast Iron Threaded Fittings
- F. ANSI B16.5 Pipe Flanges and Flanged Fittings
- G. ANSI B16.22 Wrought Copper and Wrought Copper Alloy Solder Joint Pressure Fittings
- H. ANSI B16.29 Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings - DWV
- I. ASTM A53 Pipe, Steel, Black and Hot-Dipped, Zinc Coated Welded and Seamless
- J. ASTM A105 Forgings, Carbon Steel, for Piping Components
- K. ASTM A126 Gray Cast Iron Castings for Valves, Flanges, and Pipe Fittings
- L. ASTM A234 Pipe Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and Elevated Temperatures
- M. ASTM B32 Solder Metal
- N. ASTM B88 Seamless Copper Water Tube
- O. ASTM B280 Seamless Copper Tube for Air Conditioning and Refrigeration Field Service

P.	ASTM B813	Liquid and Paste Fluxes for Soldering Applications of Copper and Copper Alloy Tube
Q.	ASTM D1785	Poly Vinyl Chloride (PVC) Plastic Pipe
R.	ASTM D2241	Poly Vinyl Chloride (PVC) Pressure-Rated Pipe (SDR Series)
S.	ASTM D2464	Threaded Poly Vinyl Chloride (PVC) Plastic Pipe Fittings, Schedule 80
T.	ASTM D2466	Poly Vinyl Chloride (PVC) Plastic Pipe Fittings, Schedule 40
U.	ASTM D2564	Solvent Cements for Poly Vinyl Chloride (PVC) Plastic Pipe and Fittings
V.	ASTM D2657	Heat Fusion Joining of Polyolefin Pipe and Fittings
W.	ASTM D2774	Recommended Practice for Underground Installation of Thermoplastic Pressure Piping
X.	ASTM D2855	Making Solvent Cemented Joints with Poly Vinyl Chloride (PVC) Pipe and Fittings
Y.	ASTM D3139	Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
Z.	ASTM D3222	Unmodified Poly Vinylidene Fluoride (PVDF) Molding Extrusion and Coating Materials
AA.	ASTM D4101	Propylene Plastic Injection and Extrusion Materials
BB.	ASTM F437	Threaded Chlorinated Poly Vinyl Chloride (CPVC) Plastic Pipe Fittings, Schedule 80
CC.	ASTM F438	Socket Type Chlorinated Poly Vinyl Chloride (CPVC) Plastic Pipe Fittings, Schedule 40
DD.	ASTM F441	Chlorinated Poly Vinyl Chloride (CPVC) Plastic Pipe, Schedules 40 and 80
EE.	ASTM F493	Solvent Cements for Chlorinated Poly Vinyl Chloride (CPVC) Plastic Pipe and Fittings
FF.	ASTM F656	Primers for Use in Solvent Cement Joints of Poly Vinyl Chloride (PVC) Plastic Pipe and Fittings
GG.	AWS A5.8	Brazing Filler Metal
HH.	AWWA C104	Cement Mortar Lining for Ductile Iron Pipe and Fittings for Water
II.	AWWA C105	Polyethylene Encasement for Ductile Iron Piping for Water
JJ.	AWWA C110	Ductile Iron and Gray Iron Fittings, 3 In. Through 48 In., for Water and Other Liquids
KK.	AWWA C111	Rubber Gasket Joints for Ductile Iron and Gray Iron Pressure Pipe and Fittings
LL.	AWWA C151	Ductile Iron Pipe, Centrifugally Cast in Metal Molds or Sand-Lined Molds for Water or Other Liquids
MM.	AWWA C153	Ductile Iron Compact Fittings, 3 In. Through 48 In., for Water and Other Liquids
NN.	AWWA C600	Installation of Ductile Iron Water Mains and Their Appurtenances
OO.	AWWA C651	Disinfecting Water Mains
PP.	AWWA C900	Polyvinyl Chloride (PVC) Pressure Pipe, 4 In. Through 12 In., for Water Distribution

#### 1.06 **QUALITY ASSURANCE**

- A. Substitution of Materials: Refer to Division 1.
- B. Order all pipe with each length marked with the name or trademark of the manufacturer and type of pipe; with each shipping unit marked with the purchase order number, metal or alloy designation, temper, size, and name of supplier.
- C. Any installed material not meeting the specification requirements must be replaced with material that meets these specifications without additional cost to the owner.

#### 1.07 **DESIGN CRITERIA**

- A. Use only new material, free of defects, rust and scale, and meeting the latest revision of ASTM or AWWA specifications as listed in this specification.
- B. Construct all piping for the highest pressures and temperatures in the respective system.
- C. Non-metallic piping will be acceptable only for the services indicated. It will not be acceptable in ventilation plenum spaces, including plenum ceilings.
- D. Where ASTM A53 type F pipe is specified, grade A type E or S, or grade B type E or S may be substituted at Contractor's option. Where the grade or type is not specified, Contractor may choose from those commercially available.

- E. Where ASTM B88, type L H (drawn) temper copper tubing is specified, ASTM B88, type K H (drawn) temper copper tubing may be substituted at Contractor's option.

**1.08 DELIVERY, STORAGE AND HANDLING**

- A. Promptly inspect shipments to insure that the material is undamaged and complies with specifications.
- B. Cover pipe to prevent corrosion or deterioration while allowing sufficient ventilation to avoid condensation. Do not store materials directly on grade. Protect pipe, tube, and fitting ends so they are not damaged. Where end caps are provided or specified, take precautions so the caps remain in place. Protect fittings, flanges, and unions by storage inside or by durable, waterproof, above ground packaging.
- C. Offsite storage agreements will not relieve the contractor from using proper storage techniques.
- D. Storage and protection methods must allow inspection to verify products.

**PART 2 – PRODUCTS**

**2.01 DOMESTIC WATER**

- A. Above Ground:
  - 1. Type L copper water tube, H (drawn) temper, ASTM B88; wrought copper pressure fittings, ANSI B16.22; lead free (<.2%) solder, ASTM B32; flux, ASTM B813; copper phosphorous brazing alloy, AWS A5.8 BCuP. Copper mechanical grooved fittings and couplings on roll grooved pipe may be used in lieu of soldered fittings. Mechanically formed brazed tee connections may be used in lieu of specified tee fittings for branch takeoffs up to one-half (1/2) the diameter of the main.
  - 2. Ductile iron pipe, thickness Class 53, AWWA C151/C115; with standard thickness cement mortar lining, AWWA C104; ductile iron mechanical grooved cement mortar lined fittings and couplings on cut grooved pipe, Class 350 12" and below, Class 250 above 12", AWWA C606; ductile iron or gray iron flanged cement mortar lined fittings, Class 250, AWWA C110; rubber gasket joints with non-toxic gasket lubricant, AWWA C111.

**2.02 DIELECTRIC UNIONS AND FLANGES**

- A. Manufacturers: Watts Regulator Company, Lochinvar, Wilkins or EPCO Sales, Inc.
- B. Dielectric unions 2" and smaller; dielectric flanges 2" and larger; with iron female pipe thread to copper solder joint or brass female pipe thread end connections, non-asbestos gaskets, having a pressure rating of not less than 175 psig at 180 degrees.

**2.03 UNIONS AND FLANGES**

- A. Unions, flanges and gasket materials to have a pressure rating of not less than 150 psig at 180 degrees. Gasket material for flanges and flanged fittings shall be Teflon type. Treated paper gaskets are not acceptable.
- B. 2" and Smaller Steel:
  - 1. ASTM A197/ANSI B16.3 malleable iron unions with brass seats. Use black malleable iron on black steel piping and galvanized malleable iron on galvanized steel piping.
- C. 2" and Smaller Copper:
  - 1. ANSI B16.18 cast bronze union coupling or ANSI B15.24 Class 150 cast bronze flanges.

**2.04 PRESS FITTING PIPE CONNECTIONS**

- A. Manufacturer: Viega, Nibco, or approved manufacturer.
- B. All press fitting materials including o-rings, couplings, fittings and adapters shall be from the same manufacturer.
- C. Bronze press fittings for copper tubing shall conform to the material and sizing, requirements of ASME B16.18 or ASME B16.22. O-rings for copper press fittings shall be EPDM. Maximum operating pressure of 200 psi.

**2.05 MECHANICAL GROOVED PIPE CONNECTIONS**

- A. Mechanical grooved pipe couplings and fittings, ASTM F1476, as manufactured by Victaulic, Gruvlok or Gustin-Bacon may be used with cut groove galvanized steel pipe, cut groove ductile iron pipe or roll

groove copper pipe where noted. Mechanical grooved components and assemblies to be rated for minimum 250 psi working pressure.

- B. All mechanical grooved pipe material including gaskets, couplings, fittings and flange adapters to be from the same manufacturer.
- C. Couplings to be malleable iron, ASTM A47, or ductile iron ASTM A536 with painted finish. Reducing couplings are not acceptable.
- D. Fittings used on galvanized steel pipe to be malleable iron, ASTM A47, or ductile iron A536, with galvanized finish, ASTM A153. Fittings used on ductile iron pipe to be cement mortar lined ductile iron with coal tar coating, ASTM A536; conforming to requirements of AWWA C110/C153 and AWWA C606. Fittings used on copper pipe to be copper.
- E. Gaskets to be EPDM, ASTM D2000. Gaskets for hot water systems and dry pipe systems to be flush seal design. Heat treated carbon steel oval neck track bolts and nuts, ASTM A183, with zinc electroplated finish ASTM B633.
- F. Flange adapters to be ductile iron, ASTM A536; except at lug type butterfly valves where standard threaded flanges shall be used.
- G. Credit for the inherent flexibility of mechanical grooved pipe connections when used for expansion joints or flexible connectors may be allowed upon specific application by the Contractor. Three flexible couplings at first three connection points both upstream and downstream of pumps may be used in lieu of flexible connectors. Request for expansion joints shall be made in writing and shall include service, location, line size, proposed application and supporting calculations for the intended service.

## **PART 3 – EXECUTION**

### **3.01 GENERAL**

- A. Install pipe and fittings in accordance with reference standards, manufacturer's recommendations and recognized industry practices.

### **3.02 PREPARATION**

- A. Cut pipe ends square. Ream ends of piping to remove burrs. Clean scale and dirt from interior and exterior of each section of pipe and fitting prior to assembly.

### **3.03 ERECTION**

- A. Install all piping parallel to building walls and ceilings and at heights which do not obstruct any portion of a window, doorway, stairway, or passageway. Where interferences develop in the field, offset or reroute piping as required to clear such interferences. Coordinate locations of plumbing piping with piping, ductwork, conduit and equipment of other trades to allow sufficient clearances. In all cases, consult drawings for exact location of pipe spaces, ceiling heights, door and window openings, or other architectural details before installing piping.
- B. Where copper or steel piping is embedded in masonry or concrete, provide protective sleeve covering of elastomeric pipe insulation.
- C. Install underground warning tape 6"-12" below finished grade above all exterior below ground piping. Where existing underground warning tape is encountered, repair and replace.
- D. Maintain piping in clean condition internally during construction.
- E. Provide clearance for installation of insulation, access to valves and piping specialties.
- F. Provide anchors, expansion joints, swing joints and/or expansion loops so that piping may expand and contract without damage to itself, equipment, or building.
- G. Do not route piping through transformer vaults or above transformers, panelboards or switchboards, including the required service space for this equipment.
- H. Install all valves and piping specialties, including items furnished by others, as specified and/or detailed. Provide access to valves and specialties for maintenance. Make connections to all equipment, fixtures and systems installed by others where same requires the piping services indicated in this section.

### **3.04 COPPER PIPE JOINTS**

- A. Remove all slivers and burrs remaining from the cutting operation by reaming and filing both pipe surfaces. Clean fitting and tube with metal brush, emery cloth or sandpaper. Remove residue from the cleaning operation, apply flux and assemble joint to socket stop. Apply flame to fitting until solder melts when placed at joint. Remove flame and feed solder into joint until full penetration of cup and ring of solder appears. Wipe excess solder and flux from joint.

**3.05 THREADED PIPE JOINTS**

- A. Use a thread lubricant or Teflon tape when making joints; no hard setting pipe thread cement or caulking will be allowed.

**3.06 SOLVENT WELDED PIPE JOINTS**

- A. Install in accordance with ASTM D2855 "Making Solvent Cemented Joints With PVC Pipe and Fittings". Saw cut piping square and smooth. Tube cutters may be used if they are fitted with wheels designed for use with PVC/CPVC pipe that do not leave a raised bead on pipe exterior. Support and restrain pipe during cutting to prevent nicks and scratches. Bevel ends 10-15 degrees and deburr interior. Remove dust, drips, moisture, grease and other superfluous materials from pipe interior and exterior. Check dry fit of pipe and fittings. Reject materials which are out of round or do not fit within close tolerance. Use heavy body solvent cement for large diameter fittings.
- B. Maintain pipe, fittings, primer and cement between 40 and 100 degrees during application and curing. Apply primer and solvent using separate daubers (3" and smaller piping only) or clean natural bristle brushes about 1/2 the size of the pipe diameter. Apply primer to the fitting socket and pipe surface with a scrubbing motion. Check for penetration and reapply as needed to dissolve surface to a depth of 4-5 thousandths. Apply solvent cement to the fitting socket and pipe in an amount greater than needed to fill any gap. While both surfaces are wet, insert pipe into socket fitting with a quarter turn to the bottom of the socket. Solvent cement application and insertion must be completed in less than 1 minute. Minimum of 2 installers is required on piping 4" and larger. Hold joint for 30 seconds or until set. Reference manufacturer's recommendations for initial set time before handling and for full curing time before pressure testing. Cold weather solvent/cement may be utilized only under unusual circumstances and when specifically approved by the Owner's Project Representative.

**3.07 MECHANICAL JOINT PIPE CONNECTIONS**

- A. Comply with AWWA C600/C605 installation requirements. Clean pipe end and socket. Clean and lubricate pipe end, socket and gasket with soapy water or gasket lubricant. Place gland and gasket, properly oriented, on pipe end. Insert pipe end fully into socket and press gasket evenly into recess keeping joint straight. Press gland evenly against gasket, insert bolts and hand tighten nuts. Make joint deflection prior to tightening bolts. Evenly tighten bolts in sequence to recommended torque.

**3.08 PUSH-ON GASKETED PIPE CONNECTIONS**

- A. Clean pipe end, bell, gasket seat and gasket of dirt or debris. Coat end of pipe and gasket with gasket lubricant. Insure pipe is supported off the ground so lubricant does not pick up dirt. Push spigot end into gasket bell with levered pipe joining tool recommended by pipe manufacturer. Large diameter exterior mains may be joined by pushing end of pipe section with backhoe against wood blocking over pipe end. Insert to fully seated position or to reference mark on pipe.

**3.09 MECHANICAL GROOVED PIPE CONNECTIONS**

- A. Use pipe factory grooved in accordance with the coupling manufacturer's specifications or field grooved pipe in accordance with the same specifications using specially designed tools specially designed for the application. Lubricate pipe and coupling gasket, align pipe, and secure joint in accordance with the coupling manufacturer's specifications.

**3.10 PRESS FITTING PIPE CONNECTIONS**

- A. Copper press fitting connections shall be made in accordance with the manufacturer's installation instructions. The tubing shall be fully inserted into the fitting and the tubing marked at the shoulder of the fitting. The fitting alignment shall be checked against the mark of the tubing to assure the tubing is fully engaged (inserted) in the fitting. The joints shall be pressed using the tool approved by the manufacturer.

### 3.11 **MECHANICALLY FORMED TEE FITTINGS**

- A. Form mechanically extracted collars in a continuous operation, consisting of drilling a pilot hole and drawing out the tube surface to form a collar having a height of not less than three times the thickness of the tube wall. Use an adjustable collaring device. Notch and dimple the branch tube. Braze the joint with neutral flame oxy-acetylene torch, applying heat properly so that pipe and tee do not distort; remove distorted connections.

### 3.12 **DOMESTIC WATER**

- A. Maintain piping system in clean condition during installation. Remove dirt and debris from assembly of piping as work progresses. Cap open pipe ends where left unattended or subject to contamination.
- B. Install exterior water piping below predicted frost level, but in no case less than 6' bury depth to top of pipe. Maintain minimum of 8' horizontal distance between 2-1/2" and larger water piping and sanitary sewer piping. Maintain minimum of 30" horizontal and 12" vertical distance, water on top, between 2" and smaller water piping and sanitary sewer piping. Where water piping crosses a sanitary sewer, provide minimum 18" vertical clearance and waterproof PVC water pipe sleeve (reference sanitary sewer materials) sealed at both ends for distance of 10' from sewer in both directions.
- C. Provide thrust restraints for 3" and larger exterior water piping joints, hydrants, caps, plugs, fittings and bends of 22-1/2 degrees or more. Field apply continuous anti-corrosion coating to rodded restraint components. Protect mechanical joints, nuts and bolts from concrete cover. Cover with 8 mil sheet or tube polyethylene material sleeve.
- D. Install interior water piping with drain valves where indicated and at low points of system to allow complete drainage. Install shutoff valves where indicated and at the base of risers to allow isolation of portions of system for repair. Do not install water piping within exterior walls.
- E. Prior to use, isolate and fill system with potable water. Allow to stand 24 hours. Flush each outlet proceeding from the service entrance to the furthest outlet for minimum of 1 minute and until water appears clear. Fill system with a solution of water and chlorine containing at least 50 parts per million of chlorine and allow to stand for 24 hours. Alternately a solution containing at least 200 parts per million of chlorine may be used and allowed to stand for 3 hours. Flush system with potable water until chlorine concentration is no higher than source water level.
- F. Wait 24 hours after final flushing. Take samples of water for lab testing. The number and location of samples shall be representative of the system size and configuration and are subject to approval by Engineer. Test shall show the absence of coliform bacteria. If test fails, repeat disinfection and testing procedures until no coliform bacteria are detected. Submit test report indicating date and time of test along with test results.

### 3.13 **DIELECTRIC UNIONS AND FLANGES**

- A. Install dielectric unions or flanges at each point where a copper-to-steel pipe connection is required in domestic water systems.

### 3.14 **UNIONS AND FLANGES**

- A. Install a union or flange at each connection to each piece of equipment and at other items which may require removal for maintenance, repair, or replacement. Where a valve is located at a piece of equipment, locate the flange or union connection on the equipment side of the valve. Concealed unions or flanges are not acceptable.

### 3.15 **PIPING SYSTEM LEAK TESTS**

- A. Isolate or remove components from system which are not rated for test pressure. Test piping in sections or entire system as required by sequence of construction. Do not insulate or conceal pipe until it has been successfully tested.
- B. If required for the additional pressure load under test, provide temporary restraints at fittings or expansion joints. Backfill underground water mains prior to testing with the exception of thrust restrained valves which may be exposed to isolate potential leaks.
- C. For hydrostatic tests, use clean water and remove all air from the piping being tested. Measure and record test pressure at the high point in the system.
- D. Inspect system for leaks. Where leaks occur, repair the area with new materials and repeat the test; caulking will not be acceptable.

