



# PROJECT MANUAL



## 20-22 | LaFayette Court Square Enhancements

NORTHEAST CORNER OF LAFAYETTE COURT SQUARE

LAGRANGE, GEORGIA 30240

09 NOV 2020

### Owner/Client:

City of LaGrange  
200 Ridley Avenue

### Civil Engineer:

James Stothard, C.E.  
Stothard Engineering, Inc.  
706.884.5279  
1008 Colquitt Street  
LaGrange, GA 30240  
stothard@charter.net

### Architect of Record:

Gordon M. Smith, Jr.  
Smith Design Group, Inc.  
206 West Haralson Street  
LaGrange, Georgia 30240  
P | 706.882.5511  
skip@sdgarch.net



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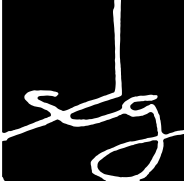
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## PART 1 | GENERAL REQUIREMENTS

### SECTION A - INVITATION TO BID

Sealed proposals from general contractors will be received by **City of LaGrange**, at City Hall, until 2 p.m. at the time prevailing in LaGrange, Georgia on **15 Dec 2020** for the **LaFayette Court Square Street Scape Enhancements** located at **northeast corner of LaFayette Court Square**, LaGrange, Georgia. At the time and place noted above the proposals will be publicly opened and read.

The project consists of renovations to streetscape enhancements and minor road work.

The contract, if awarded, will be on a lump sum basis. No bid may be withdrawn for a period of sixty (60) days after time has been called on the date of the opening.

The project is to be substantially complete in **one hundred and fifty (150) days**. Anticipated start date for construction is **January / February 2021**.

The Owner reserves the right to reject any or all bids and to waive technicalities and informalities.

**City of LaGrange**

BY: \_\_\_\_\_

**END OF SECTION A**

## SECTION B - PROPOSAL FORM

### DATE TBD

20-22 | LaFayette Court Square Street Scape Enhancements

### INVITED BIDDERS:

#### B-01

Having carefully examined the drawings entitled "**LaFayette Court Square Street Scape Enhancements**" and numbered \_\_\_\_\_ and all dated **09 NOV 2020** and Addendum No. \_\_\_\_\_ as well as the premises and conditions affecting the work, the undersigned purposes to furnish all services, labor, and material called for by them for the entire work in accordance with said document for the TOTAL SUM OF \_\_\_\_\_ DOLLARS (\$\_\_\_\_\_)

#### B-02

The undersigned further purposes that, should any of the following alternatives be accepted and be incorporated in the Contract, the TOTAL SUM will be altered in each case as follows:

2.1 Deductive Alternatives: No Items Included

2.2 Additive Alternates:

2.2.1 Add. Alt. No. 1: \$\_\_\_\_\_

To finish grade, provide and install 6" GAB and all concrete brick pavers as called for on the drawings. (Base Bid: the City of LaGrange will finish grade, provide and install all concrete brick pavers as called for in the drawings.)

#### B-03

For and in consideration of the sum of One Dollar (\$1.00), the receipt of which is hereby acknowledged, the undersigned agrees that this proposal may not be revoked, or withdrawn for a period of sixty (60) days from and including the date of the Bid Opening.

#### B-04

The undersigned agrees to execute a contract (AIA Document A101) no later than ten (10) days from and including date of notification of acceptance of this proposal in writing, by mail, telegraph, facsimile transmission, or delivery.

**B-05**

The undersigned agrees to commence actual physical work on the site with an adequate force and equipment within ten (10) days from and including a date to be specified in written order of the Owner and be substantially complete in **one-hundred and fifty (150)** consecutive calendar days (See documents for phasing).

**B-06**

Enclosed herewith is a Bid Bond\* in an amount of \_\_\_\_\_ Dollars (\$\_\_\_\_\_ ) being not less than 5% of the BASE BID. The undersigned agrees that the above-stated amount is the proper measure of liquidated damages which the Owner will sustain by failure of the undersigned to execute the Contract and to furnish the Performance Bond and the Labor & Material Payment Bond in case this proposal is accepted and further agrees to the following.

\*Certified or Cashier’s Check not acceptable

**B-07**

If this proposal is accepted within sixty (60) days from and including the date of the Bid Opening and the undersigned fails to execute the Contract within ten (10) days from and including date of notice of such acceptance, or, if he fails to furnish with Performance Bond and Labor & Material Payment Bond, the obligation of the Bid Bond will remain in full force and effect, and the money payable therefore shall be paid the Owner as liquidated damage for such failure; otherwise the obligation of the Bid Bond will be null and void.

Respectfully submitted,

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

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

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

The full names and addresses of persons and firms interested in the forgoing bids as principals are as follows:

\_\_\_\_\_  
Legal Name of Bidder: \_\_\_\_\_

Concrete Subcontractor: \_\_\_\_\_

Painting Subcontractor: \_\_\_\_\_

Electrical Subcontractor: \_\_\_\_\_

Note: The Bid Form will not be accepted without the following breakdown of the Base Bid.

Division 1 - General Requirements	\$ _____
Division 2 - Demolition	\$ _____
Division 3 - Concrete	\$ _____
Division 4 - Masonry	\$ _____
Division 5 - Metals	\$ _____
Division 6 - Wood & Plastic	\$ _____ NIC _____
Division 7 - Thermal & Moisture Protection	\$ _____ NIC _____
Division 8 - Doors & Windows	\$ _____ NIC _____
Division 9 - Finishes (Painting)	\$ _____
Division 10 - Specialties	\$ _____ NIC _____
Division 11 - Equipment	\$ _____ NIC _____
Division 12 - Furnishings	\$ _____ NIC _____
Division 13 - Special Construction	\$ _____ NIC _____
Division 14 - Conveying Systems	\$ _____ NIC _____
Division 15 - Mechanical	\$ _____ NIC _____
Division 16 - Electrical	\$ _____
BASE BID TOTAL	\$ _____

**END OF SECTION B**

## **SECTION C.1 - SUPPLEMENTARY INSTRUCTIONS TO BIDDERS**

### **C.1.01**

The following Supplementary Instructions, Articles C.1-02 thru C.0-10 inclusively, modify, change, delete from or add to the "Instructions to Bidders", AIA Document A701, 2007 Edition, which is by reference made a part of this project manual.

Upon written request, the Architect will furnish any Bidder with a copy of the "Instructions to Bidder." Where any Article, Paragraph, Subparagraph or Clause of the Instructions to Bidders is modified, change, deleted from or added to, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.

### **C.1.02 ARTICLE 1 DEFINITIONS**

1. In the ninth line of Paragraph 1.1 immediately following the word "Specifications" insert, "the Bidder's signed Proposal Form."
2. Add to Paragraph 1.3 the following: Post-bid Addenda are written or graphic instruments issued by the Architect after receipt of Bids, but prior to the signing of the Form of Agreement Between the Owner and Contractor, which modify the Bidding Documents and may or may not increase or decrease the Base Bid.
3. Add to Paragraph 1.7 the following: Unit prices are net. The term "net" as used in reference to unit prices means that the net prices offered by the Bidder is inclusive of all sums for payment, repayment, reimbursement, remittance, remuneration, compensation, profit, cost, overhead, expense, loss, expenditure, allowance, charge, demand, hire, wages, salary, tax, cash, assessment, price, money, bill, statement, dues, recovery, restitution, benefit, recoupment, exaction or injury.

### **C.1-03 ARTICLE 2 BIDDER'S REPRESENTATIONS**

There are no modifications, changes, deletions from or additions to any Article, Paragraph, Subparagraph or Clause of Article 2 of the Instructions to Bidders.

### **C.1-04 ARTICLE 3 BIDDING DOCUMENTS**

1. Beginning in the fourth line following the word "therein", of Subparagraph 3.1.1, delete the remainder of this Subparagraph and substitute the following therefor: Deposits will be refunded fully or in part, as designated in the advertisement or Invitation to Bid.
2. Add to subparagraph 3.3.3 the following: The Architect's approval of the substitutions shall not relieve any Contractor of the responsibility for any deviation from the requirements of the Contract Documents, nor shall the Architect's approval relieve the Contractor from responsibility for substitution, that is to say, that should the Architect give approval for a substitution and it be found at anytime that the material or equipment is not equal to that specified or that the information



furnished in the request for substitution was not accurate, the Architect may require the Contractor to furnish the specified material or equipment at no additional cost to the Owner.

#### **C.1-05 ARTICLE 4 BIDDING PROCEDURES**

Add to Subparagraph 4.1.1. the following: Bids shall be submitted in triplicate.

#### **C.1-06 ARTICLE 5 CONSIDERATIONS OF BIDS**

1. Delete Subparagraph 5.3.2 in its entirety and substitute the following therefor:

5.3.2 Alternative or Alternative Bids are both deductive and additive and  
a.) The successful bidder will be determined by Base Bid.

#### **C.1-07 ARTICLE 6 POST-BID INFORMATION**

There are no modifications, changes, deletions from or additions to any Article, Paragraph, Subparagraph or Clause of Article 6 of the Instructions to Bidders.

#### **C.1-08 ARTICLE 7 PERFORMANCE AND PAYMENT BOND**

Delete Subparagraph 7.1.3 in its entirety and substitute the following therefor:

7.1.3 The bonds shall be written by companies listed in the current issue of "Federal Register" Department of the Treasury as companies having complied with the law and regulations of the Department of the Treasury and that the companies also have a current surety license in the State of Georgia. The cost of furnishing bonds meeting the above requirements shall be included in the Bid.

#### **END OF SECTION C.1**

## **SECTION D - FORM OF CONTRACT**

### **D-01 FORM TO BE USED**

- 1.1 The Agreement for the work will be written on the Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, AIA Document A101, 2007 edition, with modifications.
- 1.2 Upon written request, the Architect will furnish any bidder with a copy of the form of Agreement with modifications. A copy of the modifications is included in Section I of this Project Manual.

### **END OF SECTION D**

## SECTION E - SUPPLEMENTARY GENERAL CONDITIONS

### SUPPLEMENTARY CONDITIONS

The following supplements modify the "General Conditions of the Contract for Construction", AIA Document A201, Fourteenth Edition, 2007. Where a portion of the "General Conditions" is modified or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

#### **E.1-01 ARTICLE I: GENERAL PROVISIONS**

1. Delete the second sentence and substitute the following for the second sentence:  
A modification is (1) a written amendment to the Contract signed by both parties or (2) a change order, and (3) a construction change directive.

#### **E.1-02 ARTICLE 2: OWNER**

2. Information and Services required of the Owner  
Delete subparagraph 2.2.5 and substitute the following:
5. The Contractor will be furnished free of charge ten (10) copies of drawings and project manuals. Additional sets will be furnished at the cost of reproduction, postage and handling.

#### **E.1-03 ARTICLE 3: CONTRACTOR**

4. Labor and Materials  
Add the following subparagraphs 3.4.4 and 3.4.5 to 3.4:
- 3.4.4 After the contract has been executed, the owner and architect will consider a formal request for the substitution of products in place of those specified only under the conditions set forth in the General Requirements (Division 1 of the Specifications).
- 3.4.5 By making requests for substitutions based on subparagraph 3.4.3 above, the Contractor:
  - .1 represents that the contractor has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified;
  - .2 represents that the contractor will provide the same warranty for the substitution that the contractor would for the specified;
  - .3 certifies that the cost data presented is complete and includes all related costs under this contract except the Architect's redesign costs, and waives all claims for additional costs related to the substitution which subsequently becomes apparent; and
  - .4 will coordinate the installation of the accepted substitute, making such changes as may be required for the work to be complete in all respects.

8. Allowances

3.8.2.3 Add the following to the end of Clause 3.8.2.3: "except when installation is specified as part of the allowance in the General Requirements (Division 1 of the Specification)."

1. Contractors Construction Schedules

Delete this paragraph in its entirety by deleting subparagraph 3.10.1, subparagraph 3.10.2, and subparagraph 3.10.3, and substitute the following:

The contractor, within fifteen (15) days of commencing work, shall submit to the owner and architect for their information, the contractor's schedule for completing the work. The contractor's schedule shall be revised no less frequently than monthly and shall be revised to reflect conditions encountered from time to time and shall be related to the entire project. Each such revision shall be furnished to the owner and the architect.