- E. Entire test must be witnessed by the Owner's representative. All pressure tests are to be documented on form included in specification.

<u>Test System</u>	<u>Medium</u>	<u>Initial Test</u>		<u>Final Test</u>	
		<u>Pressure</u>	<u>Duration</u>	<u>Pressure</u>	<u>Duration</u>
*Below Ground Domestic Water	Water	N/A		200 psig	2 hr.
Above Ground Domestic Water	Water	N/A		100 psig	8 hr.
Above Ground Non-potable Water	Water	N/A		100 psig	8 hr.
Below Ground Non-potable Water	Water	N/A		100 psig	8 hr.

\*Flush and hydrostatically test underground water service piping in accordance with NFPA 13 – Installation of Sprinkler Systems, latest edition. All pressure tests shall be documented on NFPA Contractor's Material and Test Certificate for Underground Piping forms. These forms are to be included in the O&M manual.

3.16 **CONSTRUCTION VERIFICATION CHECKLISTS**

- A. Contractor is responsible for utilizing the construction verification checklists supplied under these specifications in accordance with the procedures defined for construction verification checklists.

END OF SECTION

Date Submitted: \_\_\_\_\_

Project Name: \_\_\_\_\_

Location: \_\_\_\_\_ Project No: \_\_\_\_\_

Contractor: \_\_\_\_\_

Plumbing  Fire Sprinkler

Test Medium:  Air  Water  Other\_\_

Test performed per specification section No. \_\_\_\_\_

Specified Test Duration \_\_\_\_\_ Hours Specified Test Pressure \_\_\_\_\_ PSIG

System Identification: \_\_\_\_\_

Describe Location: \_\_\_\_\_

\_\_\_\_\_

Test Date: _____	
Start Test Time: _____	Initial Pressure: _____ PSIG
Stop Test Time: _____	Final Pressure: _____ PSIG

Tested By: \_\_\_\_\_ Witnessed By: \_\_\_\_\_

Title: \_\_\_\_\_ Title: \_\_\_\_\_

Signed: \_\_\_\_\_ Signed: \_\_\_\_\_

Date: \_\_\_\_\_ Date: \_\_\_\_\_

Comments: \_\_\_\_\_

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**SECTION 22 13 00**  
**FACILITY SANITARY SEWERAGE**

**PART 1 – GENERAL**

**1.01 SCOPE OF WORK**

- A. Base Bid: Unless noted otherwise, the Plumbing Contractor shall provide all labor and materials for a complete system in this specification section.

**1.02 SECTION INCLUDES**

- A. This section contains specifications for plumbing pipe and pipe fittings for this project.
  - 1. Sanitary Waste And Vent
  - 2. Piping System Leak Tests

**1.03 RELATED WORK**

- A. Applicable provisions of Division 1 govern work under this section.
- B. Section 22 05 29 – Hangers and Supports for Plumbing Piping and Equipment

**1.04 SUBMITTALS**

- A. Refer to Section 22 05 00 – Common Work Results for Plumbing, Submittals. In addition to the general content specified under Section 22 05 00 – Common Work Results for Plumbing, supply the following submittals:
  - 1. Sanitary Waste And Vent
  - 2. Piping System Leak Tests
- B. Schedule from the contractor indicating the ASTM or CISPI specification number of the pipe being proposed along with its type and grade if known at the time of submittal, and sufficient information to indicate the type and rating of fittings for each service.
- C. Statement from manufacturer on his letterhead that pipe furnished meets the ASTM, or CISPI specification contained in this section.

**1.05 REFERENCE STANDARDS**

- A. ANSI A21.4 Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water
- B. ANSI A21.11 Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
- C. ANSI A21.51 Ductile-Iron Pipe, Centrifugally Cast
- D. ANSI B16.3 Malleable Iron Threaded Fittings
- E. ANSI B16.4 Cast Iron Threaded Fittings
- F. ANSI B16.5 Pipe Flanges and Flanged Fittings
- G. ANSI B16.22 Wrought Copper and Wrought Copper Alloy Solder Joint Pressure Fittings
- H. ANSI B16.29 Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings - DWV
- I. ASTM A53 Pipe, Steel, Black and Hot-Dipped, Zinc Coated Welded and Seamless
- J. ASTM A74 Cast Iron Soil Pipe and Fittings
- K. ASTM A105 Forgings, Carbon Steel, for Piping Components
- L. ASTM A126 Gray Cast Iron Castings for Valves, Flanges, and Pipe Fittings
- M. ASTM A234 Pipe Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and Elevated Temperatures
- N. ASTM A861 High Silicon Iron Pipe and Fittings
- O. ASTM A888 Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications
- P. ASTM B32 Solder Metal
- Q. ASTM B306 Copper Drainage Tube (DWV)
- R. ASTM B813 Liquid and Paste Fluxes for Soldering Applications of Copper and Copper Alloy Tube
- S. ASTM C76 Reinforced Concrete Culvert, Storm Drain and Sanitary Pipe
- T. ASTM C564 Standard Specifications for Rubber Gaskets for Cast Iron Soil Pipe and Fittings

- U. ASTM C1540 Standard Specifications for Heavy Duty Shielded Couplings Joining Hubless Cast Iron Soil Pipe and Fittings
- V. ASTM D1785 Poly Vinyl Chloride (PVC) Plastic Pipe
- W. ASTM D2241 Poly Vinyl Chloride (PVC) Pressure-Rated Pipe (SDR Series)
- X. ASTM D2466 Poly Vinyl Chloride (PVC) Plastic Pipe Fittings, Schedule 40
- Y. ASTM D2564 Solvent Cements for Poly Vinyl Chloride (PVC) Plastic Pipe and Fittings
- Z. ASTM D2665 Poly Vinyl Chloride (PVC) Plastic Drain, Waste and Vent Pipe and Fittings
- AA. ASTM D2729 Poly Vinyl Chloride (PVC) Sewer Pipe and Fittings
- BB. ASTM D2855 Making Solvent Cemented Joints with Poly Vinyl Chloride (PVC) Pipe and Fittings
- CC. ASTM D3034 Type PSM Poly Vinyl Chloride (PVC) Sewer Pipe and Fittings
- DD. ASTM D3212 Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
- EE. ASTM D3311 Drain, Waste and Vent (DWV) Plastic Fitting Patterns
- FF. CISPI 301 Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste and Vent Piping Applications
- GG. CISPI 310 Couplings For Use In Connection With Hubless Cast Iron Soil Pipe And Fittings For Sanitary And Storm Drain, Waste And Vent Piping Applications

#### 1.06 **QUALITY ASSURANCE**

- A. Substitution of Materials: Refer to Division 1.
- B. Order all pipe with each length marked with the name or trademark of the manufacturer and type of pipe; with each shipping unit marked with the purchase order number, metal or alloy designation, temper, size, and name of supplier.
- C. Any installed material not meeting the specification requirements must be replaced with material that meets these specifications without additional cost to the owner.

#### 1.07 **DESIGN CRITERIA**

- A. Use only new material, free of defects, rust and scale, and meeting the latest revision of ASTM, or CISPI specifications as listed in this specification.
- B. Construct all piping for the highest pressures and temperatures in the respective system.
- C. Non-metallic piping will be acceptable only for the services indicated. It will not be acceptable in ventilation plenum spaces, including plenum ceilings.
- D. Where ASTM A53 type F pipe is specified, grade A type E or S, or grade B type E or S may be substituted at Contractor's option. Where the grade or type is not specified, Contractor may choose from those commercially available.
- E. Where ASTM B88, type L H (drawn) temper copper tubing is specified, ASTM B88, type K H (drawn) temper copper tubing may be substituted at Contractor's option.

#### 1.08 **DELIVERY, STORAGE AND HANDLING**

- A. Promptly inspect shipments to insure that the material is undamaged and complies with specifications.
- B. Cover pipe to prevent corrosion or deterioration while allowing sufficient ventilation to avoid condensation. Do not store materials directly on grade. Protect pipe, tube, and fitting ends so they are not damaged. Where end caps are provided or specified, take precautions so the caps remain in place. Protect fittings, flanges, and unions by storage inside or by durable, waterproof, above ground packaging.
- C. Offsite storage agreements will not relieve the contractor from using proper storage techniques.
- D. Storage and protection methods must allow inspection to verify products.

### **PART 2 – PRODUCTS**

#### 2.01 **SANITARY WASTE AND VENT**

- A. Interior Above Ground:
  - 1. Hubless cast iron soil pipe and fittings, ASTM A888; with no-hub couplings, CISPI 301, CISPI 310, ASTM A74. Pipe and fittings shall be marked with the collective trademark of the Cast Iron Pipe Institute or receive prior approval of the Engineer.
    - a. Manufacturers: A B & I Foundry, Charlotte Pipe and Foundry, Tyler Pipe

2. PVC plastic pipe, Schedule 40, Class 12454-B (PVC 1120), ASTM D1785; PVC plastic drain, waste and vent pipe and fittings, ASTM D2665; socket fitting patterns, ASTM D3311; primer, ASTM F656; solvent cement, ASTM D2564.
- B. Interior Below Ground:
1. Cast iron soil pipe and fittings, hub and spigot, service weight, ASTM A74, with neoprene rubber compression gaskets, ASTM C564, CISPI 301, and CISPI HSN 85. Pipe and fittings shall be marked with the collective trademark of the Cast Iron Pipe Institute.
    - a. Manufacturers: A B & I Foundry, Charlotte Pipe and Foundry, Tyler Pipe
  2. PVC plastic pipe, Schedule 40, Class 12454-B (PVC 1120), ASTM D1785; PVC plastic drain, waste and vent pipe and fittings, ASTM D2665; socket fitting patterns, ASTM D3311; primer, ASTM F656; solvent cement, ASTM D2564.

## PART 3 – EXECUTION

### 3.01 GENERAL

- A. Install pipe and fittings in accordance with reference standards, manufacturer's recommendations and recognized industry practices.

### 3.02 PREPARATION

- A. Cut pipe ends square. Ream ends of piping to remove burrs. Clean scale and dirt from interior and exterior of each section of pipe and fitting prior to assembly.

### 3.03 ERECTION

- A. Install all piping parallel to building walls and ceilings and at heights which do not obstruct any portion of a window, doorway, stairway, or passageway. Where interferences develop in the field, offset or reroute piping as required to clear such interferences. Coordinate locations of plumbing piping with piping, ductwork, conduit and equipment of other trades to allow sufficient clearances. In all cases, consult drawings for exact location of pipe spaces, ceiling heights, door and window openings, or other architectural details before installing piping.
- B. Where copper or steel piping is embedded in masonry or concrete, provide protective sleeve covering of elastomeric pipe insulation.
- C. Install underground warning tape 6"-12" below finished grade above all exterior below ground piping. Where existing underground warning tape is encountered, repair and replace.
- D. Maintain piping in clean condition internally during construction.
- E. Do not route piping through transformer vaults or above transformers, panelboards or switchboards, including the required service space for this equipment.
- F. Install all valves and piping specialties, including items furnished by others, as specified and/or detailed. Provide access to valves and specialties for maintenance. Make connections to all equipment, fixtures and systems installed by others where same requires the piping services indicated in this section.

### 3.04 COPPER PIPE JOINTS

- A. Remove all slivers and burrs remaining from the cutting operation by reaming and filing both pipe surfaces. Clean fitting and tube with metal brush, emery cloth or sandpaper. Remove residue from the cleaning operation, apply flux and assemble joint to socket stop. Apply flame to fitting until solder melts when placed at joint. Remove flame and feed solder into joint until full penetration of cup and ring of solder appears. Wipe excess solder and flux from joint.

### 3.05 THREADED PIPE JOINTS

- A. Use a thread lubricant or Teflon tape when making joints; no hard setting pipe thread cement or caulking will be allowed.

### 3.06 SOLVENT WELDED PIPE JOINTS

- A. Install in accordance with ASTM D2855 "Making Solvent Cemented Joints With PVC Pipe and Fittings". Saw cut piping square and smooth. Tube cutters may be used if they are fitted with wheels

designed for use with PVC/CPVC pipe that do not leave a raised bead on pipe exterior. Support and restrain pipe during cutting to prevent nicks and scratches. Bevel ends 10-15 degrees and deburr interior. Remove dust, drips, moisture, grease and other superfluous materials from pipe interior and exterior. Check dry fit of pipe and fittings. Reject materials which are out of round or do not fit within close tolerance. Use heavy body solvent cement for large diameter fittings.

- B. Maintain pipe, fittings, primer and cement between 40 and 100 degrees during application and curing. Apply primer and solvent using separate daubers (3" and smaller piping only) or clean natural bristle brushes about 1/2 the size of the pipe diameter. Apply primer to the fitting socket and pipe surface with a scrubbing motion. Check for penetration and reapply as needed to dissolve surface to a depth of 4-5 thousandths. Apply solvent cement to the fitting socket and pipe in an amount greater than needed to fill any gap. While both surfaces are wet, insert pipe into socket fitting with a quarter turn to the bottom of the socket. Solvent cement application and insertion must be completed in less than 1 minute. Minimum of 2 installers is required on piping 4" and larger. Hold joint for 30 seconds or until set. Reference manufacturer's recommendations for initial set time before handling and for full curing time before pressure testing. Cold weather solvent/cement may be utilized only under unusual circumstances and when specifically approved by the Owner's Project Representative.

**3.07 MECHANICAL HUBLESS PIPE CONNECTIONS**

- A. Place the gasket on the end of one pipe or fitting and the clamp assembly on the end of the other pipe or fitting. Firmly seat the pipe or fitting ends against the integrally molded shoulder inside the neoprene gasket. Slide the clamp assembly into position over the gasket. Tighten fasteners to manufacturers recommended torque.

**3.08 SANITARY WASTE AND VENT**

- A. Verify invert elevations and building elevations prior to installation. Install exterior piping pitched to drain at indicated elevations and slope. Install interior piping pitched to drain at minimum slope of 1/4" per foot where possible and in no case less than 1/8" per foot for piping 3" and larger.
- B. Install exterior piping below predicted frost level and not less than 5' bury depth to top of pipe wherever possible. Where piping is located above predicted frost level, provide frost protection.
- C. Flush piping inlets (floor drains, hub drains, mop basins, fixtures, etc.) with high flow of water at completion of project to demonstrate full flow capacity. Remove blockages and make necessary repairs where flow is found to be impeded.

**3.09 PIPING SYSTEM LEAK TESTS**

- A. For hydrostatic tests, use clean water and remove all air from the piping being tested. Measure and record test pressure at the high point in the system.
- B. Inspect system for leaks. Where leaks occur, repair the area with new materials and repeat the test; caulking will not be acceptable.
- C. Entire test must be witnessed by the Owner's representative. All pressure tests are to be documented.

<u>System</u>	<u>Test Medium</u>	<u>Initial Test</u>		<u>Final Test</u>	
		<u>Pressure</u>	<u>Duration</u>	<u>Pressure</u>	<u>Duration</u>
Sanitary Waste and Vent	Water	N/A		10' water	2 hr.

**3.10 CONSTRUCTION VERIFICATION CHECKLISTS**

- A. Contractor is responsible for utilizing the construction verification checklists supplied under these specifications in accordance with the procedures defined for construction verification checklists.

END OF SECTION

**SECTION 22 42 00  
COMMERCIAL PLUMBING FIXTURES**

**PART 1 - GENERAL**

**1.01 SCOPE OF WORK**

- A. Base Bid: Unless noted otherwise, the Plumbing Contractor shall provide all labor and materials for a complete system in this specification section.

**1.02 SECTION INCLUDES**

- A. This section includes specifications for plumbing fixtures, faucets and trim.
  - 1. Plumbing Fixtures
    - a. Lavatories
    - b. Urinals
    - c. Water Closets

**1.03 RELATED WORK**

- A. Applicable provisions of Division 1 shall govern work under this section.
- B. Section 22 05 14 – Plumbing Specialties
- C. Section 22 11 00 – Facility Water Distribution
- D. Section 22 13 00 – Facility Sanitary Sewerage

**1.04 SUBMITTALS**

- A. Refer to Section 22 05 00 – Common Work Results for Plumbing, Submittals. In addition to the general content specified under Section 22 05 00 – Common Work Results for Plumbing, supply the following submittals:
  - 1. Lavatories
  - 2. Urinals
  - 3. Water Closets
- B. Include data concerning sizes, rough in-dimensions, capacities, materials of construction, trim, finishes, manufacturer's installation requirements, manufacturer's performance limitations, and appropriate identification.

**1.05 REFERENCE STANDARDS**

- A. ANSI A112.6.1M Supports for Off-the Floor Plumbing Fixtures for Public Use
- B. ANSI A112.18.1 Finished and Rough Brass Plumbing Fixture Fittings
- C. ANSI A112.19.1 Enameled Cast Iron Plumbing Fixtures
- D. ANSI A112.19.2M Vitreous China Plumbing Fixtures
- E. ANSI A112.19.5 Trim for Water Closet Bowls, Tanks and Urinals
- F. ANSI Z124.2 Plastic Shower Receptors and Shower Stalls
- G. ARI-1010 Self-Contained Mechanically Refrigerated Drinking Water Coolers
- H. ASSE 1011 Hose Connection Vacuum Breakers
- I. ASSE 1014 Handheld Showers
- J. ASSE 1016 Individual Thermostatic, Pressure Balancing, and Combination Pressure Balancing and Thermostatic Control Valves for Individual Fixture Fittings

**1.06 QUALITY ASSURANCE**

- A. Substitution of Materials: Refer to Division 1.
- B. Plumbing products requiring approval by the State of Wisconsin Dept. of Safety & Professional Services must be approved or have pending approval at the time of shop drawing submission.