The contractor shall continuously maintain at the site, for the benefit of the owner and architect, one record copy of this contract marked to record on a current basis changes, selections and modifications made during construction. Additionally, the contractor shall maintain at the site for the owner and architect the approved shop drawings, product data, samples and other similar required submittals. Additionally the contractor shall maintain a record of the project by maintaining a daily project record log and shall make these records available to the owner at its requests. Upon final completion of the work, all these record documents shall be delivered to the owner.

3.18 Indemnification

Delete this paragraph in its entirety by deleting subparagraph 3.18.1, and subparagraph 3.18.2, and substitute the following:

To the fullest extent permitted by law, the contractor shall indemnify and hold harmless the owner, the architect, and the architect's consultants from and against liability, claims, damages, losses, and expenses including attorney's fees, arising out of or resulting from performance of the work, provided that such liability, claims, 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) including loss of use resulting there from, but only to the extent caused in whole or in part by negligent acts or omissions of 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 liability, claim, damage, loss or expense is caused in part by a party indemnified here under.

In claims against any person or entity indemnified under this paragraph 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 this paragraph 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 worker's compensation acts, disability benefits acts or other employee benefits acts.

## **E.1-04 ARTICLE 4: ADMINISTRATION OF THE CONTRACT**

4.2 Architect's Administration of Contract

8. Delete the words. "may authorize minor changes in the work as provided in paragraph 7.4".

Add the following subparagraph 4.2.15 to paragraph 4.2:

4.2.15 Architect shall have no authority to approve or accept materials or workmanship inferior to or not in conformance with that called for by contract documents.

2. Claims and Disputes. (4.3 is not included at all in 2007)

2. Delete the words "arbitration or" from second and third sentences.

Delete the following subparagraphs:

4.3.3

4.3.4

4.3.5

4.3.7

4.3.8

4.3.8.1

4.3.8.2

and substitute the following:

### Claims by the Contractor

All contractor claims shall be initiated by written notice and claim to the owner and architect. Such written notice and claim must be furnished within twenty-one days after occurrence of the event, or the first appearance of the condition, giving rise to the claim.

Pending final resolution of any claim of the contractor, the contractor shall diligently proceed with performance of this contract and the owner shall continue to make payments to the contractor in accordance with this contract. The resolution of any claim under this paragraph shall be reflected by a change order executed by the owner, the architect, and the contractor.

### Claims for Additional Costs

If the contractor wishes to make claim for an increase in the contract price, as a condition precedent to any liability of the owner therefore, the contractor shall give the architect written notice of such claim within twenty-one days after the occurrence of the event, or the first appearance of the condition, giving rise to such claim. Such notice shall be given by the contractor before proceeding to execute any additional or changed work. The failure by the contractor to give such notice and to give such notice prior to executing the work shall constitute a waiver of any claim for additional compensation.

In connection with any claim by the contractor against the owner for compensation in excess of the contract price, any liability of the owner for the contractor's costs shall be strictly limited to direct costs incurred by the contractor and shall in no event include indirect costs or consequential damages by the contractor. The owner shall not be liable to the contractor for claims of third parties,

including subcontractors, unless and until liability of the contractor has been established therefore in a court of competent jurisdiction.

#### Claims for Additional Time

If the contractor is delayed in progressing any task which at the time of delay is then critical or which during the delay becomes critical, as the sole result of any act or neglect to act by the owner or someone acting in the owner's behalf, or by changes ordered in the work, unusual delay in transportation, unusually adverse weather conditions not reasonable anticipatable, fire or any causes beyond the contractor's control, then the date for achieving Substantial Completion of the Work shall be extended upon the written notice and claim of the contractor to the owner and the architect, for such reasonable time as the architect may determine. Any notice and claim for extension of time by the contractor shall be made not more than seven (7) days after the occurrence of the event or the first appearance of the condition giving rise to the claim and shall set forth in detail the contractor's basis for requiring additional time in which to complete the project. In the event the delay to the contractor is a continuing one, only one notice and claim for additional time shall be necessary. If the contractor fails to make such claim as required in this paragraph, any claim for an extension of time shall be waived.

#### 4.3 Resolution of Claims and Disputes

4. Delete the words "but subject to arbitration" from the first sentence.

#### 5. Arbitration

Delete this paragraph in its entirety.

### **E.1-05 ARTICLE 5: SUBCONTRACTORS**

#### 2. Award of Subcontracts and other Contracts for Portions of the Work

1. Delete the last sentence of subparagraph 5.2.1

#### 5.4 Contingent Assignment of Subcontractors

### **E.1-07 ARTICLE 7: CHANGES IN THE WORK**

#### 1. Changes

1. Delete the phrase "or order for a minor change in the work," from subparagraph 7.1.1

2. Delete the phrase "an order for a minor change in the work may be issued by the Architect alone" from paragraph 7.1.2.

3. Delete the phrase "or order for a minor change in the work" from subparagraph 7.1.3.

### 7.3 Construction Change Directives

7.3.7 In the first sentence, delete the words "a reasonable allowance for overhead and profit" and substitute "an allowance for overhead and profit in accordance with clauses 7.3.11.1 through 7.3.11.6 below."

Add the following subparagraph 7.3.11 to 7.3:

7.3.11 In subparagraph 7.3.6, the allowance for the combined overhead and profit included in the total cost to the owner shall be based on the following schedule:

- .1 For the contractor, the work performed by the contractor's own forces, 15% of the cost.
- .2 For the contractor, for work performed by the contractor's subcontractor, 7.5% of the amount due the subcontractor.
- .3 For each subcontractor or sub-contractor involved for work performed by that subcontractor's or subcontractor's own forces 7.5% of the cost.
- .4 For each subcontractor, for work performed by the subcontractor's sub-sub-subcontractor, 7.5% of the amount due the sub-subcontractor.
- .5 Cost to which overhead and profit is to be applied shall be determined in accordance with subparagraph 7.3.6.
- .6 In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including labor, materials and subcontracts. Labor and materials shall be itemized in the manner prescribed above. Where major cost items are subcontracts, they shall be itemized also. In no case will a change involving over \$100.00 be approved without such itemization.

## **E.1-08 ARTICLE 8 TIME**

### 8.3 Delays in Extension of Time

1. Delete the phrase, "or by delay authorized by the owner pending mediation and arbitration," from subparagraph 8.3.1 and add at the end of subparagraph 8.3.1 the following: "However, the parties expressly agree that the contractor shall not be entitled to any increase in the Contract Sum or to any damages or any other additional compensation as a consequence of any such delays or disruptions."

.8.3.2 Delete the subparagraph 8.3.2

.8.3.3 Delete the subparagraph 8.3.3

## **E.1-09 ARTICLE 9: PAYMENTS AND COMPLETION**

**Note: The General Contractor and sub contractors are to plan on payments being made 30 days after approved application of payment is submitted to the owner.**

3. Applications for Payment

9.3.1 Add the following sentence to subparagraph 9.3.1: "The form of application for payment shall be a notarized AIA Document G702, Application and Certification for Payment, supported by AIA Document G703, Continuation Sheet.

Add the following clause 9.3.1.3 to subparagraph 9.3.1:

9.3.1.3 Until substantial completion, the owner shall pay 90% of the amount due the contractor on account of progress payments.

## 9.8 Substantial Completion

9.8.3 Add the following sentences at the end of subparagraph 9.8.3.

The payment shall be sufficient to increase the total to 100% of the contract sum, less such amounts as the architect shall determine for incomplete work and unsettled claims.

## 9.10 Final Completion and Final Payment

Add the following subparagraph to 9.10.5 to paragraph 9.10:

9.10.5 As a prerequisite to final payment, the contractor shall submit the following items to the architect, properly executed:

1. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
2. AIA Document G706A, "Contractors Affidavit of Release of Lien", conditional upon receipt of final payment
3. AIA Document G707, "Consent of Surety to Final Payment"
4. Guarantee by contractor and each subcontractor that the work will be free of defects in materials and workmanship for a period of one (1) year, except as otherwise specified. Form of guarantee shall be as included herein.

## **E.1-10 ARTICLE 10: PROTECTION OF PERSONS AND PROPERTY**

### 10.1 Safety Precautions and Programs

Add the following subparagraph 10.1.1 to paragraph 10.1

10.1.1 The contractor will implement interim life safety measures to compensate for hazard posed by construction. The interim life safety measures will be maintained during the construction period so that life safety is not diminished in any occupied area; furthermore, to maintain a safe environment in the construction and adjacent areas.



Interim life safety measures will be implemented at project construction development and will be continuously enforced through construction completion.

## 10.2 Safety of Persons and Property

Add the following subparagraphs 10.2.4.1 and 10.2.4.2 to paragraph 10.2.4:

10.2.4.1 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary the contractor shall give the owner reasonable advance notice and secure owner's written approval.

10.2.4.2 Contractor shall comply with OSHA Hazardous Communication Standard as described in the Code of Federal Regulations 29, part 1910.1200, effective May 23, 1988.

## **E.1-11 ARTICLE 11: INSURANCE AND BONDS**

### 11.1 Contractor's Liability Insurance

11.1.1.1 Delete the semicolon at the end of Clause 11.1.1.1 and add: "including private entities performing work at the site and exempt for the coverage on account of number of employees or occupation, which entities shall maintain voluntary compensation coverage at the same limits specified for mandatory coverages for the duration of the project."

11.1.1.2 Delete the semicolon at the end of clause 11.1.1.2 and add: "or persons or entities excluded by statute from the requirements and clause 11.1.1.1 but required by the contract documents to provide the insurance required by that clause."

Add the following clauses 11.1.1.9 and 11.1.1.10 to 11.1.1:

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

1. Premises Operations (including X, C, U, coverages as applicable)
2. Independent Contractor's Protective
3. Products and Completed Operations
4. Personal Injury Liability with Employment Exclusion deleted
5. Contractual, including specified provision for contractor's obligation under paragraph 3.18
6. Owned, non-owned and hired motor vehicles.
7. Broad Form Property Damage including Completed Operations.

11.1.1.10 If the general liability coverage are provided by a commercial general liability policy on a claims-made basis, the policy date or retroactive date shall predate the contract, the termination date of the policy or applicable extended reporting period shall be no earlier than the termination date of coverages required to be maintained after final payment, certified in accordance with subparagraph 9.10.2.

Add the following clause 11.1.2.1 to subparagraph 11.1.2:

11.1.2.1 The insurance required by subparagraph 11.1.1 shall be written for not less than the following limits, or greater if required by law:

1. Workers' Compensation:
  - a. State: Statutory
  - b. Applicable Federal (i.e. Longshoremen's): Statutory
  - c. Employer's Liability \$500,000 per accident; \$500,000 Disease Policy Limit; 500,000 Disease each employee
  
2. Comprehensive or Commercial General Liability (including premises operations, independent contractor's protective, products and completed operations, broad form property damage)
  - a. Bodily Injury  
\$1,000,000 each occurrence  
\$1,000,000 aggregate
  - b. Property Damage  
\$1,000,000 each occurrence  
\$1,000,000 aggregate
  - c. Products and Completed Operations to be maintained for 7 years after final payment.
  - d. Property Damage Liability Insurance shall provide X, C, and U coverage.
  - e. Broad Form Property Damage Coverage shall include completed operations.
  
3. Contractual Liability:
  - a. Bodily Injury:  
\$1,000,000 each occurrence  
\$1,000,000 aggregate
  - b. Property Damage  
\$1,000,000 each occurrence  
\$1,000,000 aggregate
  
4. Personal Injury with Employment Exclusion deleted:  
\$1,000,000 aggregate
  
5. Business Auto Liability (including owned, non-owned and hired vehicles):
  - a. Bodily Injury:  
\$1,000,000 each occurrence  
\$1,000,000 aggregate
  - b. Property Damage:

\$1,000,000 each occurrence

6. If the general liability coverages are provided by a commercial liability policy, the:
  - a. General aggregate shall be not less than \$1,000,000 and it shall apply, in total, to this project only.
  - b. Fire damage limit shall be not less than \$500,000 on any one fire.
  - c. Medical expense limit shall be not less than \$5,000 on any one person.
  
7. Umbrella Excess Liability:  
\$1,000,000 over primary insurance

11.1.3 Add the following sentence to subparagraph 11.1.3:

If this insurance is written on the Comprehensive General Liability policy form, the certificates shall be AIA Document G705, Certificate of Insurance. If this insurance is written on a commercial general liability policy form, ACORD form 25S will be acceptable.

11.2 Owner's Liability Insurance

- 11.2.1 Delete 11.2 and substitute the following: "The contractor shall purchase and maintain insurance covering the owner's contingent liability for claims which may arise from operations under the contract."