**1.07 ENERGY EFFICIENCY REQUIREMENTS**

- A. Plumbing fixtures must meet the following maximum water usage requirements:
  - 1. Lavatory Faucets: flow of 0.5 gallons per minute
  - 2. Urinal Flush Valves: 0.13 gallons per flush

3. Water Closet Flush Valves: 1.28 gallons per flush

## **PART 2 – PRODUCTS**

### **2.01 PLUMBING FIXTURES**

- A. Manufacturers: Fixture descriptions establish fixture type, quality, materials, features and size. Products of the following manufacturers determined to be equal by the Architect/Engineer will be accepted. Architect to select from manufacturer's standard finish colors.
  1. Vitreous China and Enameled Cast Iron Fixtures: American Standard, Kohler, Sloan, Toto, Zurn
  2. Water Closet Seats: Bemis, Beneke, Centoco, Olsonite Sperzel
  3. Faucets: Chicago Faucet, Sloan, Zurn
  4. Stops and Supplies: Chicago Faucet, McGuire, Zurn
  5. Flush Valves: Sloan, Zurn
  6. Drains and Traps: Kohler, McGuire, Dearborn, Zurn
  7. Carriers and Supports: Josam, J.R. Smith, Wade, Watts, Zurn
  8. Thermostatic Mixing Valves: Bradley, Lawler, Leonard, Powers
- B. Lavatories:
  1. L-1: Undercounter mounted white vitreous china lavatory with 17" x 14" bowl, overflow, and clamps. Battery powered sensor operated faucet with cast brass spout, 0.5 gpm vandal resistant spray outlet, 4" C-C trim plate, and thermostatic mixing valve with checkstops and wall mounting bracket.
    - a. Fixture: Kohler 'Caxton' K-2210
    - b. Faucet: Sloan EAF-150 with EAF-12 spray head
    - c. Cover Plate: Sloan ETF-607-A
    - d. Thermostatic Mixing Valve: Symmons S-120-CKX-W
    - e. Drain: Kohler K-13885 strainer and 1¼" offset tailpiece
    - f. Trap: 1¼" x 1½" 17 gauge cast brass p-trap
- C. Urinals:
  1. U-1: Wall mounted white vitreous china high efficiency 0.125 gallon per flush urinal with ¾" top inlet spud, 2" outlet spud, removable strainer, and concealed hard wired sensor operated 0.13 gpf flush valve with override button, wall box, stainless steel access panel, elbow adaptor for top spud fixtures, and 120VAC/24VAC transformer.
    - a. Fixture: Kohler 'Bardon' K-4904-ET
    - b. Flush Valve: Sloan 197-0.13 ES-S TMO SWB
    - c. Transformer: Sloan EL-154
    - d. Carrier: Zurn Commercial Grade
- D. Water Closets:
  1. WC-1: Wall hung white vitreous china high efficiency siphon jet water closet with elongated bowl, 1½" top spud, 2½" passageway and 1.28 gallon flush. Concealed hard wired sensor operated 0.13 gpf flush valve with override button, wall box, stainless steel access panel, elbow adaptor for top spud fixtures, and 120VAC/24VAC transformer. Fixture to be ADA compliant.
    - a. Fixture: Toto CT708E
    - b. Flush Valve: Sloan 153-1.28 ES-S TMO SWB
    - c. Transformer: Sloan EL-154
    - d. Seat: Bemis 1655-SS/C white solid plastic with open front
    - e. Carrier: Zurn Commercial Grade

## **PART 3 – EXECUTION**

### **3.01 INSTALLATION**

- A. Install plumbing fixtures in accordance with manufacturer's instructions. Set level and plumb. Secure in place to counters, floors and walls providing solid bearing and secure mounting. Bolt fixture carriers to floor and wall. Secure rough-in fixture piping to prevent movement of exposed piping.

- B. Install each fixture with trap easily removable for servicing and cleaning. Install fixture stops in readily accessible location for servicing.
- C. Install barrier free fixtures in compliance with the International Building Code and Federal ADA Accessibility Guidelines. Install barrier free lavatory traps parallel and adjacent to wall and supplies and stops elevated to avoid contact by wheelchair users.
- D. Where individual toilet rooms contain one or more wall mounted urinals, install one urinal with the lip 17" above finished floor. Install all additional urinals within the same room with the lip 24" above finished floor.
- E. Each fixture shall have a stop valve installation to control the fixture. Stop valves shall be heavy duty type with brass stems and screwed or sweat inlet connections. Compression type inlets are not acceptable.
- F. Cover pipe wall penetrations with escutcheons. Exposed traps, stops, piping and escutcheons to be chrome plated brass, unless otherwise indicated.
- G. Set floor mounted plumbing fixtures, counter mounted sinks, lavatory and sink faucets and drains with full setting bed of flexible non-staining plumber's putty.
- H. Seal wall mounted plumbing fixtures to wall with silicone sealant.
- I. Seal openings between walls, floors and fixtures with mildew-resistant silicone sealant same color as fixture.
- J. Adjust lavatory mixing valve outlet water temperature to maximum 105°F.
- K. Test fixtures to demonstrate proper operation. Replace malfunctioning units or components. Adjust flush valves for intended water flow rate to fixtures without splashing, noise or overflow. Adjust self-closing faucets to 15 second cycle.
- L. Protect fixtures during construction. At completion clean plumbing fixtures and trim using manufacturer's recommended cleaning methods and materials.

END OF SECTION



























**Champaign County  
ADA Compliance Project**

**Champaign County ADA Compliance Interior Projects  
ITB #2016-009**

**Proposed Schedule  
08/30/2016**

August 2016	Bailey Edward Architecture to develop specifications & written documentation for the bid document
Tuesday, September 6, 2016	Present draft bid document to the Facilities Committee for approval
Thursday, September 7, 2016	Finalize bid document
<b>Thursday, September 8, 2016</b>	<b>Advertise and Post Bid</b>
<b>Thursday, September 22, 2016, 2:00pm</b>	<b>Vendor Pre-Bid Meeting – Brookens Administrative Center, 1776 E. Washington St., Urbana, Illinois 61802 – Lyle Shields Meeting Room</b>
Friday, September 23, 2016, 12:00noon	Deadline for submission of questions and clarifications
<b>Monday, September 26, 2016</b>	<b>Bailey Edward Architecture responds to submitted questions or clarifications.</b>
<b>Thursday, September 29, 2016, 2:00pm</b>	<b>Bid Opening – Brookens Administrative Center, 1776 E. Washington St., Urbana, Illinois 61802 – Lyle Shields Meeting Room</b>
Tuesday, October 4, 2016	Present to the Facilities Committee for project approval
Thursday, October 20, 2016	Present to County Board for project approval
Friday, October 21, 2016	Finalize and sign agreement with successful low bidder. Successful low bidder submits “A & E Shop Drawings” to Bailey Edward Architecture for approval.
November 1, 2016	Contractor to mobilize/stage equipment and begin project – all materials for project must be on-site or available daily as needed during this project.
<b>December 31, 2016</b>	<b>Substantial Completion of Project</b>
January 3, 2017	Publish Punch List
<b>January 9 2017</b>	<b>Complete Punch List and Project</b>

**General Information**

Applying for electric and/or natural incentives from both the Department of Commerce and participating utilities for the same energy efficiency measure is prohibited.

Check One:  Pre-Approval  Final Certification

<b>Public Entity Name:</b> Brookens Administrative Center	
<b>Public Sector Class:</b>	<input checked="" type="checkbox"/> Local Government <input type="checkbox"/> Community College <input type="checkbox"/> State <input type="checkbox"/> Local Government <input type="checkbox"/> K-12 School <input type="checkbox"/> University <input type="checkbox"/> Federal
<b>Project Manager/ Primary Contact</b>	First Name: John Last Name: Meerdink Telephone #: numbers only, ie 6185551212 Job Title: Mechanical Design email: jmeerdink@ghrinc.com Telephone #: numbers only, ie 6185551212 2173566519
<b>Contractor</b>	First Name: Mike Last Name: Meislahn Telephone #: numbers only, ie 6185551212 Company: Reliable Mechanical Co. email: Mmeislahn@reliable-mechanical.com Telephone #: numbers only, ie 6185551212 2173595621
<b>Proposed Start Date:</b> MM/DD/YYYY	07/13/2016
<b>Proposed Completion Date:</b> MM/DD/YYYY	09/09/2016
<b>Total Gas &amp; Electric Incentive Requested</b>	Incentive based on total of all worksheets, up to 75% of the total project cost. \$18,550.00 Combined Department of Commerce incentives and other public source incentives cannot exceed 100% of the total project cost. No entry needed, automatic calculation
<b>Other Public Incentive Funds, \$</b>	\$ -
<b>Total Project Cost</b>	\$ 161,990.00
<b>Total Electric Incentive &amp; Bonus:</b>	\$ 18,550.00
<b>Total Gas Incentive &amp; Bonus:</b>	\$ -
<b>Total Electric &amp; Natural Gas Incentive</b>	\$ 18,550.00
<b>Incentive/Cost</b>	11.5 %
<b>(Incentive+Funds)/Cost</b>	11 %
<b>Total + Bonus</b>	\$ 18,550.00



**General Information**

Applying for electric and/or natural incentives from both the Department of Commerce and participating utilities for the same energy efficiency measure is prohibited.

Check One:  Pre-Approval  Final Certification

<b>Public Entity Name:</b> Brookens Administrative Center	
<b>Public Sector Class:</b> <input checked="" type="checkbox"/> Local Government <input type="checkbox"/> Community College <input type="checkbox"/> State	
Local Government <input type="checkbox"/> K-12 School <input type="checkbox"/> University <input type="checkbox"/> Federal	
<b>Project Manager/Primary Contact</b>	First Name: John Last Name: Meerdink Telephone #: numbers only, ie 6185551212 2173566519 Job Title: Mechanical Design email: jmeerdink@ghrinc.com
<b>Contractor</b>	First Name: Mike Last Name: Meislahn Telephone #: numbers only, ie 6185551212 2173595621 Company: Reliable Mechanical Co. email: Mmeislahn@reliable-mechanical.com
<b>Proposed Start Date:</b> MM/DD/YYYY	07/13/2016
<b>Proposed Completion Date:</b> MM/DD/YYYY	09/09/2016
<b>Total Gas &amp; Electric Incentive Requested</b>	Incentive based on total of all worksheets, up to 75% of the total project cost. \$18,550.00 Combined Department of Commerce incentives and other public source Incentives cannot exceed 100% of the total project cost. No entry needed, automatic calculation
<b>Other Public Incentive Funds, \$</b>	\$ -
<b>Department of Commerce Use Only</b>	
<b>Electric Incentive:</b>	\$ -
<b>Bonus:</b>	N/A
<b>Total Electric Incentive &amp; Bonus:</b>	\$ -
<b>Total Electric &amp; Natural Gas Incentive</b>	\$ 18,550.00
<b>Incentive/Cost</b>	11.5 %
<b>(Incentive+Funds)/Cost</b>	11 %
<b>Total + Bonus</b>	\$ 18,550.00

# Applicant Certifications

- Applicant hereby certifies that:
  - For electric energy projects, the project received electric delivery service from Ameren Illinois or ComEd. **A copy of the electric utility bill or other documentation must be submitted with this Application.**
  - For natural gas energy projects, the project received natural gas delivery service from Ameren Illinois, Nicor, Peoples Gas or North Shore. **A copy of the gas utility bill or other documentation must be submitted with this Application.**
  - All authorizations required to perform the project, described in its application, have either been obtained or will be obtained no later than 90 days following the grant beginning date set forth in the Notice of Grant Award issued by the Department of Commerce.
  - The project complies with all applicable state, federal, and local environmental and zoning laws, ordinances, and regulations and that all required licenses, permits, etc., have either been obtained or will be obtained no later than 90 days following an award by the Department of Commerce.
  - It is not in violation of the prohibitions against bribery of any officer or employee of the State of Illinois as set forth in 30 ILCS505/10.1.
  - It has not been barred from contracting with a unit of state or local government as a result of a violation of Section 33E-3 or 33E-4 of the Criminal Code of 1961 (720 ILCS 5/33 E-4).
  - It is not in violation of the Educational Loan Default Act (5 ILCS 385/3).
  - I understand that the State Finance Act, 30 ILCS 105/30 may apply and that payments under this incentive program are contingent upon the existence of a valid appropriation, and that no officer, institution, department, board or commission shall contract any indebtedness on behalf of the State, or assume to bind the State in an amount in excess of the money appropriated, unless expressly authorized by law.
  - I understand that the Illinois Prevailing Wage Act (820 ILCS 130/0.01) may apply and that grantees are responsible for determining if their projects will trigger compliance programs.
  - As of the submittal date, the information provided in its application is accurate, and the individual signing below is authorized to submit this application.
  - I agree and authorize the release of all electric and natural gas utility usage and billing information to the Illinois Department of Commerce & Economic Opportunity and its agents for purposes of performing an Evaluation, Measurement, and Verification (EM&V) of Department of Commerce's energy efficiency programs.

Electronic signatures are not acceptable. Please supply Certifications (this page) with copy of the original signature via email, or electronically (scanned document).

Authorized Official (signature)		Date	
Prefix	First Name	Last Name	MM/DD/YYYY
Mr.	Dana	Brenner	08/08/2016
Telephone	Title		
numbers only, ie 6185551212	Facility Director		
2173843765	Authorized Signature email address		
	dbrenner@co.champaign.il.us		

### Payment Information Below

FEIN	Name of Public Entity	
9 digit, Federal Employment ID Number, does not start with "E"	Brookens Administration Center	
37-6006910	City	Zip 5 digit required Plus 4 optional
Street Address	Urbana	61802 - 4578
Incentive Payment mailed to:		
1776 E. Washington		



**f** **t** AmerenIllinois.com  
Customer Service 1.800.232.2477

**Statement Issued** 07/12/2016  
**Amount Due** \$413.04  
**Due Date** Sep 12, 2016

**Account Number** 2017069000  
**Customer Name** CHAMPAIGN CO PHYSICAL PLANT  
**Service Address** 502 S LIERMAN AVE, GAS  
URBANA, IL 61802

**Last Payment** \$1,332.33  
*Payment received. Thank you.*

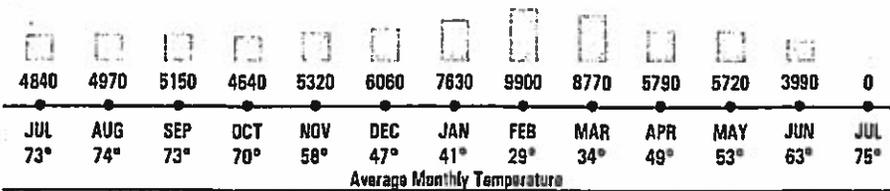
**Current Charge Summary for Statement 07/12/2016**

**Total Gas Charge** \$413.04  
**Total Amount Due** \$413.04

**Important Account Messages**

The current billed amount of \$413.04 is due on Sep 12, 2016.

**Gas Usage History in Therms**



**Average Daily Gas Use (Therms)**

TIME PERIOD	AVG. DAILY USE
CURRENT MONTH	0.00 Therms
LAST MONTH	128.71 Therms
LAST YEAR	161.33 Therms

39059 13073  
00036 2212047 00073 000145 0001/0002  
INTERNAL USE ONLY



See page 2 for account messages and tips from Ameren Illinois.

Keep this portion for your records.

Page 1 of 4

Please detach stub and return this portion with your payment.



See reverse side if your address has changed and for details on other ways to pay your bill.

**Account Number** 2017069000  
**Amount Due** \$413.04  
**Due Date** 09/12/2016  
**Amount Enclosed** \_\_\_\_\_

>000036 2212047 0001 092139 102

CHAMPAIGN CO PHYSICAL PLANT  
ANITA BUSBOOM  
1776 E WASHINGTON ST  
URBANA, IL 61802-4578

AMEREN ILLINOIS  
PO BOX 88034  
CHICAGO IL 60680-1034

3040000 0020170690000 00413040 00413040 00413040  
202



f AmerenIllinois.com  
Customer Service 1.800.232.2477

Statement Issued 07/12/2016  
Amount Due \$413.04  
Due Date Sep 12, 2016

Account Number 2017069000  
Customer Name CHAMPAIGN CO PHYSICAL PLANT  
Service Address 502 S LIERMAN AVE, GAS  
URBANA, IL 61802

**Payment Details**

Payment Received DATE AMOUNT  
June 24, 2016 \$1,332.33

**Gas Service Non Residential Billing Detail - Rate Zone III 06/01/2016 - 07/01/2016 (30 days)**

Gas Meter Read for 06/01/2016 - 07/01/2016 (30 days)

READ TYPE	METER NUMBER	CURRENT METER READ	PREVIOUS METER READ	READ DIFFERENCE	MULTIPLIER	USAGE
Total Therm	5TC85591	172252.0000 Estimate	172252.0000 Actual	0.0000	10.0000	0.0000

Usage Summary  
Total Meter Therms 0.0000

Maximum Daily Contract Quantity

Gas Delivery	CHARGE DESCRIPTION	USAGE	UNIT	RATE	CHARGE
Ameren Illinois	Customer Charge				\$279.84
GDS-3 Intermediate Gas	Qualifying Infrastructure Plant Surchg	\$383.61	@	0.920000%	\$3.53
Delivery Space Heat				Gas Delivery	\$283.37

Gas Supply	Rider TBS Capacity Charge	5,880.00	Therms	@ \$ 0.01855000	\$109.07
Rider T				Gas Supply	\$109.07

Taxes and Other Fees	Illinois State Commerce Commission Tax	\$0.39
	Urbana Municipal Gross Revenue	\$20.21
	<b>Total Tax Related Fees</b>	<b>\$20.60</b>

**Total Gas Charges \$413.04**

**Bank Status**

Bank Election Factor for Service Point 18284652 10  
MDCQ 588

00036 2212047 000074 00147 0002/0002





AmerenIllinois.com  
Customer Service 1.800.232.2477

Statement Issued 07/06/2016  
Amount Due \$2,543.65  
Due Date Sep 6, 2016

Account Number 2245102015  
Customer Name CHAMPAIGN CO PHYSICAL PLANT  
Service Address 101 E MAIN ST, USMS  
URBANA, IL 61801

Last Payment \$3,375.68  
Payment received. Thank you.

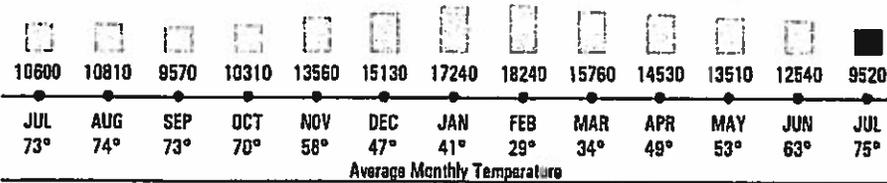
Current Charge Summary for Statement 07/06/2016

Total Gas Charge \$2,543.65  
Total Amount Due \$2,543.65

Important Account Messages

The current billed amount of \$2,543.65 is due on Sep 06, 2016.