11.3 Property Insurance

- 11.3.1 Modify the first sentence of subparagraph 11.3.1 as follows: Delete "Unless otherwise provided, the owner" and substitute "the Contractor".

Add the following sentences: The form of policy for this coverage shall be completed value. If the owner is damaged by the failure of the contractor to maintain such insurance, then the contractor shall bear all reasonable cost properly attributable thereto.

- 11.3.1.2 Delete clause 11.3.1.2

- 11.3.1.3 Delete clause 11.3.1.3

- 11.3.4 Delete subparagraph 11.3.4

- 11.3.5 Delete subparagraph 11.3.5

Delete subparagraph 11.3.6 and substitute the following:

- 11.3.6 Before an exposure to loss may occur, the contractor shall file with the owner two certified copies of the policy or policies providing this property insurance coverage, each containing those endorsements specifically related to the project. Each policy shall contain a provision that the policy

will not be cancelled or allowed to expire until at least 30 days prior written notice has been given to the contractor.

11.3.8 Modify subparagraph 11.3.8 by substituting "Contractor" for "Owner" as fiduciary; except that the first reference to "Owner" in the first sentence, the word "this" should be substituted for "Owner's".

11.3.9 Modify subparagraph 11.3.9 by substituting "Contractor" for "Owner" each time the latter word appears.

11.3.10 Modify subparagraph 11.3.10 by substituting "Contractor" for "Owner" each time the latter word appears.

Delete the last sentence

11.4 Performance Bond and Payment Bond

Delete subparagraph 11.4.1 and substitute the following:

11.4.1 The contractor shall furnish bonds covering faithful performance of the contract and payment of obligations arising there under. Bonds may be obtained through the contractor's usual source and the cost there of shall be included in the contract sum. The amount of each bond shall be equal to 100% of the contract sum.

11.4.1.1 The contractor shall deliver the required bonds to the owner not later than 3 days following the date the agreement is entered into, or if the work is to be commenced prior thereto in response to a letter of intent, the contractor shall, prior to the commencement of the work, submit evidence satisfactory to the owner that such bonds will be furnished.

11.4.1.2 The contractor shall require the attorney-in-fact who executed the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

## **E.1-13 ARTICLE 13: MISCELLANEOUS PROVISIONS**

13.5 Test and Inspections

13.5.1 Modify the last sentence of subparagraph 13.5.1 by deleting the word "Owner" and substituting "Contractor" in its place.

Add the following paragraph 13.8 to Article 13:

13.8 Equal Opportunity

13.8.1 The contractor shall maintain policies of employment as follows:

13.8.1.1 The contractor and contractor's subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, sex, national origin, age, veteran's status, or handicapped (when otherwise qualified). The contractor shall take affirmative action to insure that applicants are employed and that employees are treated during employment without regard to their race, religion, sex, national origin, age, veteran's status, or handicap (when otherwise qualified). Such action shall include but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the policies of nondiscrimination.

13.8.1.2 The contractor and the contractor's subcontractors shall, in all solicitations or advertisements for employees placed by them or on their behalf, state consideration for employment without regard to race, religion, sex, national origin, age, veteran's status or handicap (when otherwise qualified).

## 13.9 CODES

### 13.9.1 INTERNATIONAL BUILDING CODE

The 2018 Edition of the International Building Code with all amendments including State of Georgia amendments as of date of opening of bids shall govern the construction of this project and is adopted and incorporated into the Contract Documents and is made a part thereof by reference, provided, however: That the drawings and specifications shall be adhered to in all cases where they call for quality of materials, quality of workmanship, or quality of construction which is equal to or in excess of the quality required by the International Building Code, and provided also; that there shall be no variances from the plans and specifications except to the extent that the said variances shall be necessary in order to comply with the International Building Code. It shall be the responsibility of the contractor to familiarize himself or herself with the requirements of the International Building Code. If there are any expressed requirements in the plans and/or specifications which are at variance to the International Building Code, all changes in the work, necessary to eliminate the said requirements and make the work conform to the International Building Code shall be adjusted as provided in the contract for changes in the work.

### 13.8.2 INTERNATIONAL PLUMBING CODE

The 2018 Edition of the International Plumbing Code with all amendments and State of Georgia Amendments as of date of opening of bids shall govern the installation of all work and is adopted and incorporated into the Contract Documents and is made a part thereof by reference, provided, however: That the drawings and specifications shall be adhered to in all cases where they call for quality of materials, quality of workmanship, or quality of construction which is equal to or in excess of the quality required by the International Plumbing Code, and provided also; that there shall be no variances from the plans and specifications except to the extent that the said variances shall be necessary in order to comply with the International Plumbing Code. It shall be the responsibility of the contractor to familiarize himself or herself with the requirements of the International Plumbing Code. If there are any expressed requirements in the plans and/or specifications which are at variance to the International Plumbing Code, all changes in the work, necessary to eliminate the said

requirements and make the work conform to the International Plumbing Code shall be adjusted as provided in the contract for changes in the work.

### 13.8.3 INTERNATIONAL FUEL GAS CODE

The 2018 Edition of the International Fuel Gas Code with all amendments and State of Georgia Amendments as of date of opening of bids shall govern the construction of this project and is adopted and incorporated into the Contract Documents and is made a part thereof by reference, provided, however: That the drawings and specifications shall be adhered to in all cases where they call for quality of materials, quality of workmanship, or quality of construction which is equal to or in excess of the quality required by the International Fuel Gas Code, and provided also; that there shall be no variances from the plans and specifications except to the extent that the said variances shall be necessary in order to comply with the International Fuel Gas Code. It shall be the responsibility of the contractor to familiarize himself or herself with the requirements of the International Fuel Gas Code. If there are any expressed requirements in the plans and/or specifications which are at variance to the International Fuel Gas Code, all changes in the work, necessary to eliminate the said requirements and make the work conform to the Standard Fuel Gas Code shall be adjusted as provided in the contract for changes in the work.

### 13.8.4 NATIONAL ELECTRICAL CODE

The 2017 Edition of the National Electrical Code with all amendments as of date of opening of bids shall govern the construction of this project and is adopted and incorporated into the Contract Documents and is made a part thereof by reference, provided, however: That the drawings and specifications shall be adhered to in all cases where they call for quality of materials, quality of workmanship, or quality of construction which is equal to or in excess of the quality required by the National Electrical Code, and provided also; that there shall be no variances from the plans and specifications except to the extent that the said variances shall be necessary in order to comply with the National Electrical Code. It shall be the responsibility of the contractor to familiarize himself or herself with the requirements of the National Electrical Code. If there are any expressed requirements in the plans and/or specifications which are at variance to the National Electrical Code, all changes in the work, necessary to eliminate the said requirements and make the work conform to the National Electrical Code shall be adjusted as provided in the contract for changes in the work.

### 13.8.5 LIFE SAFETY CODE

The Life Safety Code, NFPA 101 shall govern the construction of this project and is adopted and incorporated into the Contract Documents and is made a part thereof by reference, provided, however: That the drawings and specifications shall be adhered to in all cases where they call for quality of workmanship, or quality of construction which is equal to or in excess of the quality required by the Life Safety Code, and provided also; that there shall be no variances from the plans and specifications except to the extent that the said variances shall be necessary in order to comply with the Life Safety Code. It shall be the responsibility of the contractor to familiarize himself or herself with the requirements of the Life Safety Code. If there are any expressed requirements in the plans and/or specifications which are at variance to the Life Safety Code, all changes in the work, necessary

to eliminate the said requirements and make the work conform to the Life Safety Code shall be adjusted as provided in the contract for changes in the work.

#### 13.8.6 INTERNATIONAL MECHANICAL CODE

The 2018 Edition of the International Mechanical Code with all amendments and State of Georgia Amendments as of date of opening of bids shall govern the construction of this project and is adopted and incorporated into the Contract Documents and is made a part thereof by reference, provided, however: That the drawings and specifications shall be adhered to in all cases where they call for quality of materials, quality of workmanship, or quality of construction which is equal to or in excess of the quality required by the International Mechanical Code, and provided also; that there shall be no variances from the plans and specifications except to the extent that the said variances shall be necessary in order to comply with the International Mechanical Code. It shall be the responsibility of the contractor to familiarize himself or herself with the requirements of the International Mechanical Code. If there are any expressed requirements in the plans and/or specifications which are at variance to the International Mechanical Code, all changes in the work, necessary to eliminate the said requirements and make the work conform to the International Mechanical Code shall be adjusted as provided in the contract for changes in the work.

#### 13.8.7 AMERICANS WITH DISABILITIES ACT OF 2010

The American With Disabilities Act Of 2010 with all amendments as of the date of the opening of bids shall govern the installation of all work and is adopted and incorporated into the Contract Documents and is made a part thereof by reference, provided, however: that the drawings and specifications shall be adhered to in all cases where they call for quality of materials, quality of workmanship, or quality of construction which is equal to or in excess of the quality required by the Americans With Disabilities Act Of 2010, and provided also; that there shall be no variances from the plans and specifications except to the extent that the said variances shall be necessary in order to comply with the Americans With Disabilities Act Of 2010. It shall be the responsibility of the contractor to familiarize himself or herself with the requirements of the Americans With Disabilities Act Of 2010. If there are any expressed requirements in the plans and/or specifications which are at variance to the American With Disabilities Act Of 2010, all changes in the work, necessary to eliminate the said requirements and make the work conform to the Americans With Disabilities Act Of 2010 shall be adjusted as provided in the contract for changes in the work.

### **E.1-14 ARTICLE 14: TERMINATION / SUSPENSION OF THE CONTRACT**

14.4.3 Modify subparagraph 14.4.3. Delete the following "along with reasonable overhead and profit on the work not executed."

#### **END OF SECTION E.1**

## SECTION F - SPECIAL CONDITIONS

### 1. OWNER'S REPRESENTATIVE

- A. The Owner's Representative shall be **Bill Bulloch, Asst. City Manager**. All documentation required by the specifications to be submitted to the "Owner" shall be submitted to the Architect for transmittal to the Owner.
- B. All instructions and requests for changes from the Owner to the contractor will be issued through the "Architect" PROVIDED: that the Engineer shall not have the authority to authorize changes in the work which shall mean changes to the contract sum. PROVIDED FURTHER: that the "Engineer" will request and review Contractor's proposal for such changes and will submit recommendations to the owner for issuance for change orders.
- C. Changes in the contract sum shall be authorized in writing solely by the Owner.
- D. Except as provided herein above, the contractor shall disregard any instructions from persons other than "Architect".
- E. Should a situation arise, in conflict with these requirements, the contractor shall notify the "Architect" immediately.
- F. The Contractor shall bear all costs incurred by his failure to follow the instructions contained in paragraphs A, B, C, D, E above.

### 2. UTILITIES: SEE SECTION 01501 - Temporary Facilities and Controls

### 3. STORAGE AREAS

- A. Location: Space for materials storage at the site is limited. Storage of all items shall be at the discretion of the contractor as designated by the Owner. Provide storage trailers as required. At completion of the work, material and debris shall be removed.
- B. Storage: All materials not used at the end of the day shall be returned to the designated storage areas.

### 4. EXISTING CONDITIONS: The Contractor, in undertaking the work under this contract, is assumed to have visited the premises and to have taken into consideration all conditions which might affect his work. No consideration will be given any claim based on lack of knowledge of existing conditions except where the contract documents make definite provisions for adjustment of cost or extension of time due to existing conditions which cannot be readily ascertained.

Existing utilities shall not be interrupted or disturbed in any way without the written approval of the Owner of the utility in question. All liability shall be borne by the Contractor and he or she shall save the



Owner and the Architect and their agents and employees harmless from all claims arising out of the unauthorized interruption or disturbance of any existing utility.

All workers shall be expected to exhibit acceptable behavior and dress.

5. ACTS AND EXECUTIVE ORDERS: The contractor, by signing the contract, acknowledges that he or she is aware of and familiar with the contents and requirements of the following acts and executive orders:

A. High Voltage Act

B. Underground Gas Pipe Law - Georgia law 1969, PP.50-57.

C. Williams Steiger Occupational Safety and Health Act of 1970.

D. The non-discrimination clause contained in Section 202 Executive Order 11246 as amended by Executive order 11375 relative to Equal Opportunity for all persons without regard to race, color, religion, sex or national origin and the implementing rules and regulations described by the Secretary of Labor are incorporated.