Gas Usage History in Therms



Average Daily Gas Use (Therms)

TIME PERIOD	AVG. DAILY USE
CURRENT MONTH	317.33 Therms
LAST MONTH	404.52 Therms
LAST YEAR	353.33 Therms

1/4  
533.30

39059 13073  
03259 2211025 006574 013147 0001/0002  
INTERNAL USE ONLY



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Page 1 of 4

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Account Number 2245102015  
Amount Due \$2,543.65  
Due Date 09/06/2016

Amount Enclosed \_\_\_\_\_



>003259 2211025 0001 092139 102

AUTO\*\*SCH 3-DIGIT 618  
CHAMPAIGN CO PHYSICAL PLANT  
BROOKENS ADMIN CENTER  
1776 E WASHINGTON ST  
URBANA, IL 61802-4578



AMEREN ILLINOIS  
PO BOX 88034  
CHICAGO IL 60680-1034

10700000 0022451020105 000002543650 000002543650



f AmerenIllinois.com  
Customer Service 1.800.232.2477

**Statement Issued** 07/06/2016  
**Amount Due** \$2,543.65  
**Due Date** Sep 6, 2016

**Account Number** 2245102016  
**Customer Name** CHAMPAIGN CO PHYSICAL PLANT  
**Service Address** 101 E MAIN ST, USMS  
URBANA, IL 61801

**Payment Details**

**Payment Received** DATE: June 24, 2016 AMOUNT: \$3,375.68

**Gas Service Non Residential Billing Detail - Rate Zone III** 06/01/2016 - 07/01/2016 (30 days)

Gas Meter Read for 06/01/2016 - 07/01/2016 (30 days)

READ TYPE	METER NUMBER	CURRENT METER READ	PREVIOUS METER READ	READ DIFFERENCE	MULTIPLIER	USAGE
Total Therm	6TC21874	205465.0000 Actual	204513.0000 Actual	952.0000	10.0000	9520.0000

**Usage Summary**

Total Meter Therms 9520.0000 Transport Gas 9520.0000

**Maximum Daily Contract Quantity**

	CHARGE DESCRIPTION	USAGE UNIT	RATE	CHARGE
<b>Gas Delivery</b>	Customer Charge			\$279.84
Ameren Illinois	Gas Environmental Adjustment	9,520.00 Therms	@ \$ 0.00847620	\$80.69
GDS-3 Intermediate Gas	Distribution Delivery Charge	9,520.00 Therms	@ \$ 0.10909000	\$1,038.54
Delivery Space Heat	Gas Energy Efficiency Cost Recovery	9,520.00 Therms	@ \$ 0.01510000	\$143.75
	Qualifying Infrastructure Plant Surchg	\$1,490.42	@ 0.920000%	\$13.71
	<b>Gas Delivery</b>			<b>\$1,556.53</b>

<b>Gas Supply</b>	Rider TBS Capacity Charge	9,560.00 Therms	@ \$ 0.01855000	\$177.34
Rider T			<b>Gas Supply</b>	<b>\$177.34</b>

<b>Taxes and Other Fees</b>	Illinois State Gas Use Tax			\$228.48
	Illinois State Commerce Commission Tax			\$1.73
	Urbana Municipal Gross Revenue			\$89.29
	Urbana Municipal Use Charge			\$490.28
	<b>Total Tax Related Fees</b>			<b>\$809.78</b>

**Total Gas Charges** \$2,543.65

**Bank Status**

Bank Election Factor for Service Point 18746608 10  
MDCQ 956

03259 2211029 008575 013149 0002/0002





f AmerenIllinois.com  
Customer Service 1.800.232.2477

Statement Issued 07/06/2016  
Amount Due \$228.37  
Due Date Sep 6, 2016

Account Number 0167100015  
Customer Name CHAMPAIGN CO PHYSICAL PLANT  
Service Address 204 E MAIN ST, GAS  
URBANA, IL 61801

Last Payment \$261.36  
Payment received. Thank you.

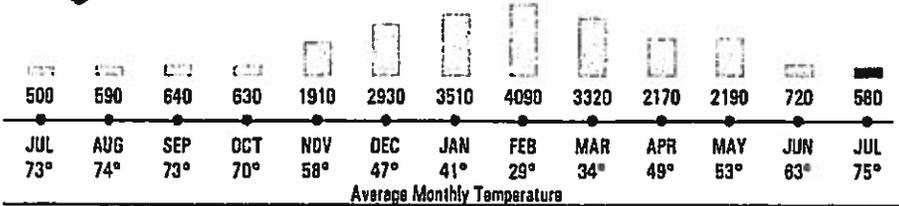
**Current Charge Summary for Statement 07/06/2016**

Total Gas Charge \$228.37  
Total Amount Due \$228.37

**Important Account Messages**

The current billed amount of \$228.37 is due on Sep 06, 2016.

**Gas Usage History in Therms**



**Average Daily Gas Use (Therms)**

TIME PERIOD	AVG. DAILY USE
CURRENT MONTH	18.33 Therms
LAST MONTH	23.23 Therms
LAST YEAR	16.67 Therms

38059 13073  
03261 2211029 006578 013155 0001A0002  
INTERNAL USE ONLY

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533.30



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Page 1 of 4

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Account Number 0167100015  
Amount Due \$228.37  
Due Date 09/06/2016

Amount Enclosed \_\_\_\_\_



>003261 2211029 0001 092139 10Z

\*\*\*\*\*AUTO\*\*SCH 3-DIGIT 618  
CHAMPAIGN CO PHYSICAL PLANT  
BROOKENS ADMIN CTR  
1776 E WASHINGTON ST  
URBANA, IL 61802-4578



AMEREN ILLINOIS  
PO BOX 88034  
CHICAGO IL 60680-1034

9040000 0001671000105 00228370 00228370 00228370



f AmerenIllinois.com  
Customer Service 1.800.232.2477

Statement Issued 07/06/2016  
Amount Due \$228.37  
Due Date Sep 6, 2016

Account Number 0167100015  
Customer Name CHAMPAIGN CO PHYSICAL PLANT  
Service Address 204 E MAIN ST, GAS  
URBANA, IL 61801

**Payment Details**

	DATE	AMOUNT
Payment Received	June 24, 2016	\$261.36

**Gas Service Non Residential Billing Detail - Rate Zone III 06/01/2016 - 07/01/2016 (30 days)**

Gas Meter Read for 06/01/2016 - 07/01/2016 (30 days)

READ TYPE	METER NUMBER	CURRENT METER READ	PREVIOUS METER READ	READ DIFFERENCE	MULTIPLIER	USAGE
Total Therm	2TC24518	62362.0000 Actual	62304.0000 Actual	58.0000	10.0000	580.0000

**Usage Summary**

Total Meter Therms	580.0000	Transport Gas	580.0000
--------------------	----------	---------------	----------

**Maximum Daily Contract Quantity**

	CHARGE DESCRIPTION	USAGE	UNIT	RATE	CHARGE
Gas Delivery	Customer Charge				\$76.63
Ameren Illinois	Gas Environmental Adjustment	580.00	Therms	@ \$ 0.00847620	\$4.92
GDS-2 Small Gas Delivery	Distribution Delivery Charge	580.00	Therms	@ \$ 0.06129000	\$35.55
Service Space Heat	Gas Energy Efficiency Cost Recovery	580.00	Therms	@ \$ 0.01259000	\$7.30
	Qualifying Infrastructure Plant Surchg	\$156.41		@ 0.920000%	\$1.44
				<b>Gas Delivery</b>	<b>\$125.84</b>

Gas Supply	Rider TBS Capacity Charge	2,670.00	Therms	@ \$ 0.01855000	\$49.53
Rider T				<b>Gas Supply</b>	<b>\$49.53</b>

Taxes and Other Fees	Illinois State Gas Use Tax	\$13.92
	Illinois State Commerce Commission Tax	\$0.18
	Urbana Municipal Gross Revenue	\$9.03
	Urbana Municipal Use Charge	\$29.87
	<b>Total Tax Related Fees</b>	<b>\$53.00</b>

**Total Gas Charges \$228.37**

**Bank Status**

Bank Election Factor for Service Point 46651833 10  
MCCQ 267

03261 2211029 006579 013157 00020002





f Amereallinois.com  
Customer Service 1.800.232.2477

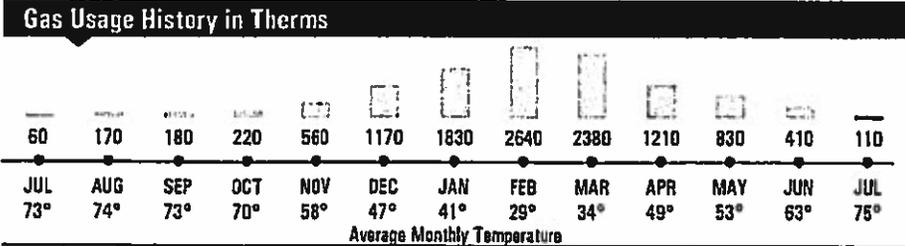
Statement Issued 07/06/2016  
Amount Due \$137.47  
Due Date Sep 6, 2016

Account Number 2435153056  
Customer Name CHAMPAIGN CO PHYSICAL PLANT  
Service Address 400 S ART BARTELL RD, USMS  
URBANA, IL 61802

Last Payment \$192.07  
Payment received. Thank you.

Current Charge Summary for Statement 07/06/2016	
Total Gas Charge	\$137.47
<b>Total Amount Due</b>	<b>\$137.47</b>

**Important Account Messages**  
The current billed amount of \$137.47 is due on Sep 06, 2016.



**Average Daily Gas Use (Therms)**

TIME PERIOD	AVG. DAILY USE
CURRENT MONTH	3.67 Therms
LAST MONTH	13.23 Therms
LAST YEAR	2.00 Therms

39059 13073  
03262 2211029 000590 013159 0001A0002  
INTERNAL USE ONLY

YA  
533-30



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Account Number 2435153056  
Amount Due \$137.47  
Due Date 09/06/2016  
Amount Enclosed \_\_\_\_\_

>003262 2211029 0001 092139 10Z
   
 \*\*\*\*\*AUTO\*\*SCH 3-DIGIT 618
   
 CHAMPAIGN CO PHYSICAL PLANT
   
 1776 E WASHINGTON ST
   
 URBANA, IL 61802-4578

AMEREN ILLINOIS
   
 PO BOX 88034
   
 CHICAGO IL 60680-1034



f AmerenIllinois.com  
Customer Service 1.800.232.2477

**Statement Issued** 07/06/2016  
**Amount Due** \$137.47  
**Due Date** Sep 6, 2016

**Account Number** 2435153056  
**Customer Name** CHAMPAIGN CO PHYSICAL PLANT  
**Service Address** 400 S ART BARTELL RD, USMS  
URBANA, IL 61802

**Payment Details**

<b>Payment Received</b>	<b>DATE</b> June 24, 2016	<b>AMOUNT</b> \$192.07
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**Gas Service Non Residential Billing Detail - Rate Zone III** 06/01/2016 - 07/01/2016 (30 days)

**Gas Meter Read for 06/01/2016 - 07/01/2016 (30 days)**

READ TYPE	METER NUMBER	CURRENT METER READ	PREVIOUS METER READ	READ DIFFERENCE	MULTIPLIER	USAGE
Total Therm	7TC04830	22750.0000 Actual	22739.0000 Actual	11.0000	10.0000	110.0000

**Usage Summary**

Total Meter Therms	110.0000	Transport Gas	110.0000
--------------------	----------	---------------	----------

**Maximum Daily Contract Quantity**

	CHARGE DESCRIPTION	USAGE UNIT	RATE	CHARGE
<b>Gas Delivery</b>	Customer Charge			\$76.63
Ameren Illinois	Gas Environmental Adjustment	110.00 Therms	@ \$ 0.00847620	\$0.93
GDS-2 Small Gas Delivery	Distribution Delivery Charge	110.00 Therms	@ \$ 0.06129000	\$6.74
Service Space Heat	Gas Energy Efficiency Cost Recovery	110.00 Therms	@ \$ 0.01259000	\$1.38
	Qualifying Infrastructure Plant Surchg	\$114.06	@ 0.920000%	\$1.05
			<b>Gas Delivery</b>	<b>\$86.73</b>

<b>Gas Supply</b>	Rider TBS Capacity Charge	1,940.00 Therms	@ \$ 0.01855000	\$35.99
Rider T			<b>Gas Supply</b>	<b>\$35.99</b>

<b>Taxes and Other Fees</b>	Illinois State Gas Use Tax	\$2.64
	Illinois State Commerce Commission Tax	\$0.12
	Urbana Municipal Gross Revenue	\$6.32
	Urbana Municipal Use Charge	\$5.67
	<b>Total Tax Related Fees</b>	<b>\$14.75</b>

**Total Gas Charges** \$137.47

**Bank Status**

Bank Election Factor for Service Point 75918856 10  
MDCQ 194

03262 2211029 006981 013161 00020002





AmerenIllinois.com  
Customer Service 1.800.232.2477

Statement Issued 07/06/2016  
Amount Due \$542.25  
Due Date Sep 6, 2016

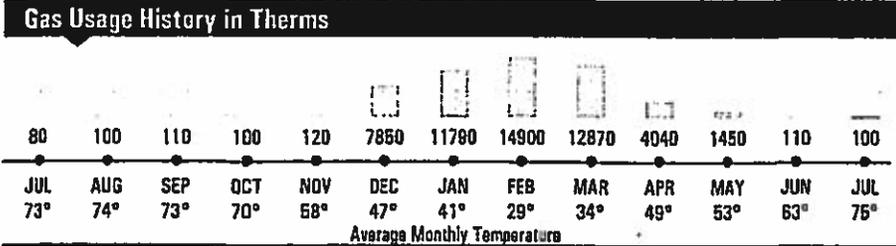
Account Number 4507886250  
Customer Name CHAMPAIGN COUNTY PHYSICAL  
Service Address 1701 E MAIN ST, GAS  
URBANA, IL 61802

Last Payment \$545.38  
Payment received. Thank you.

Current Charge Summary for Statement 07/06/2016	
Total Gas Charge	\$542.25
Total Amount Due	\$542.25

**i** Important Account Messages

The current billed amount of \$542.25 is due on Sep 06, 2016.



**Average Daily Gas Use (Therms)**

TIME PERIOD	AVG. DAILY USE
CURRENT MONTH	3.33 Therms
LAST MONTH	3.55 Therms
LAST YEAR	2.67 Therms

533.30

39059 13073  
00106 221119 000217 060433 00010002  
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Account Number 4507886250  
Amount Due \$542.25  
Due Date 09/06/2016  
Amount Enclosed \_\_\_\_\_

>000106 221119 0001 092139 102

CHAMPAIGN COUNTY PHYSICAL  
PHYSICAL PLANT  
1776 E WASHINGTON ST  
URBANA, IL 61802-4578

AMEREN ILLINOIS  
PO BOX 88034  
CHICAGO IL 60680-1034

6040000 0045078862500 00542250 00542250 00542250  
210



f AmerenIllinois.com  
Customer Service 1.800.232.2477

Statement Issued 07/06/2016  
Amount Due \$542.25  
Due Date Sep 6, 2016

Account Number 4507886250  
Customer Name CHAMPAIGN COUNTY PHYSICAL  
Service Address 1701 E MAIN ST, GAS  
URBANA, IL 61802

**Payment Details**

	DATE	AMOUNT
Payment Received	June 24, 2016	\$545.38

**Gas Service Non Residential Billing Detail - Rate Zone III 06/01/2016 - 07/01/2016 (30 days)**

Gas Meter Read for 06/01/2016 - 07/01/2016 (30 days)

READ TYPE	METER NUMBER	CURRENT METER READ	PREVIOUS METER READ	READ DIFFERENCE	MULTIPLIER	USAGE
Total Therm	00848946	65178.0000 Actual	65168.0000 Actual	10.0000	10.0000	100.0000

**Usage Summary**

Total Meter Therms	100.0000	Transport Gas	100.0000
--------------------	----------	---------------	----------

**Maximum Daily Contract Quantity**

	CHARGE DESCRIPTION	USAGE UNIT	RATE	CHARGE
Gas Delivery	Customer Charge			\$278.84
Ameren Illinois	Gas Environmental Adjustment	100.00 Therms	@ \$ 0.00847620	\$0.85
GDS-3 Intermediate Gas	Distribution Delivery Charge	100.00 Therms	@ \$ 0.10909000	\$10.91
Delivery Space Heat	Gas Energy Efficiency Cost Recovery	100.00 Therms	@ \$ 0.01510000	\$1.51
	Qualifying Infrastructure Plant Surchg	\$495.81	@ 0.920000%	\$4.66
			<b>Gas Delivery</b>	<b>\$297.67</b>

Gas Supply	Rider TBS Capacity Charge	11,340.00 Therms	@ \$ 0.01855000	\$210.36
Rider T			<b>Gas Supply</b>	<b>\$210.36</b>

<b>Taxes and Other Fees</b>	Illinois State Gas Use Tax	\$2.40
	Illinois State Commerce Commission Tax	\$0.51
	Urbana Municipal Gross Revenue	\$26.16
	Urbana Municipal Use Charge	\$5.15
	<b>Total Tax Related Fees</b>	<b>\$34.22</b>

**Total Gas Charges \$542.25**

**Bank Status**

Bank Election Factor for Service Point 42698980	10
MDCQ	1134

00106 2211119 000216 000435 00020002





f t AmerenIllinois.com  
Customer Service 1.800.232.2477

Statement Issued 07/06/2016  
Amount Due \$86.66  
Due Date Sep 6, 2016  
Last Payment \$90.47  
Payment received. Thank you.

Account Number 5182430895  
Customer Name CHAMPAIGN CO PHYSICAL PLANT  
Service Address 1705 E MAIN ST, USMS  
URBANA, IL 61801

**Current Charge Summary for Statement 07/06/2016**

Total Gas Charge \$86.66  
Total Amount Due \$86.66

**Important Account Messages**

The current billed amount of \$86.66 is due on Sep 06, 2016.

**Gas Usage History in Therms**

0	0	0	0	0	18	236	496	405	177	104	22	0
JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
73°	74°	73°	70°	58°	47°	41°	29°	34°	49°	53°	63°	75°

Average Monthly Temperature

**Average Daily Gas Use (Therms)**

TIME PERIOD	AVG. DAILY USE
CURRENT MONTH	0.00 Therms
LAST MONTH	0.71 Therms
LAST YEAR	0.00 Therms

00039 2211047 000286 000571 00050006  
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533-30



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Account Number 5182430895  
Amount Due \$86.66  
Due Date 09/06/2016  
Amount Enclosed \_\_\_\_\_

CHAMPAIGN CO PHYSICAL PLANT  
1776 E WASHINGTON ST  
URBANA, IL 61802-4578

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CHICAGO IL 60680-1034

2040000 0051824308905 00086660 00086660 00086660  
212



f t AmerenIllinois.com  
Customer Service 1.800.232.2477

Statement Issued 07/06/2016  
Amount Due \$86.66  
Due Date Sep 6, 2016

Account Number 5182430895  
Customer Name CHAMPAIGN CO PHYSICAL PLANT  
Service Address 1705 E MAIN ST, USMS  
URBANA, IL 61801

**Payment Details**

	DATE	AMOUNT
Payment Received	June 24, 2016	\$90.47

**Gas Service Non Residential Billing Detail - Rate Zone III 06/01/2016 - 07/01/2016 (30 days)**

Gas Meter Read for 06/01/2016 - 07/01/2016 (30 days)

READ TYPE	METER NUMBER	CURRENT METER READ	PREVIOUS METER READ	READ DIFFERENCE	MULTIPLIER	USAGE
Total Therm	3TC81629	6951.0000 Actual	6951.0000 Actual	0.0000	1.0000	0.0000

**Usage Summary**

Total Meter Therms	0.0000
--------------------	--------

**Maximum Daily Contract Quantity**

	CHARGE DESCRIPTION	USAGE	UNIT	RATE	CHARGE
Gas Delivery Ameren Illinois GDS-2 Small Gas Delivery Service Space Heat	Customer Charge				\$76.63
	Qualifying Infrastructure Plant Surchg	\$76.34	@	0.920000%	\$0.70
				Gas Delivery	\$77.33

Gas Supply Rider T	Rider TBS Capacity Charge	270.00	Therms	@ \$ 0.01855000	\$5.01
				Gas Supply	\$5.01

Taxes and Other Fees	Illinois State Commerce Commission Tax				\$0.08
	Urbana Municipal Gross Revenue				\$4.24
				Total Tax Related Fees	\$4.32

**Total Gas Charges \$86.66**

**Bank Status**

Bank Election Factor for Service Point 43069723	10
MDCQ	27

00039 2211047 000287 000573 0006/0006





f AmerenIllinois.com  
Customer Service 1.800.232.2477

Statement Issued 07/06/2016  
Amount Due \$101.05  
Due Date Sep 6, 2016  
Last Payment \$105.64  
Payment received. Thank you.