E. Public Employee Hazardous Chemical Protection and Right To Know Act: O.C.G.A. Sec. 45.22 (1988 H.B.No.503).3.

F. Drug Free Workplace Act - O.C.G.A. Sec.50-24 (2010 H.B.No.9).

G. State of Georgia "Call-Before-You-Dig-" Law. Requirements following:

1. Notification must be made to the Utilities Protection Center 2010 Lakeside Parkway, Tucker, Georgia 30084. Telephone No. 800-282-7411 during UPC business days Monday through Friday (excluding holidays), during business hours of 7:00a.m. to 4:00 p.m.
2. The call must be made 72 hours prior to excavation and must include location of excavation, name, address, and phone number of the company or person excavating, type of excavation and start date.
3. If the excavation is not finished in 17 days, additional notice must be given no later than 14 days from the day of the first notification.
4. If blasting is required after notice is given, Contractor must call back to update location request or "ticket".
5. This law applies to all mechanized equipment, from drag lines to pile drives.
6. All electric, gas, telephone, and cable TV utilities in the state are required to be members of the UPC. If underground facilities are cut that belong to a utility that is required to be UPC member, but is not, the Contractor is not liable.

7. Violators can be fined from \$1,000 to \$3,000 plus the cost of replacing or repairing damaged facilities and any injury to persons or property.
6. ACCESS TO PREMISES: Ingress and egress shall be limited to the construction entrance as shown on the drawings to the subject work areas. Any debris dropped or tracked outside of areas in which work is being done, shall be immediately cleaned up.
7. SUBMITTALS: The Contractor agrees that submittals of equipment and material and submittals of shop drawings of equipment and materials layouts required from the Contractor under provisions of these specifications and processed by the Architect are not Change Orders and that the purpose of the said submittals by the Contractor is to demonstrate the Contractor understands the design concept of the project by indicating which equipment and materials he or she intends to furnish and install and by detailing the installation he or she intends to achieve.
8. SHOP DRAWINGS:

A. General: The contractor shall check data to ensure compliance with specifications and check and verify field measurements, and shall review, approve and stamp each copy submitted with date and name of person making review before submitting them to the Architect. Six copies of all shop drawings shall be submitted to the Architect, four (4) of which will be returned to the Contractor and one (1) copy to the Owner's Representative. Where additional copies are required by the Contractor, the extra copies shall be furnished accordingly. Sufficient copies for maintenance manuals shall be submitted.

B. Identification: All submittal data shall be identified to show project name, specification section, drawing or detail number, room number, date, revision date, contractor and subcontractor's name, and the model, style and size of item being submitted. Manufacturer's standard drawings shall be modified by deletions or additions to show clearly only items applicable to this project.

C. Review.

1. The Contractor agrees that submittals of equipment and material and shop drawings of equipment and material layouts required under provisions of these specifications and processed by the Architect are not Change Orders. The purpose of submittals is to demonstrate that the Contractor understands the design concept of the project by indicating the equipment and materials he or she intends to furnish and install, and by detailing the installation he or she intends to achieve.

2. The Contractor shall conform to the requirements of the Contract Documents unless a change order or a specific letter of clarification is issued. The Contractor shall identify on each submittal and in letter form to the Architect any and all deviations from the contract documents.

3. Any submittal or shop drawings not conforming to the contract documents without this identification and notification shall be assumed to be marked "Revise and Resubmit",

and the contractor shall promptly re-submit said submittal so as to be in full compliance with the contract documents.

4. Failure of the Contractor to provide this information during the shop drawings phase shall make the Contractor responsible for all changes to achieve compliance with the contract documents.

9. SCHEDULING AND PHASING OF WORK: After award of contract, a pre-construction meeting shall be held at the site between the Owner's representative, representative of the Contractor, and representatives of the Architect to review the project and set up the approximate work schedule. With ten (10) days of this meeting, the Contractor shall submit five (5) typed copies of the work sequence schedule, showing proposed dates of beginning completion milestones and completing work, to the Architect for approval. A CPM schedule will also be required, subject to Architect's approval.

#### 10. VANDALISM

The Contractor shall take every precaution not to leave equipment and materials where they can be reached and used for defacing new or existing work at any time and in particular at night and on the weekends.

#### 11. PROGRESS REPORTS:

- A. Prior to submitting the first periodical estimate, the contractor shall have furnished to the Owner and the Architect, a construction progress schedule that outlines each phase of work. The Contractor shall adhere to the schedule and update it prior to each subsequent request for payment. Failure to adhere to the schedule shall be admittance on the part of the Contractor that he or she is behind schedule and corrective steps, at no cost to the Owner, must be taken to bring the job back on schedule.
- B. Cost Breakdown: Contractor shall furnish a complete cost breakdown for all materials installed and for each phase of the work. The cost of breakdown will be furnished prior to the first request for payment. This cost breakdown will reflect the Project Schedule and illustrate the estimated monthly Request for Payment.

#### 12. COMMUNICATIONS:

- A. All notices, demands, requests, instructions, approvals, proposals and claims must be in writing. Requests for clarifications and instruction concerning the drawings or specifications shall be submitted to the Architect by mail or facsimile transmission on the Request For Information form in Sect. I. Only written and signed instructions will be considered binding and a part of the Construction Documents.
- B. Any notice to demand, request instruction to, proposal to, or claim upon the Contractor shall be sufficiently given if delivered at the office of the Contractor stated in Owner-Contractor Agreement (or at such office as he may designate in writing to the Owner), or deposited in the United States mail

in a sealed, postage paid envelope, or if delivered with charges prepaid to any telegraph company or transmission, in each case addressed to said office.

- C. All papers required to be delivered to the Owner shall, unless otherwise specified in writing by the Contractor, be delivered to:

**Bill Bulloch, Asst. City Manager**  
**200 Ridley Ave**  
**LaGrange, GA 30240**

and any notice to, demand, request, instruction, approval, proposal, or claim upon the Owner shall be sufficiently given if delivered, or deposited in the United States mail in a sealed, postage paid envelope, or delivered charges prepaid to any telegraph company for transmission to said individual at said address or such other representatives of the Owner may subsequently specify in writing to the Contractor for such purpose.