Account Number 9141297005  
Customer Name CHAMPAIGN CO PHYSICAL PLANT  
Service Address 1707 E MAIN ST, USMS  
URBANA, IL 61801

**Current Charge Summary for Statement 07/06/2016**

Total Gas Charge \$101.05  
Total Amount Due \$101.05

**Important Account Messages**

The current billed amount of \$101.05 is due on Sep 06, 2016.

**Gas Usage History in Therms**

24	24	25	23	162	512	967	1812	1183	237	146	37	12
JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
73°	74°	73°	70°	58°	47°	41°	29°	34°	49°	53°	63°	75°

Average Monthly Temperature

**Average Daily Gas Use (Therms)**

TIME PERIOD	AVG. DAILY USE
CURRENT MONTH	0.40 Therms
LAST MONTH	1.19 Therms
LAST YEAR	0.80 Therms

39056 13073  
00039 2211047 000262 000563 0001A006  
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533.30



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Account Number 9141297005  
Amount Due \$101.05  
Due Date 09/06/2016  
Amount Enclosed \_\_\_\_\_

0000039 2211047 0001 092139 202  
\*\*\*\*\*AUTO\*\*ALL FOR AADC 618  
CHAMPAIGN CO PHYSICAL PLANT  
1776 E WASHINGTON ST  
URBANA, IL 61802-4578

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PO BOX 88034  
CHICAGO IL 60680-1034

7040000 0091412970005 00101050 00101050 00101050  
214



f AmerenIllinois.com  
Customer Service 1.800.232.2477

Statement Issued 07/06/2016  
Amount Due \$101.05  
Due Date Sep 6, 2016

Account Number 9141297005  
Customer Name CHAMPAIGN CO PHYSICAL PLANT  
Service Address 1707 E MAIN ST, USMS  
URBANA, IL 61801

**Payment Details**

Payment Received DATE AMOUNT  
June 24, 2016 \$105.54

**Gas Service Non Residential Billing Detail - Rate Zone III 06/01/2016 - 07/01/2016 (30 days)**

Gas Meter Read for 06/01/2016 - 07/01/2016 (30 days)

READ TYPE	METER NUMBER	CURRENT METER READ	PREVIOUS METER READ	READ DIFFERENCE	MULTIPLIER	USAGE
Total Therm	2TC24016	8666.0000 Actual	8654.0000 Actual	12.0000	1.0000	12.0000

**Usage Summary**

Total Meter Therms 12.0000 Transport Gas 12.0000

**Maximum Daily Contract Quantity**

	CHARGE DESCRIPTION	USAGE UNIT	RATE	CHARGE
Gas Delivery	Customer Charge			\$76.63
Ameren Illinois	Gas Environmental Adjustment	12.00 Therms	@ \$ 0.00847620	\$0.10
GDS-2 Small Gas Delivery	Distribution Delivery Charge	12.00 Therms	@ \$ 0.06129000	\$0.74
Service Space Heat	Gas Energy Efficiency Cost Recovery	12.00 Therms	@ \$ 0.01259000	\$0.15
	Qualifying Infrastructure Plant Surchg	\$88.77	@ 0.920000%	\$0.82
	<b>Gas Delivery</b>			<b>\$78.44</b>

Gas Supply	Rider TBS Capacity Charge	900.00 Therms	@ \$ 0.01855000	\$16.70
Rider T				
	<b>Gas Supply</b>			<b>\$16.70</b>

Taxes and Other Fees	Illinois State Gas Use Tax			\$0.29
	Illinois State Commerce Commission Tax			\$0.10
	Urbana Municipal Gross Revenue			\$4.90
	Urbana Municipal Use Charge			\$0.62
	<b>Total Tax Related Fees</b>			<b>\$5.91</b>

**Total Gas Charges \$101.05**

**Bank Status**

Bank Election Factor for Service Point 45352429 10  
MDCQ 90

00039 2211047 000283 000565 0002/0006





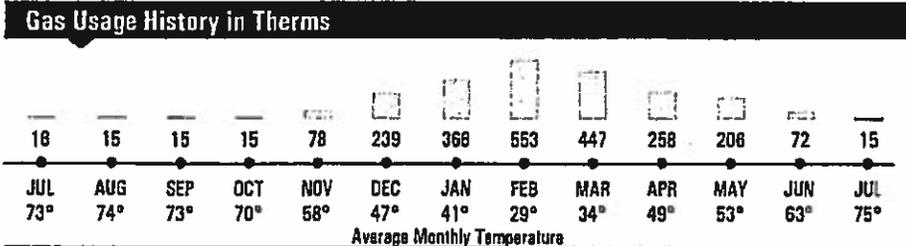
AmerenIllinois.com  
Customer Service 1.800.232.2477

Statement Issued 07/06/2016  
Amount Due \$89.89  
Due Date Sep 6, 2016  
Last Payment \$100.11  
Payment received. Thank you.

Account Number 4430028003  
Customer Name CHAMPAIGN CO PHYSICAL PLANT  
Service Address 1709 E MAIN ST, USMS  
URBANA, IL 61801

Current Charge Summary for Statement 07/06/2016	
Total Gas Charge	\$89.89
Total Amount Due	\$89.89

**Important Account Messages**  
The current billed amount of \$89.89 is due on Sep 06, 2016.



**Average Daily Gas Use (Therms)**

TIME PERIOD	AVG. DAILY USE
CURRENT MONTH	0.50 Therms
LAST MONTH	2.32 Therms
LAST YEAR	0.53 Therms

00039 2211047 000284 000567 00030006  
INTERNAL USE ONLY

533.30



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Account Number 4430028003  
Amount Due \$89.89  
Due Date 09/06/2016  
Amount Enclosed \_\_\_\_\_

CHAMPAIGN CO PHYSICAL PLANT  
1776 E WASHINGTON ST  
URBANA, IL 61802-4578

AMEREN ILLINOIS  
PO BOX 88034  
CHICAGO IL 60680-1034



f t AmerenIllinois.com  
Customer Service 1.800.232.2477

Statement Issued 07/06/2016  
Amount Due \$89.89  
Due Date Sep 6, 2016

Account Number 4430028003  
Customer Name CHAMPAIGN CO PHYSICAL PLANT  
Service Address 1709 E MAIN ST, USMS  
URBANA, IL 61801

**Payment Details**

Payment Received DATE AMOUNT  
June 24, 2016 \$100.11

**Gas Service Non Residential Billing Detail - Rate Zone III 06/01/2016 - 07/01/2016 (30 days)**

Gas Meter Read for 06/01/2016 - 07/01/2016 (30 days)

READ TYPE	METER NUMBER	CURRENT METER READ	PREVIOUS METER READ	READ DIFFERENCE	MULTIPLIER	USAGE
Total Therms	2TC93572	7436.0000 Actual	7421.0000 Actual	15.0000	1.0000	15.0000

**Usage Summary**

Total Meter Therms 15.0000 Transport Gas 15.0000

**Maximum Daily Contract Quantity**

Gas Delivery	CHARGE DESCRIPTION	USAGE UNIT	RATE	CHARGE
Ameren Illinois	Customer Charge			\$76.63
GDS-2 Small Gas Delivery	Gas Environmental Adjustment	15.00 Therms	@ \$ 0.00847620	\$0.13
Service Space Heat	Distribution Delivery Charge	15.00 Therms	@ \$ 0.06129000	\$0.92
	Gas Energy Efficiency Cost Recovery	15.00 Therms	@ \$ 0.01259000	\$0.19
	Qualifying Infrastructure Plant Surchg	\$78.00	@ 0.920000%	\$0.72
			<b>Gas Delivery</b>	<b>\$78.59</b>

Gas Supply	Rider TBS Capacity Charge	310.00 Therms	@ \$ 0.01855000	\$5.75
Rider T			<b>Gas Supply</b>	<b>\$5.75</b>

Taxes and Other Fees	Illinois State Gas Use Tax			\$0.36
	Illinois State Commerce Commission Tax			\$0.08
	Urbana Municipal Gross Revenue			\$4.34
	Urbana Municipal Use Charge			\$0.77
			<b>Total Tax Related Fees</b>	<b>\$5.55</b>

**Total Gas Charges \$89.89**

**Bank Status**

Bank Election Factor for Service Point 80497826 10  
MDCQ 31

00039 2211047 000285 000569 0004/0008





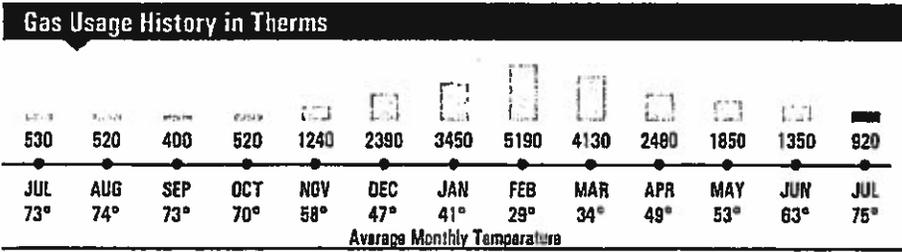
f AmerenIllinois.com  
Customer Service 1.800.232.2477

Statement Issued 07/06/2016  
Amount Due \$296.71  
Due Date Sep 6, 2016  
Last Payment \$385.97  
Payment received. Thank you.

Account Number 3583105015  
Customer Name CHAMPAIGN CO PHYSICAL PLANT  
Service Address 1776 E WASHINGTON ST, USMS  
URBANA, IL 61802

Current Charge Summary for Statement 07/06/2016	
Total Gas Charge	\$296.71
<b>Total Amount Due</b>	<b>\$296.71</b>

**Important Account Messages**  
The current billed amount of \$296.71 is due on Sep 06, 2016.



**Average Daily Gas Use (Therms)**

TIME PERIOD	AVG. DAILY USE
CURRENT MONTH	30.67 Therms
LAST MONTH	43.55 Therms
LAST YEAR	17.67 Therms

Rpc/GWS  
539.30

39059 13073  
03193 2211039 066436 012871 0001/0002  
INTERNAL USE ONLY



See page 2 for account messages and tips from Ameren Illinois. *Keep this portion for your records.* Page 1 of 4

Please detach stub and return this portion with your payment.



See reverse side if your address has changed and for details on other ways to pay your bill.

Account Number 3583105015  
Amount Due \$296.71  
Due Date 09/06/2016  
Amount Enclosed \_\_\_\_\_

CHAMPAIGN CO PHYSICAL PLANT  
BROOKENS ADMIN CENTER  
1776 E WASHINGTON ST  
URBANA, IL 61802-4578

AMEREN ILLINOIS  
PO BOX 88034  
CHICAGO IL 60680-1034

7040000 0035831050105 00296710 00296710 00296710  
218



f AmerenIllinois.com  
Customer Service 1.800.232.2477

Statement Issued 07/06/2016  
Amount Due \$296.71  
Due Date Sep 6, 2016

Account Number 3583105015  
Customer Name CHAMPAIGN CO PHYSICAL PLANT  
Service Address 1776 E WASHINGTON ST, USMS  
URBANA, IL 61802

**Payment Details**

Payment Received DATE June 24, 2016 AMOUNT \$385.97

**Gas Service Non Residential Billing Detail - Rate Zone III 06/01/2016 - 07/01/2016 (30 days)**

Gas Meter Read for 06/01/2016 - 07/01/2016 (30 days)

READ TYPE	METER NUMBER	CURRENT METER READ	PREVIOUS METER READ	READ DIFFERENCE	MULTIPLIER	USAGE
Total Therm	5TC54323	14459.0000 Actual	14367.0000 Actual	92.0000	10.0000	920.0000

**Usage Summary**

Total Meter Therms	920.0000	Transport Gas	920.0000
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**Maximum Daily Contract Quantity**

CHARGE DESCRIPTION	USAGE	UNIT	RATE	CHARGE
Gas Delivery				
Ameren Illinois				
GDS-2 Small Gas Delivery				
Service Space Heat				
Customer Charge				\$76.63
Gas Environmental Adjustment	920.00	Therms	@ \$ 0.00847620	\$7.80
Distribution Delivery Charge	920.00	Therms	@ \$ 0.06129000	\$56.39
Gas Energy Efficiency Cost Recovery	920.00	Therms	@ \$ 0.01259000	\$11.58
Qualifying Infrastructure Plant Surchg	\$189.49		@ 0.920000%	\$1.74
			Gas Delivery	\$154.14

Gas Supply				
Rider T				
Rider TBS Capacity Charge	3,330.00	Therms	@ \$ 0.01855000	\$61.77
			Gas Supply	\$61.77

Taxes and Other Fees				
Illinois State Gas Use Tax				\$22.08
Illinois State Commerce Commission Tax				\$0.22
Urbana Municipal Gross Revenue				\$11.12
Urbana Municipal Use Charge				\$47.38
			Total Tax Related Fees	\$80.80

**Total Gas Charges \$296.71**

**Bank Status**

Bank Election Factor for Service Point 14267554 10  
MDCQ 333

03193 2211039 008437 012873 00026002





f AmerenIllinois.com  
Customer Service 1.800.232.2477

Statement Issued 07/06/2016  
Amount Due \$286.93  
Due Date Sep 6, 2016

Account Number 8496018011  
Customer Name CHAMPAIGN CO PHYSICAL PLANT  
Service Address 1905 E MAIN ST, USMS  
URBANA, IL 61801

Last Payment \$344.70  
Payment received. Thank you.

**Current Charge Summary for Statement 07/06/2016**

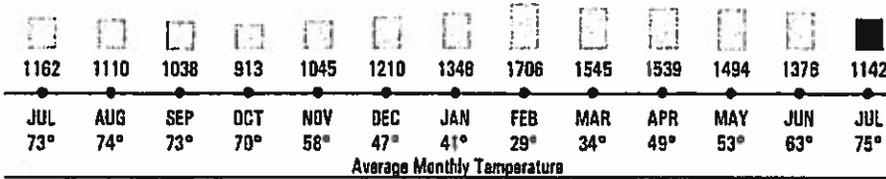
Total Gas Charge \$286.93  
Total Amount Due \$286.93



**Important Account Messages**

The current billed amount of \$286.93 is due on Sep 06, 2016.

**Gas Usage History in Therms**



**Average Daily Gas Use (Therms)**

TIME PERIOD	AVG. DAILY USE
CURRENT MONTH	38.07 Therms
LAST MONTH	44.39 Therms
LAST YEAR	38.73 Therms

39059 13073  
03190 2211017 006450 012899 0001/0002  
INTERNAL USE ONLY

9/1  
533.20



See page 2 for account messages and tips from Ameren Illinois.

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Page 1 of 4

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See reverse side if your address has changed and for details on other ways to pay your bill.

Account Number 8496018011  
Amount Due \$286.93  
Due Date 09/06/2016

Amount Enclosed \_\_\_\_\_



>003190 2211017 0001 092139 102

\*\*\*\*\*AUTO\*\*SCH 3-DIGIT 618  
CHAMPAIGN CO PHYSICAL PLANT  
BROOKEN ADMINISTRATIVE CTR  
1776 E WASHINGTON ST  
URBANA, IL 61802-4578

AMEREN ILLINOIS  
PO BOX 88034  
CHICAGO IL 60680-1034

2040000 220 0084960180101 00286930 00286930 00286930



f AmerenIllinois.com  
Customer Service 1.800.232.2477

**Statement Issued** 07/06/2016  
**Amount Due** \$286.93  
**Due Date** Sep 6, 2016

**Account Number** 8496018011  
**Customer Name** CHAMPAIGN CO PHYSICAL PLANT  
**Service Address** 1905 E MAIN ST, USMS  
URBANA, IL 61801

**Payment Details**

	DATE	AMOUNT
Payment Received	June 24, 2016	\$344.70

**Gas Service Non Residential Billing Detail - Rate Zone III** 06/01/2016 - 07/01/2016 (30 days)

Gas Meter Read for 06/01/2016 - 07/01/2016 (30 days)

READ TYPE	METER NUMBER	CURRENT METER READ	PREVIOUS METER READ	READ DIFFERENCE	MULTIPLIER	USAGE
Total Therms	4TC21044	47458.0000 Estimate	46316.0000 Actual	1142.0000	1.0000	1142.0000

**Usage Summary**

Total Meter Therms	1142.0000	Transport Gas	1142.0000
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**Maximum Daily Contract Quantity**

	CHARGE DESCRIPTION	USAGE UNIT	RATE	CHARGE
<b>Gas Delivery</b>	Customer Charge			\$76.63
Ameren Illinois	Gas Environmental Adjustment	1,142.00 Therms	@ \$ 0.00847620	\$9.68
GDS-2 Small Gas Delivery	Distribution Delivery Charge	1,142.00 Therms	@ \$ 0.06129000	\$69.99
Service Space Heat	Gas Energy Efficiency Cost Recovery	1,142.00 Therms	@ \$ 0.01259000	\$14.38
	Qualifying Infrastructure Plant Surchg	\$159.87	@ 0.920000%	\$1.47
	<b>Gas Delivery</b>			<b>\$172.15</b>

<b>Gas Supply</b>	Rider TBS Capacity Charge	1,000.00 Therms	@ \$ 0.01855000	\$18.55
Rider T				
	<b>Gas Supply</b>			<b>\$18.55</b>

<b>Taxes and Other Fees</b>	Illinois State Gas Use Tax	\$27.41
	Illinois State Commerce Commission Tax	\$0.19
	Urbana Municipal Gross Revenue	\$9.82
	Urbana Municipal Use Charge	\$58.81
	<b>Total Tax Related Fees</b>	<b>\$96.23</b>

**Total Gas Charges** \$286.93

**Bank Status**

Bank Election Factor for Service Point 76274536 10  
MDCQ 100

03190 2211017 006451 012901 00020002



CUSTOMER NUMBER: 50725-11541

COUNTY OF CHAMPAIGN  
1776 E WASHINGTON ST  
URBANA IL 61802

Invoice Date	Invoice Number	Payment Due Date
Jul 12, 2016	1672023-01	Sep 10, 2016
Billing Period	Invoice Total	Total Due
Jun 2016	\$7,868.68	\$14,298.51

HAS YOUR ADDRESS CHANGED? If so, please contact customer service at the number below.

**Summary Invoice**

FACILITY/TRANSACTION	VOLUMES THM	TOTAL
101 E MAIN ST - 2245102015	9,520.00	\$3,163.68
1605 E MAIN ST - 0041056007 <i>Hwy</i>	130.00	\$43.21
1701 E MAIN ST - 4507886250	100.00	\$33.23
1705 E MAIN STREET - 5182430895	0.00	\$0.00
1707 E MAIN ST - 9141297005	12.00	\$3.99
1709 E MAIN ST - 4430028003	15.00	\$4.99
1776 E WASHINGTON ST - 3583105015	920.00	\$305.74
1805 E MAIN ST - 8496018011	1,142.00	\$379.51
204 E MAIN ST - 0167100015	580.00	\$192.75
210 S ART BARTELL RD - 5342068000 <i>Ac.</i>	39.00	\$12.98
301 S ART BARTELL RD - 3480155004 <i>Hwy</i>	0.00	\$0.00
400 ART BARTELL RD - 2435153056	110.00	\$36.55
500 S ART BARTELL RD - 3347152017 <i>CCNH</i>	11,110.00	\$3,692.05
502 S LIERMAN AVE - 2017069000	0.00	\$0.00

Total Due - Jun 2016: \$7,868.68  
 Previous Balance as of Invoice Date: may CCNH ← \$6,429.83  
 Adjustment to Previous Billing: \$0.00  
 Total Amount Due Sep 10, 2016: \$14,298.51  
 Please ACH/Wire payments over \$50,000 to:  
 US Bank  
 ABA No: 075000022 Acct No: 182380410411  
 Please make check payable to:  
 Constellation Energy Services - Natural Gas, LLC

If payment does not equal total amount due, please provide explanation and/or documentation.  
 BILL INFO - Call 877-409-9836 8:00 AM - 5:00 PM M-F  
 Constellation Energy Services - Natural Gas, LLC

*\$7,868.68*  
*- 3,748.24*  
*\$4,120.44*

PLEASE DETACH AND RETURN THIS PORTION WITH YOUR PAYMENT



We appreciate your prompt payment.  
 A finance charge may be assessed  
 on past due invoices.

Customer Number: 50725-11541

Invoice Date	Invoice Number	Payment Due Date
Jul 12, 2016	1672023-01	Sep 10, 2016
Invoice Total	Total Due	Amount Enclosed
\$7,868.68	\$14,298.51	<i>\$4,120.44</i>

COUNTY OF CHAMPAIGN  
1776 E WASHINGTON ST  
URBANA IL 61802

CONSTELLATION ENERGY SERVICES - NATURAL GAS LLC  
PO BOX 3145  
MILWAUKEE WI 53201-3145



1010000001672023013 7001429851

<b>FACILITY/TRANSACTION</b>	<b>VOLUMES THM</b>	<b>TOTAL</b>
<b>Total Amount:</b>	<b>23,678.00</b>	<b>\$7,868.68</b>

Customer Number: 50725-11541  
 Invoice Number: 1672023-01

 Delivery Month: Jun 2016  
 Invoice Date: Jul 12, 2016

FACILITY/TRANSACTION	MONTHLY VOLUMES THM	UNIT PRICE	TOTAL
<b>101 E MAIN ST - 2245102015</b>			
IL Co-Op 12 Balanced Procurement	9,520.00	\$0.32200	\$3,065.44
LDC Distribution Fuel	305.10	\$0.32200	\$98.24
<b>Facility Sub-Total:</b>	<b>9,520.00</b>		<b>\$3,163.68</b>
<b>Facility Total:</b>	<b>9,520.00</b>		<b>\$3,163.68</b>
<b>1605 E MAIN ST - 0041056007</b>			
IL Co-Op 12 Balanced Procurement	130.00	\$0.32200	\$41.86
LDC Distribution Fuel	4.20	\$0.32200	\$1.35
<b>Facility Sub-Total:</b>	<b>130.00</b>		<b>\$43.21</b>
<b>Facility Total:</b>	<b>130.00</b>		<b>\$43.21</b>
<b>1701 E MAIN ST - 4507886250</b>			
IL Co-Op 12 Balanced Procurement	100.00	\$0.32200	\$32.20
LDC Distribution Fuel	3.20	\$0.32200	\$1.03
<b>Facility Sub-Total:</b>	<b>100.00</b>		<b>\$33.23</b>
<b>Facility Total:</b>	<b>100.00</b>		<b>\$33.23</b>
<b>1705 E MAIN STREET - 5182430895</b>			
IL Co-Op 12 Balanced Procurement		\$0.32	\$0.00
<b>Facility Sub-Total:</b>	<b>0.00</b>		<b>\$0.00</b>
<b>Facility Total:</b>	<b>0.00</b>		<b>\$0.00</b>
<b>1707 E MAIN ST - 9141297005</b>			
IL Co-Op 12 Balanced Procurement	12.00	\$0.32200	\$3.86
LDC Distribution Fuel	0.40	\$0.32200	\$0.13
<b>Facility Sub-Total:</b>	<b>12.00</b>		<b>\$3.99</b>
<b>Facility Total:</b>	<b>12.00</b>		<b>\$3.99</b>
<b>1709 E MAIN ST - 4430028003</b>			
IL Co-Op 12 Balanced Procurement	15.00	\$0.32200	\$4.83
LDC Distribution Fuel	0.50	\$0.32200	\$0.16
<b>Facility Sub-Total:</b>	<b>15.00</b>		<b>\$4.99</b>
<b>Facility Total:</b>	<b>15.00</b>		<b>\$4.99</b>
<b>1776 E WASHINGTON ST - 3583105015</b>			
IL Co-Op 12 Balanced Procurement	920.00	\$0.32200	\$296.24
LDC Distribution Fuel	29.50	\$0.32200	\$9.50
<b>Facility Sub-Total:</b>	<b>920.00</b>		<b>\$305.74</b>
<b>Facility Total:</b>	<b>920.00</b>		<b>\$305.74</b>
<b>1905 E MAIN ST - 8496018011</b>			
IL Co-Op 12 Balanced Procurement	1,142.00	\$0.32200	\$367.72
LDC Distribution Fuel	36.60	\$0.32200	\$11.79
<b>Facility Sub-Total:</b>	<b>1,142.00</b>		<b>\$379.51</b>



Customer Number: 50725-11541  
 Invoice Number: 1672023-01

Delivery Month: Jun 2016  
 Invoice Date: Jul 12, 2016

FACILITY/TRANSACTION	MONTHLY VOLUMES THM	UNIT PRICE	TOTAL
<b>Facility Total:</b>	<b>1,142.00</b>		<b>\$379.51</b>
<b>204 E MAIN ST - 0167100015</b>			
IL Co-Op 12 Balanced Procurement	580.00	\$0.32200	\$186.76
LDC Distribution Fuel	18.60	\$0.32200	\$5.99
<b>Facility Sub-Total:</b>	<b>580.00</b>		<b>\$192.75</b>
<b>Facility Total:</b>	<b>580.00</b>		<b>\$192.75</b>
<b>210 S ART BARTELL RD - 5342068000</b>			
IL Co-Op 12 Balanced Procurement	39.00	\$0.32200	\$12.56
LDC Distribution Fuel	1.30	\$0.32200	\$0.42
<b>Facility Sub-Total:</b>	<b>39.00</b>		<b>\$12.98</b>
<b>Facility Total:</b>	<b>39.00</b>		<b>\$12.98</b>
<b>301 S ART BARTELL RD - 3480155004</b>			
IL Co-Op 12 Balanced Procurement		\$0.32	\$0.00
<b>Facility Sub-Total:</b>	<b>0.00</b>		<b>\$0.00</b>
<b>Facility Total:</b>	<b>0.00</b>		<b>\$0.00</b>
<b>400 ART BARTELL RD - 2435153056</b>			
IL Co-Op 12 Balanced Procurement	110.00	\$0.32200	\$35.42
LDC Distribution Fuel	3.50	\$0.32200	\$1.13
<b>Facility Sub-Total:</b>	<b>110.00</b>		<b>\$36.55</b>
<b>Facility Total:</b>	<b>110.00</b>		<b>\$36.55</b>
<b>500 S ART BARTELL RD - 3347152017</b>			
IL Co-Op 12 Balanced Procurement	11,110.00	\$0.32200	\$3,577.42
LDC Distribution Fuel	356.00	\$0.32200	\$114.63
<b>Facility Sub-Total:</b>	<b>11,110.00</b>		<b>\$3,692.05</b>
<b>Facility Total:</b>	<b>11,110.00</b>		<b>\$3,692.05</b>
<b>502 S LIERMAN AVE - 2017069000</b>			
IL Co-Op 12 Balanced Procurement		\$0.32	\$0.00
<b>Facility Sub-Total:</b>	<b>0.00</b>		<b>\$0.00</b>
<b>Sales Tax:</b>			<b>\$0.00</b>
<b>Facility Total:</b>	<b>0.00</b>		<b>\$0.00</b>
<b>Total for Invoice:</b>	<b>23,678.00</b>		<b>\$7,868.68</b>

**Applicant Certifications**

- Applicant hereby certifies that:
- For electric energy projects, the project received electric delivery service from Ameren Illinois or ComEd. A copy of the electric utility bill or other documentation must be submitted with this Application.
- For natural gas energy projects, the project received natural gas delivery service from Ameren Illinois, Nicor, Peoples Gas or North Shore.
- A copy of the gas utility bill or other documentation must be submitted with this Application.
- All authorizations required to perform the project, described in its application, have either been obtained or will be obtained no later than 90 days following the grant beginning date set forth in the Notice of Grant Award issued by the Department of Commerce.
- The project complies with all applicable state, federal, and local environmental and zoning laws, ordinances, and regulations and that all required licenses, permits, etc., have either been obtained or will be obtained no later than 90 days following an award by the Department of Commerce.
- It is not in violation of the prohibitions against bribery of any officer or employee of the State of Illinois as set forth in 30 ILCS505/10.1.
- It has not been barred from contracting with a unit of state or local government as a result of a violation of Section 33E-3 or 33E-4 of the Criminal Code of 1961 (720 ILCS 5/33 E-4).
- It is not in violation of the Educational Loan Default Act (5 ILCS 385/3).
- I understand that the State Finance Act, 30 ILCS 105/30 may apply and that payments under this incentive program are contingent upon the existence of a valid appropriation, and that no officer, institution, department, board or commission shall contract any indebtedness on behalf of the State, or assume to bind the State in an amount in excess of the money appropriated, unless expressly authorized by law.
- I understand that the Illinois Prevailing Wage Act (820 ILCS 130/0.01) may apply and that grantees are responsible for determining if their projects will trigger compliance.
- As of the submittal date, the information provided in its application is accurate, and the individual signing below is authorized to submit this application.
- I agree and authorize the release of all electric and natural gas utility usage and billing information to the Illinois Department of Commerce & Economic Opportunity and its agents for purposes of performing an Evaluation, Measurement, and Verification (EM&V) of Department of Commerce's energy efficiency program.

Electronic signatures are not acceptable. Please supply Certifications (this page) with copy of the original signature via email, or electronically (scanned document).

*Diana M. Brenner*  
 Authorized Official (signature)

<b>Prefix</b>	<b>First Name</b>	<b>Last Name</b>	<b>Title</b>	<b>Date</b>
Mr.	Dana	Brenner	Facility Director	08/08/2016
<b>Telephone</b>	<b>Fax</b>		<b>Authorized Signature email address</b>	
2173843765 <small>numbers only, ie 8185551212</small>	2173843896		dbrenner@co.champaign.il.us	

**Payment Information Below**

<b>FEIN</b> <small>9 digit Federal Employment ID Number, does not start with 'E'</small>	<b>Name of Public Entity</b>	
37-6006910	Brookens Administration Center	
<b>Street Address</b> <small>Incentive Payment mailed to:</small>	<b>City</b>	<b>Zip</b> <small>5 digit required Plus 4 optional</small>
1776 E. Washington	Urbana	61802 - 4578

# HIGH EFFICIENCY BOILERS

## FTXL™

FIRE TUBE BOILER

**SMART SYSTEM™**

**CON-X-US™** REMOTE CONNECT CAPABLE

**CASCADING SEQUENCER**

**LOGH-N-LINK®** USB DRIVE SETUP

5 INPUTS FROM 399,999 TO 850,000 BTU/HR

10:1 TURNDOWN RANGE

COMMON VENT AND PVC DIRECT-VENTING

FLOW RATES FROM 10 TO 150 GPM

SMALL 6.2 SQ. FT. FOOTPRINT

4 PUMP CONTROL

WIRELESS OUTDOOR SENSOR CAPABLE



**98%** **AIRI CERTIFIED**  
**THERMAL EFFICIENCY\***

\*See back page for efficiency by model.

 **Lochinvar**  
HIGH EFFICIENCY BOILERS & WATER HEATERS



## THE NEW 98% STANDARD

With a new generation of variable flow technology, the 98% standard boiler is now available in a range of sizes from 100 to 1500 BHP. The new 98% standard boiler is designed to provide the same high efficiency and reliability as the 90% standard boiler, but with the added benefit of variable flow technology. This means the boiler can adjust its output to match the load, resulting in lower fuel consumption and lower operating costs.

### REDUCE INSTALLATION COST WITH VARIABLE FLOW TECHNOLOGY

Variable flow technology allows the boiler to operate at a lower firing rate, which means it can be installed in a smaller room. This is a significant cost saving for the installer, as well as for the building owner, as it allows for more flexible boiler placement.

### SMOOTH FLOWING, MODULATING COMBUSTION

The new 98% standard boiler features a modulating burner that provides a smooth, steady flow of gas to the burner. This results in a more stable flame and more efficient combustion, which means the boiler can operate at a lower firing rate for longer periods of time. This is a significant cost saving for the building owner, as it means the boiler can operate at a lower firing rate for longer periods of time.

### MINIMUM SUPPLY PRESSURE, INSTALLER-FRIENDLY

The new 98% standard boiler is designed to operate at a minimum supply pressure of 1.5 bar. This is a significant cost saving for the installer, as it means the boiler can be installed in a smaller room. This is a significant cost saving for the building owner, as it allows for more flexible boiler placement.

## CONX IUS INTRODUCING BOILER PLANT CONTROL, FROM ANYWHERE.

The Conx Ius boiler plant control system is a cloud-based solution that allows you to manage your boiler plant from anywhere, at any time. It provides a comprehensive set of tools for monitoring and controlling your boiler plant, including real-time data, alerts, and reports. The system is easy to install and use, and it integrates seamlessly with your existing boiler plant equipment.

### SMART SYSTEM

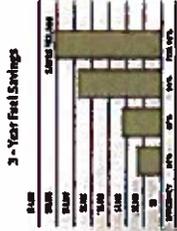
Conx Ius provides the ability to monitor and manage multiple boiler plants, without the need for complex hardware or software. The system is designed to be easy to use, with a simple interface that allows you to view real-time data and receive alerts. The system is also designed to be secure, with a robust security protocol that protects your data.



### HOW 98% TRANSLATES INTO FUEL SAVINGS

Based on a comparison of a 90% efficient boiler with a 98% efficient boiler, the 98% boiler can save up to 8% on fuel costs. This is a significant saving, especially for larger buildings with high boiler loads. The savings are based on a boiler load of approximately 10,000 BHP per year, at a cost of \$3.00 per therm of natural gas.

Conx Ius provides a comprehensive set of tools for monitoring and controlling your boiler plant, including real-time data, alerts, and reports. The system is easy to install and use, and it integrates seamlessly with your existing boiler plant equipment.



### ENHANCED MULTI-COLOR LED INTERFACE

The Conx Ius interface is a multi-color LED display that provides a clear and easy-to-read view of your boiler plant data. It features a large, high-resolution screen that can display multiple data points at once. The interface is also designed to be user-friendly, with a simple layout that allows you to find the information you need quickly and easily.

### LOCK-ING™ EASY USB FLASH PROGRAMMING

The Conx Ius system is easy to program and install. It features a unique Lock-Ing™ USB flash programming interface that allows you to load the system software onto a USB drive. This makes it easy to install the system on a new boiler plant, and it also allows you to update the system software easily.

### WIRELESS OUTDOOR SENSOR

The Conx Ius system includes a wireless outdoor sensor that provides real-time data on outdoor temperature and humidity. This data is used to optimize the boiler plant's performance, ensuring that it is operating at the most efficient level possible. The sensor is easy to install and use, and it provides a significant cost saving for the building owner.



## THE NEW 98% STANDARD

As the industry defines the fire tube boiler category with its "mid-range" (valuable) standard "ECON" line, FTXL's standard light commercial applications, the FTXL adds models from 395,000 to 850,000 Btu/hr. to take total commercial fire-tube technology to the next level. FTXL offers a second-class AHRI Thermal Efficiency and footprint, plus remote connectivity as part of the SMART SYSTEM™ control at your fingertips, anywhere!

### REDUCE INSTALLATION COST WITH VARIABLE FLOW TECHNOLOGY

FTXL's variable flow technology makes it the most efficient fire tube boiler in the industry. The variable flow technology allows the boiler to operate at a lower flow rate when the load is light, and at a higher flow rate when the load is heavy. This technology is the only one of its kind in the industry.

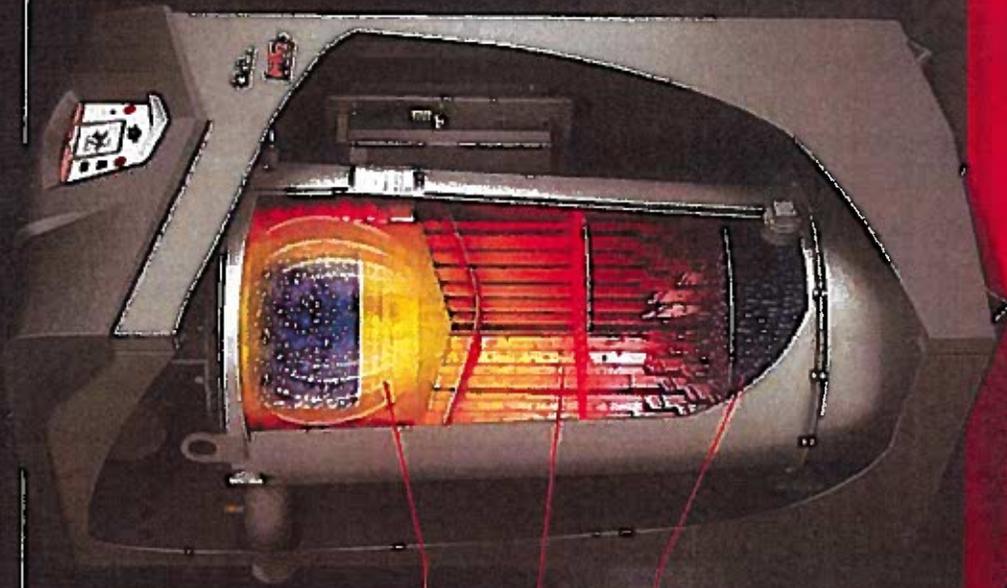
Variable flow technology is a registered trademark of FTXL.

### SMOOTH-RUNNING, MODULATING COMBUSTION

FTXL's smooth-running, modulating combustion technology is the most advanced in the industry. The modulating combustion technology allows the boiler to operate at a lower firing rate when the load is light, and at a higher firing rate when the load is heavy. This technology is the only one of its kind in the industry.

### MINIMUM SUPPLY PRESSURE, INSTALLER-FRIENDLY

FTXL's minimum supply pressure, installer-friendly technology is the most advanced in the industry. The minimum supply pressure technology allows the boiler to operate at a lower supply pressure when the load is light, and at a higher supply pressure when the load is heavy. This technology is the only one of its kind in the industry.



DISCRETE BURNER DESIGN  
EASIER TO MAINTAIN  
AND REPAIR

SMOOTH-RUNNING  
COMBUSTION

MINIMUM SUPPLY PRESSURE,  
INSTALLER-FRIENDLY

VARIABLE FLOW TECHNOLOGY  
FOR EFFICIENT OPERATION

### PEACE OF MIND, WHEN IT MATTERS MOST

FTXL's 98% thermal efficiency is the highest in the industry. This means you'll get the most out of your boiler, and you'll save money on your energy bills.

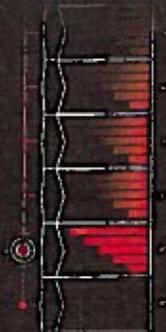
FTXL's compact footprint is the smallest in the industry. This means you'll save space in your boiler room, and you'll have more room for other equipment.

### THE SMALLEST FOOTPRINT, EASY TO INSTALL & SERVICE

FTXL's compact footprint is the smallest in the industry. This means you'll save space in your boiler room, and you'll have more room for other equipment.

### FLEXIBLE VENTING OPTIONS

FTXL offers 6 venting options, including direct vent, natural gas vent, and low-voltage vent. This means you can choose the venting option that best fits your application.



FTXL's 98% thermal efficiency is the highest in the industry. This means you'll get the most out of your boiler, and you'll save money on your energy bills.

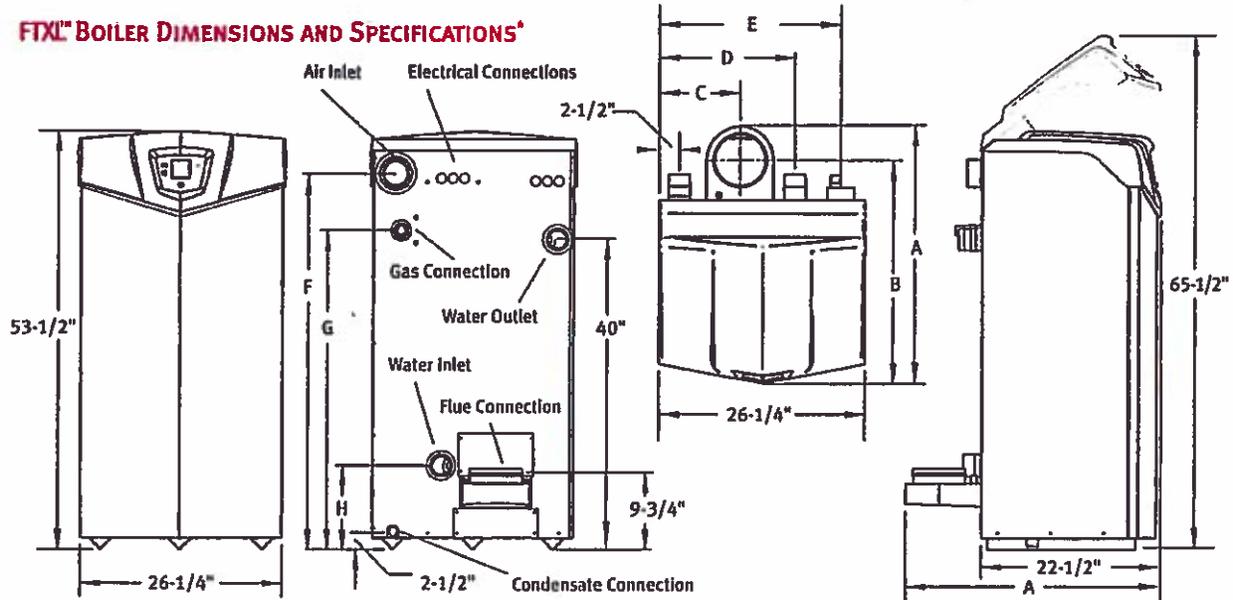
FTXL's compact footprint is the smallest in the industry. This means you'll save space in your boiler room, and you'll have more room for other equipment.



FTXL Boilers exceed JEC Optional Standards C406.2 calling for thermal efficiencies of 97% or higher

TO LEARN MORE, LOG ON TO [WWW.FTXLBOILER.COM](http://WWW.FTXLBOILER.COM) TODAY!

## FTX™ BOILER DIMENSIONS AND SPECIFICATIONS\*



Model Number	Input		Thermal Efficiency	Output MBH	NET AHRJ Rating		Turn down	HEX Water Volume			A	B	C	D	E	F	G	H	Water Conn.	Vent Size	Air Intake	Gas Conn.	Shipping Wt. (lbs)
	Min MBH	Max MBH			MBH	MBH		Flow (GPM) Min	Flow (GPM) Max	Water													
FTX400(L)	40.0	399.9	90.6%	392	341	10:1	10	105	13	30-1/2"	27-1/2"	10-1/4"	17"	23-1/4"	46-1/4"	39-1/2"	10-3/4"	2"	4"	4"	1"	435	
FTX500(L)	50.0	500.0	97.7%	489	425	10:1	15	105	12	30-1/2"	27-1/2"	10-1/4"	17"	23-1/4"	46-1/4"	39-1/2"	10-3/4"	2"	4"	4"	1"	460	
FTX600(L)	65.0	600.0	97.5%	585	509	7:1	15	105	12	30-1/2"	27-1/2"	10-1/4"	17"	23-1/4"	46-1/4"	39-1/2"	10-3/4"	2"	4"	4"	1"	470	
FTX725(L)	103.5	725.0	97.2%	705	613	7:1	20	150	17	33"	28-1/2"	10-1/2"	17-1/2"	23-1/2"	48-1/2"	41-1/4"	11"	2-1/2"	6"	4"	1"	510	
FTX850(L)	121.5	850.0	97.0%	875	717	7:1	25	150	16	33"	28-1/2"	10-1/2"	17-1/2"	23-1/2"	48-1/2"	41-1/4"	11"	2-1/2"	6"	4"	1"	535	

\*Information is subject to change without notice.  
Dimensions are in inches. Sided "N" or "L" for Natural or LP gas.

### SMART SYSTEM FEATURES

- Smart System Digital Operating Control
  - Multi-Color Graphic LCD Display w/Navigation Dial
- Loch-N-Link® USB Thumb Drive Port for Easy Programming
- Cascading Sequencer with Built-In Redundancy
  - Selectable Cascade Type:
    - Lead Lag/Efficiency Optimization
  - Multiple Size Boilers
  - Front-End Loading
- 3 Reset Temperatures Inputs w/Independent Outdoor Reset Curves for Each Outdoor Sensor
- Four-Pump Control
  - System Pump with Parameter for Continuous Operation
  - Boiler Pump with Variable-Speed Control
  - Domestic Hot Water Boiler Pump
  - Domestic Hot Water Recirculation Pump Control with Sensor
- Building Management System Integration
  - 0-10 VDC Input to Control Modulation or Setpoint
  - 0-10 VDC Input from Variable-Speed System Pump
  - 0-10 VDC Modulation Rate Output Signal
  - 0-10 VDC Enable/Disable Signal
- Programmable System Efficiency Optimizers
  - Space Heating Night Setback
  - DHW Night Setback
  - Anti-Cycling
  - Ramp Delay
  - Boost Time and Temperature
- High-Voltage Terminal Strip
  - 120 VAC/60 Hertz/1 Phase
  - Pump Contacts for 3 Pumps

- Low-Voltage Terminal Strip
  - Building Recirculation Pump Start/Stop
  - Proving Switch Contacts
  - Flow Switch Contacts
  - Alarm Contacts
  - Runtime Contacts
  - 3 Space Heat Thermostat Contacts
  - Tank Thermostat Contacts
  - System Sensor Contacts
  - Tank Sensor Contacts
  - Cascade Contacts
  - 0-10 VDC BMS Contacts
  - 0-10 VDC Boiler Rate Output Contacts
  - 0-10 VDC Boiler Pump Speed Contacts
  - 0-10 VDC System Pump Speed Contacts
  - ModBus Contacts
- Time Clock
- Data Logging
  - Ignition Attempts
  - Last 10 Lockouts
  - Space Heat Run Hours
  - Domestic Hot Water Run Hours

### STANDARD FEATURES

- 97%-98% Thermal Efficiency
- Modulating Burner with up to 10:1 Turndown
  - Direct Spark Ignition
  - Low NOx Operation
  - Sealed Combustion
  - Low Gas Pressure Operation
- Stainless Steel Fire-Tube Heat Exchanger
  - ASME-Certified, "H" Stamped
  - 160 psi Working Pressure
  - 50 psi Relief Valve
  - Combustion Analyzer Test Port
  - Fully Welded Design

- Vertical and Horizontal Direct Vent
  - Direct Vent up to 100 feet
  - PVC, CPVC, Polypropylene or AL29-4C
  - Factory Supplied Sidewall Vent Termination
- Smart System Control
- Other Features
  - On/Off Switch
  - Adjustable High Limit with Manual Reset
  - Automatic Reset High Limit
  - Manual Reset Low Water Cutoff
  - Flue Temperature Sensor
  - Low Air Pressure Switch
  - Temperature and Pressure Gauge
  - Condensate Trap
  - Zero Service Clearances
  - 10-Year Limited Warranty (See Warranty)
  - Custom Maintenance Reminder with Contact Info
  - Password Security
  - Customizable Freeze Protection Parameters

### OPTIONAL EQUIPMENT

- CON-X-US Remote Connectivity
  - Motorized Isolation Valve
  - Wireless Outdoor Temperature Sensor
  - Multi-Temperature Loop Control
- Variable-Speed Boiler Circulator
- Constant-Speed Boiler Circulator
- ModBus Communication
- Alarm Bell
- Condensate Neutralization Kit
- Concentric Vent Kit (FTX400-FTX600)
- BMS Gateway to BACnet or LonWorks
- High and Low Gas Pressure Switches w/Manual Reset (FTX500-FTX850)
- Firing Controls
  - M9-Standard Construction
  - M13-CSD-1/FM/GE Gax (FTX500-FTX850)



Lochinvar, LLC  
300 Hadden Simpson Parkway  
Lebanon, Tennessee 37090  
P: 615.889.8900 / F: 615.547.1000  
www.Lochinvar.com







232



233

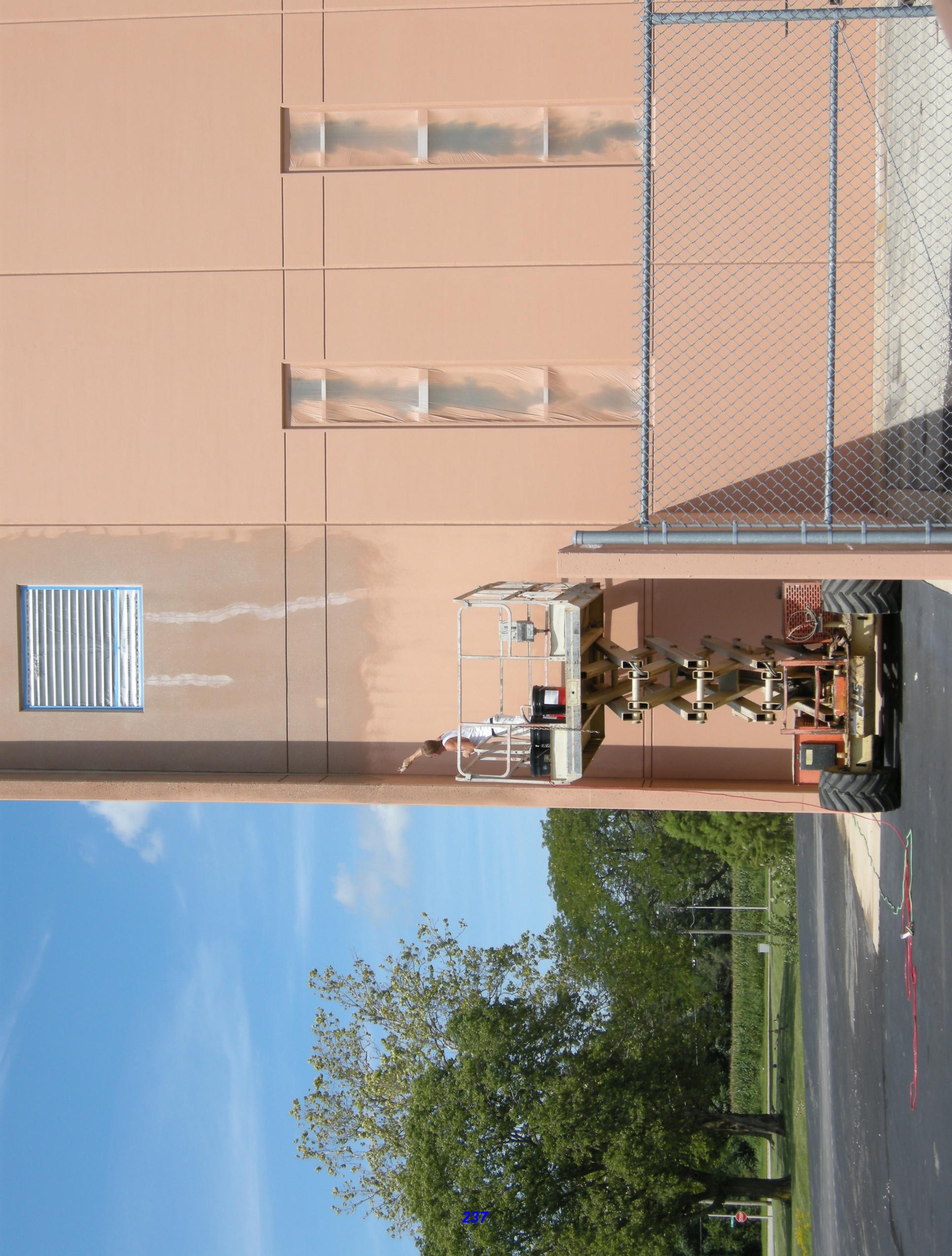




235



236





**CHAMPAIGN COUNTY VETERANS MONUMENT  
MAINTENANCE AGREEMENT**

This Agreement is made this 15th day of August, 1995, between Champaign County, an Illinois municipal corporation, with its principal place of business at 204 E. Elm Street, in the City of Urbana, County of Champaign, State of Illinois, referred to hereinafter as "County" and the Champaign County Veterans Association, located in the County of Champaign, State of Illinois, referred to hereinafter as "Association", for the maintenance and repair of the Champaign County Veterans' Memorial Monument, referred to hereinafter as "Monument."

**1. LOCATION**

The Monument is to be located on the northwest corner of 101 E. Main Street, Urbana, Illinois. Said property is owned by the County and is the site of the Champaign County Courthouse. Said monument shall be adjacent to the existing sidewalk at the northwest corner of the County Courthouse and no closer than six (6) feet from the Courthouse structure.

**2. OWNERSHIP**

The Monument and any lighting or flags associated with the Monument are the sole property of the Association.

**3. MAINTENANCE AND REPAIRS**

- A. The maintenance and repairs of the Monument to be undertaken and performed under this Agreement will be the sole expense of the Association and will include, but are not limited to, the following:
- i. Structural maintenance including the repair of any damage to said Monument whether rendered by human or natural causes. Said repairs will take place no later than ninety (90) days of the damage.
  - ii. Maintenance and repair of any lighting associated with the Monument, including the replacement of bulbs within thirty (30) days after discovery by the Association that a bulb is not functioning or within thirty (30) days of being advised by the County that a bulb was not functioning.
  - iii. Maintenance and repair of any flag poles and flags associated with the

Monument including the replacement of flags within a reasonable period of time after the Association becomes aware, or is advised by the County, of the need for a new flag.

- B. The County shall be advised in writing thirty (30) days prior to any major repairs or any modifications to the Monument.
- C. The County shall maintain the grounds surrounding the Monument, including mowing and trimming. The Association shall not add or remove vegetation surrounding the Monument without prior permission to do so by the County Administrator.

#### 4. DESIGNATION OF AGENT

Ron Hubert, whose address is 2101 Burlison, Urbana, Illinois, 61801, is hereby designated as the agent of the Association to contract for and oversee the repairs and maintenance provided for in this Agreement. The Association will advise the County in writing of any change in the designated agent. The agent now designated, or any in the future, will receive no compensation from the County for his or her actions as the agent. Finally, the agent shall provide the County with a written report of any maintenance of repairs undertaken, costs and expenses incurred, and receipts for the payment of the costs and expenses within thirty (30) days of said occurrence.

#### 5. INSURANCE

The Association shall maintain insurance for the Monument in a minimum amount of seventy thousand dollars (\$70,000) with an insurance company acceptable to and approved by the County. The County shall be named on the policy as a co-insured.

#### 6. MONUMENT EVENTS

- A. The Association shall notify the County in writing of any proposed event involving the Monument at least fourteen (14) days in advance of said event.
- B. The County reserves the right to require the Association to procure additional insurance for special event coverage.

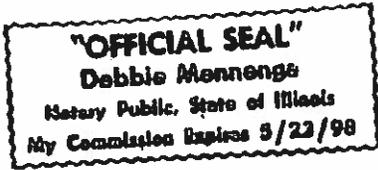
#### 7. PERSONAL INJURY AND PROPERTY DAMAGE LIABILITY

Any liability of the parties for personal injury to the agent hereunder or to any worker employed to make repairs under this agreement, or to third persons, as well as any liability of



voluntary act, and as the free and voluntary act of the association, for the uses and purposes set forth.

Given under my hand and seal on August 21, 1995.



Debbie Mennenga  
Signature and Title of the Officer/Notary

State of Illinois )  
County of Champaign ) ss

I, Dennis R. Bing, do certify that Lyle E. Shields, personally known to me to be the Chairman of the Champaign County Board, Champaign County, Illinois, whose name is subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that as chairman, he signed and delivered the above instrument of writing as chairman of the Champaign County Board, pursuant to authority given by the Champaign County Board, for the uses and purposes set forth.

Given under my hand and seal on \_\_\_\_\_, 1995.

Dennis R. Bing  
Dennis R. Bing, County Clerk and ex-Officio  
Clerk of the County Board



WHEREAS, the State of Illinois is proud of her Veterans of World War I, World War II, and the Korean and Viet Nam conflicts; and

WHEREAS, 92,751 Americans, including 5,564 Illinoisans remain unaccounted for in these conflicts; and

WHEREAS, these unaccounted for heroes should not vanish from our memories;

THEREFORE, I, James R. Thompson, Governor of the State of Illinois, hereby declare that the POW-MIA flag, created by the National League of Families, be established as the official symbol in Illinois in memory of those Americans who are missing and unaccounted for. This flag will be flown at State buildings and other appropriate locations every day during the month of November, Illinois POW-MIA Day in April, Memorial Day in May and Flag Day in June, and shall continue to be flown on those named holidays until all Americans now missing are returned or accounted for.

*In Witness Whereof, I have hereto set my hand and caused the Great Seal of the State of Illinois to be affixed.*

*Done at the Capitol in the City of Springfield, this FIRST day of NOVEMBER in the Year of Our Lord one thousand nine hundred and EIGHTY-FIVE and of the State of Illinois the one hundred and SIXTY-SEVENTH*



*Jim Edgar*  
SECRETARY OF STATE

*James R. Thompson*  
GOVERNOR

**RECEIPT AND WAIVER OF MECHANIC'S LIEN RIGHTS**

Dated: July 20, 1995, 19    

The undersigned hereby acknowledges receipt of the sum of \$ 51,784.00

**CHECK ONLY ONE**

- 1)  as partial payment for labor, skill and material furnished
- 2)  as payment for all labor, skill and material furnished or to be furnished (except the sum of \$ \_\_\_\_\_ retainage or holdback)
- 3)  upon receipt by the undersigned of a check in the amount of \$ \_\_\_\_\_ payable to \_\_\_\_\_ and when the check has been properly endorsed and has been paid by the bank upon which it is drawn this document shall become effective.
- 4)  as full and final payment for all labor, skill and material furnished or to be furnished to the following described real property: (legal description, street address or project name)

JOB NAME: Veterans Feature  
 LOCATION: Champaign, IL  
 CUSTOMER: Champaign County Veterans Assoc  
 ACCT #: 93-7619

For value received hereby waives all rights acquired by the undersigned to file or record mechanic's liens, against said real property for labor, skill or material furnished to said real property (only for the amount paid if Box 1 is checked, and except for retainage shown if Box 2 is checked). The undersigned affirms that all material furnished by the undersigned has been paid for, and all subcontractors employed by the undersigned have been paid in full, EXCEPT:

None

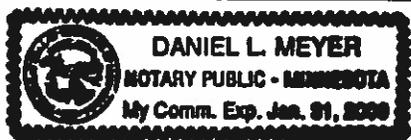
This document shall become effective when the check has been paid by the bank upon which it is drawn.

COUNTY: Stearns

STATE: Minnesota

On this 19th day of July 1995 before me, a Notary Public within said county, personally appeared Gary Theisen

NOTE: If this instrument is executed by a corporation, it must be signed by an officer, and if executed by a partnership, it must be signed by a partner.



Daniel L. Meyer  
 Notary Public Daniel L. Meyer - 1/31/00  
 My Commission Expires \_\_\_\_\_

**COLD SPRING GRANITE COMPANY**

By Gary Theisen  
 Gary Theisen - Assistant Treasurer  
 \_\_\_\_\_  
 (Title)  
 202 South Third Avenue  
 \_\_\_\_\_  
 (Address)  
 Cold Spring, MN 56320  
 \_\_\_\_\_



**Insurance**

Personal, Life & Business

July 24, 1995

Champaign County Veterans Association  
c/o James A Mitsdarffer  
PO Box 11582  
Champaign, IL 61821

RE: Quote for Insuring the Champaign County Veterans Memorial

Dear Mr Mitsdarffer:

This letter will serve to confirm our phone conversation of this morning regarding insuring the Champaign County Veterans Memorial. I have received quotes from both Central Mutual Insurance Company and Aetna Life & Casualty Company.

Central quoted an estimated annual premium of \$250-300. Aetna's estimated annual premium was \$500-600. Both estimates are based on the same information - providing \$1,000,000 general liability coverage and physical damage coverage with a \$56,500 limit for the monument itself.

If you choose not to take the physical damage coverage for the monument the premium would be less than quoted above. Central's premium would be reduced to approximately \$150 and Aetna's to approximately \$250-300.

You have indicated that the monument is virtually indestructible, however the possibility does exist that it could be damaged, so I would recommend that you insure the monument itself in addition to purchasing the general liability coverage. But that decision is up to the Champaign County Veterans Association.

If you have any questions about this, please feel free to give me a call.

Sincerely,  
EMP Insurance Agency, Inc.

A handwritten signature in cursive script that reads "Leisa K Weatherford".

Leisa K Weatherford  
Commercial Lines CSR

LKW/36459

102 W. Springfield Ave. • P.O. Box 1310 • Champaign, IL 61820 • (217) 359-1621 • Fax (217) 356-3014





# OTTO BAUM COMPANY, INC.

## CONTRACTORS

866 N. MAIN STREET MORTON, IL 61550  
Ph. 309/266-7114 - FAX 309/263-1050

### ESTIMATE & AGREEMENT

DATE: August 10, 2016

BID: We hereby propose to furnish material & labor to complete the work outlined herein for the sum of:

\$ 2,500.00

Payment - 30 days after billing

To: Mr. Dana Brenner  
Facilities Director  
1776 E. Washington St.  
Urbana, IL 61802  
Email: [dbrenner@co.champaign.il.us](mailto:dbrenner@co.champaign.il.us)

We hereby submit bid for:

**PROJECT:** Champaign County Veteran's War Memorial  
Masonry Repairs

**SCOPE INCLUDES:**

- Mobilize equipment and materials to jobsite.
- Cut out and reseal 70 lineal feet total of granite sealant joints. This includes the four (4) joints on the taller marble panels and 6 joints on the short front panel walls as shown.
- Pressure wash the entire flat area of the memorial. This includes the top paver area and front walkway area.
- Clean out and regrout up to 36 square foot total of granite paver area grout joints.
- Clean up and demobilize all equipment and debris.

**SCOPE EXCLUDES:**

- Flower or shrub trimming. This may be required for access to work area.
- Removal or relocation of mechanical, electrical, and/or plumbing interferences. We will work around.
- Permits

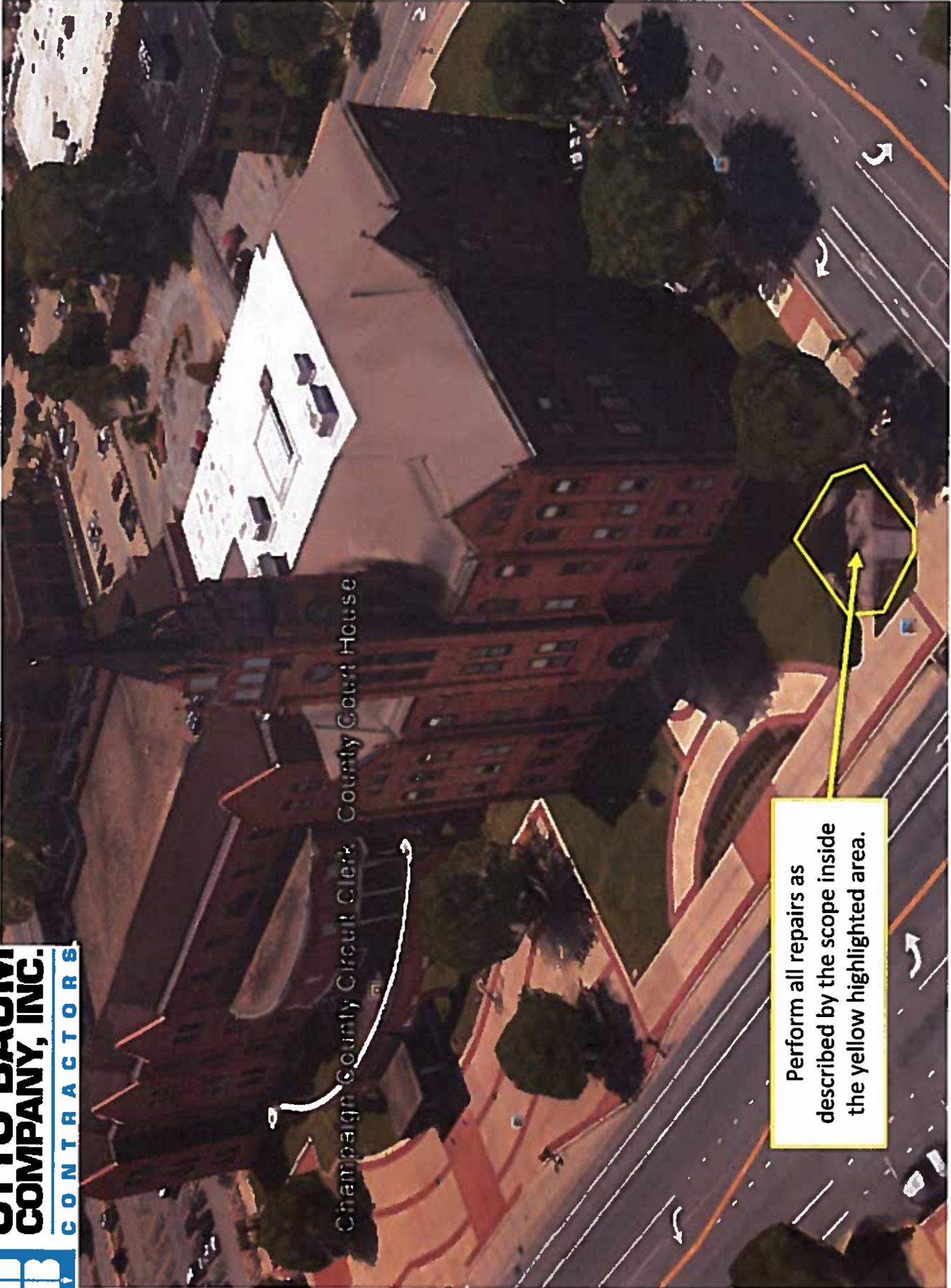
**CLARIFICATIONS:**

- Reference attached marked up photographs for further clarification of work scope.
- New grout to match existing as closely as possible from available local supplier stock.
- New sealant colors to be chosen from manufacturer's standard color selection.
- All work to be performed during regular business hours.
- Water and electric to be provided by Owner.
- Pricing assumes work will be completed during the 2016 construction season.

CONTRACTOR'S GUARANTEE		ACCEPTANCE OF BID	
We guarantee all material used in this contract to be as specified above and the entire job to be done in a neat, workmanlike manner. Any variations from plan or alterations requiring extra labor or material will be performed only upon written order and billed in addition to the sum covered by this contract. Agreements made with our workmen are not recognized.		The above specification, terms and contract are satisfactory, and I (We) hereby authorize the performance of this work.	
		BY (please print):	
DATE: 08/10/16	SIGNED:  Carl Cole <a href="mailto:carlcole@ottobaum.com">carlcole@ottobaum.com</a>	DATE: 8/10/16	SIGNED: 

This contract is void 30 days from date unless signed and returned to bidder.  
WE COMPLY WITH ALL WORKMAN'S COMPENSATION & PROPERTY DAMAGE LIABILITY INSURANCE LAWS  
All information contained herein is confidential and proprietary.





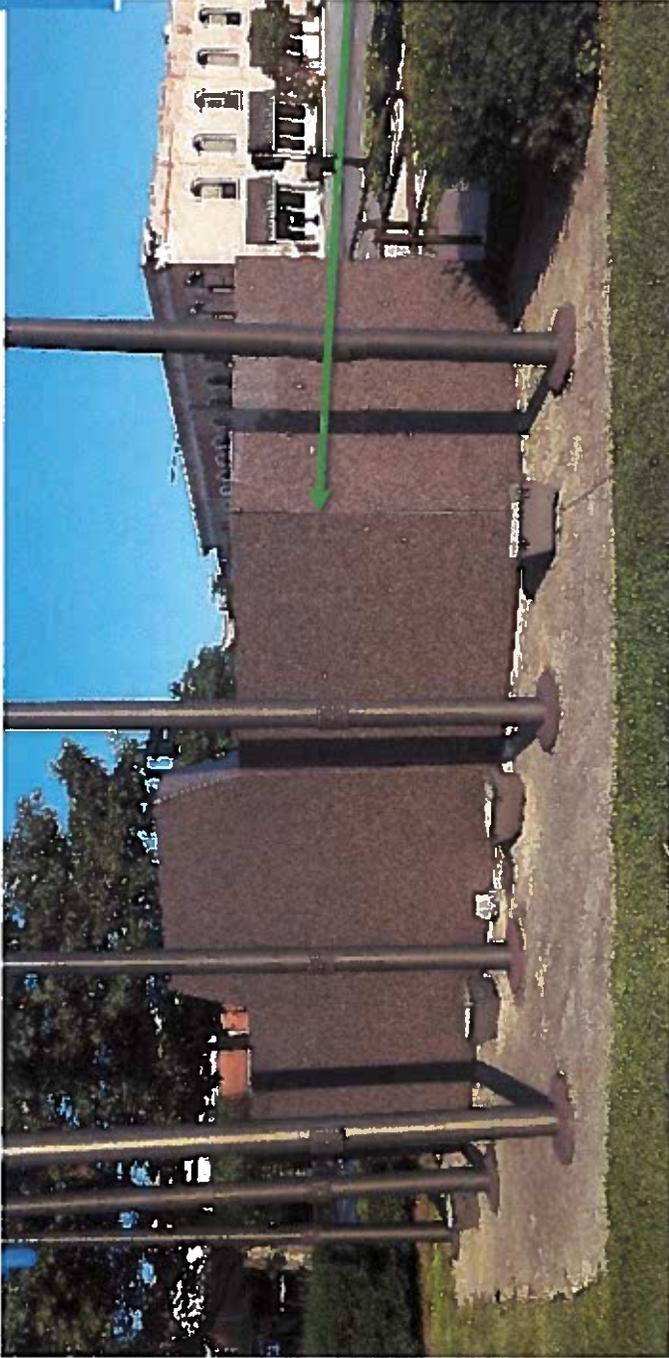
Champaign County Circuit Clerk County Court House

Perform all repairs as described by the scope inside the yellow highlighted area.



# OTTO BAUM COMPANY, INC.

CONTRACTORS



Cut out & reseal 70 LF total of vertical sealant joints. This includes 4 joints on the tall wall & 6 joints on the front planter walls.



Pressure wash all of the granite paver & walk area on the memorial & clean out & install up to 36 SF total of new grout.

**RESOLUTION NO. 9674**

**A RESOLUTION AUTHORIZING THE REMOVAL OF  
PLAYGROUND EQUIPMENT ON PROPERTY  
LOCATED AT 2603 CAMPBELL DRIVE, CHAMPAIGN**

WHEREAS, Champaign County removed a dangerous structure from the property located at 2603 Campbell Drive, Champaign on October 2, 2003, and on November 20, 2003, placed a lien against the property to recover the cost of demolition and thereafter foreclosed on the lien and thereby acquired the title to the property; and

WHEREAS, Champaign County entered into a lease agreement in 2010 with the Dobbins Downs Community Improvement Association, NFP which is a private, non-profit corporation to establish and maintain a neighborhood park on the property located at 2603 Campbell Drive; and

WHEREAS, the Dobbins Downs Community Improvement Association, NFP had previously desired to have the neighborhood park at 2603 Campbell Drive under the management of the City of Champaign Park District and the property was duly annexed to the City of Champaign to facilitate transfer of park management to the City of Champaign Park District but the City of Champaign Park District has since declined to accept management responsibility for the park on the property at 2603 Campbell Drive, Champaign; and

WHEREAS, the Dobbins Downs Community Improvement Association, NFP is no longer a not-for profit corporation in good standing with the State of Illinois and has defaulted on the lease for the property; and

WHEREAS, on July 27, 2016, the Champaign County State's Attorney's Office sent a Landlord's Five Day Notice to the Dobbins Downs Community Improvement Association, NFP demanding the right of re-entry and all other rights of exclusive possession and ownership to begin five days after the mailing of that Notice; and

WHEREAS, the property at 2603 Campbell Drive serves no long term need for Champaign County and retaining the property at 2603 Campbell Drive provides no benefit to Champaign County and the presence of playground equipment on the property at 2603 Campbell Drive creates an attractive nuisance and a potential liability for Champaign County; and

WHEREAS, the Zoning Administrator in consultation with the County Administrator has installed a temporary security fence to prevent trespass onto the property; and

NOW, THEREFORE BE IT RESOLVED by the Champaign County Board that:

1. The Champaign County Administrator is hereby authorized to have the playground equipment removed from the property at 2603 Campbell Drive in a timely but cost effective manner and subject to approval of any request for funding necessary to pay for the removal of the playground equipment and to plan for the ultimate disposal of the property at 2603 Campbell Drive; and
2. The Facilities Director is hereby authorized to maintain the vegetation on the property until the property is no longer owned by Champaign County; and
3. The Zoning Administrator is hereby authorized to keep the temporary security fence in place on the property until the property is no longer owned by Champaign County; and

PRESENTED, ADOPTED, APPROVED and RECORDED this 18th day of August, 2016.

---

Patti Petrie, Chair  
Champaign County Board  
Champaign County, Illinois

ATTEST: \_\_\_\_\_  
Gordy Hulton, County Clerk  
and *ex-officio* Clerk of the Champaign County Board

**Petition for Annexation  
TO THE CITY COUNCIL OF THE CITY OF CHAMPAIGN  
CHAMPAIGN COUNTY, ILLINOIS**



The Undersigned Petitioner(s) respectfully state under oath:

1. That the following described Tract is not within the corporate limits of any municipality and is, or will be, at the time of annexation, contiguous to the City of Champaign, Illinois:

**Legal Description:**

LOT 33 IN THE REGENCY WEST SUBDIVISION SOUTHWEST QUARTER, SECTION 35, TOWNSHIP 20 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, CHAMPAIGN COUNTY, ILLINOIS, RECORDED AS DOCUMENT NO. 1970R03806 ON MAY 27, 1970.

ENCOMPASSING 0.177 ACRES, MORE OR LESS.

PINS: 12-14-35-353-017

STREET ADDRESSES: 2603 CAMPBELL DRIVE, CHAMPAIGN, ILLINOIS 61821

The common address of the Tract is:  
(If the address to the left is incorrect, please make corrections.)

2603 Campbell Drive  
Champaign, IL 61821

\_\_\_\_\_  
\_\_\_\_\_

2. That 51% of the voters (shown below) who are registered to vote at this Tract have signed this petition.
3. That all of the owners of the Tract have signed this petition.

The Undersigned Petitioners respectfully request that the Tract described above herein be annexed to the City of Champaign, Illinois pursuant to Section 5/7-1-8 of the Municipal Code of the State of Illinois, as amended (65 ILCS 5/7-1-8).

\_\_\_\_\_  
Patsy Petrie  
Champaign County Board Chair

**REGISTERED VOTERS**

All of the people below are registered to vote at this address. Please sign; OR strike out and initial next to the names of registered voters who no longer live at this address. Spaces are provided for newly registered voters to sign and print their names.

\_\_\_\_\_  
There are no registered voters at this site.

Subscribed and sworn to before me this _____ Day of _____, 20__
_____ Notary Public

For City Use Only Record #: XXX
------------------------------------