- D. All papers required to be delivered to the Architect shall be delivered to:

SMITH DESIGN GROUP, INC.  
206 WEST HARALSON STREET  
LaGRANGE, GEORGIA 30240

and any notice to, demand, request, proposal, or claim upon the Architect shall be sufficiently given if delivered, or deposited in the United States mail in a sealed, postage paid envelope, or delivered charges prepaid to any telegraph company for transmission to said Architect at said address.

- E. Any notice, demand, request, instruction, approval, proposal, or claim shall be deemed to have been given as of the time of actual delivery or (in case of mailing) when the same should have been received in due course of post, or in the case of telegrams, at the time of actual receipt, as the case may be.

### 13. LAYING OUT WORK:

The Contractor shall verify all existing conditions and contiguous work and lay out his or her work therefrom, providing for himself all other necessary measurements, lines and levels, and shall assume the responsibility for the correctness of the laying out of the work.

### 14. EXISTING PLANTING:

Construct protective tree fencing as described in the construction documents as indicated around tree save area. Storage or parking in the areas is not allowed.

### 15. SIGNS:

The Contractor shall cause no signs to be displayed at the site unless specifically authorized in writing by the Owner, except however, the Contractor shall furnish, erect and maintain such signs required by safety regulation to safeguard life and property.

16. NOTIFICATION TO OWNER WHEN CONTRACTOR VISITS SITE AFTER FINAL INSPECTION:

- A. When the Contractor's representative visits the job site after the final inspection to perform specific work such as maintenance service, seasonal balance, or to correct a deficiency, the Contractor shall notify the Owner not less than 48 hours prior to the date on which they will visit the site, except under an emergency condition.
- B. The Contractor shall visit the designated office of the Owner to notify the Owner that the Contractor is on the site prior to visiting the site, thereby enabling the Owner representative to accompany the Contractor, should they so desire while the Contractor is on the project site.
- C. An exact copy of the notification shall be provided to the Architect with the intent of the site visit. After the Contractor has completed the site visit, the Contractor shall give a written report of the action taken and any incomplete work yet to be performed to the Architect within five (5) days.

17. FIRE MARSHAL DRAWINGS:

- A. The Architect will deliver to the Contractor the set of drawings approved by the Fire Marshal. The Contractor shall maintain custody of these documents in a clean, unmarked condition at the job site for ready reference by the Fire Marshal during job visits.
- B. This set of documents shall be returned to the Architect with the Final Request for Payment and the Certificate of Occupancy by the Fire Marshal or receipt for same.
- C. The Contractor is subject to a fine of \$1500 by the State Fire Marshal if a Fire Marshal representative visits the job site and the Fire Marshal approved plans and specifications are not available.

18. ALL GLASS - FIBER PRODUCTS, INCLUDING INSULATION

All Glass-Fiber products, including insulation are to carry carcinogen warning labels as required by the Department of Labor.

19. HAZARDOUS MATERIALS:

- A. A/E's Responsibility: Plans and specification have been prepared by the A/E for the Owner without the A/E having conducted investigation as to the presence of asbestos or hazardous waste on the project. Not being a part of this contract, the A/E has not charged any fees and has not and will not advise the Owner with regard to the detection and/or removal of asbestos or hazardous waste. the Owner is aware that asbestos or hazardous waste could be present and will make all decisions with regard to its removal. The removal of all hazardous materials and encapsulation of remaining surfaces is the sole responsibility of the Owner.

B. Friable Materials: If the Contractor observes the existence of friable materials which must be disturbed during the course of his work, Contractor shall promptly notify Owner and Architect. Owner shall make all arrangements regarding testing and removal or encapsulation of asbestos materials if present. The Contractor shall not perform any work pertinent to the friable material prior to receipt of special instructions from the Owner through the Architect. "Friable Material" is any material which can be crumbled, pulverized or reduced to a powder by hand pressure when dry.

20. ASBESTOS (ACBM):

A. Specifications written for equipment and materials in the specifications are intended to eliminate any asbestos containing substance. The Contractor and his suppliers are hereby notified that NO ASBESTOS CONTAINING PRODUCT IS PERMITTED. If a product is listed in these specifications which contain asbestos, the Contractor and his or her supplier shall so inform the A/E immediately and shall not deliver such product to the project site until additional written instructions are received.

B. Upon completion of construction, and prior to final inspection, the Contractor(s) for work performed under this division of the specifications shall be required to provide a certificate to the A/E in the following form:

CERTIFICATION FOR ASBESTOS CONTAINMENT

I / we \_\_\_\_\_  
(Sub-contractor)

certify that there is no asbestos contained in materials provided and/or installed by us in

\_\_\_\_\_  
(Project / Building)

WITNESS: \_\_\_\_\_ DATE: \_\_\_\_\_  
(Notary Public)

CONTRACTOR: \_\_\_\_\_

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

21. NOTIFICATION OF JOB SITE OBSERVATIONS

Recommended observations by Mechanical / Electrical Engineers at the following stages of construction for a Mechanical / Electrical design project. General contractor to notify Architect 48 hours prior to each of the following:

A. Plumbing:

1. First major portion of underfloor piping before being covered.
2. Roughing of water, waste and vent piping for first major toilet battery.

3. All overhead piping upon completion of pipe insulation and prior to insulation of ceiling.
- B. Air Conditioning:
1. First major portion of ductwork prior to being insulated.
  2. First major portion of piping prior to being insulated.
  3. All overhead ductwork and piping upon completion of insulation but prior to installation of ceiling.
- C. Electrical:
1. Substantially completed conduit system prior to wire pulling.
  2. Completion of major wire pulling and energizing of distribution panels.
  3. Substantially completed installation of lighting fixtures prior to installation of ceiling.
- D. Fire Protection: All overhead piping prior to installation of ceiling.
- E. All Systems:
1. Upon written notification of the contractor that the installation is 100% complete.
  2. A second inspection to insure that all items noted at final inspections have been corrected.

**END OF SECTION F**

## SECTION G - STATEMENT OF WORK

### G-01 WORK TO BE DONE

The work covered by this contract consists of furnishing all plant, labor, equipment, and materials and performing all operations required to accomplish all the work required by the Project Manual entitled, "**LaFayette Court Square Street Scape Enhancements**", and the Drawings similarly entitled, all dated **09 NOV 2020** in strict accordance therewith and subject to the terms and conditions of the Contract.

### G-02 DESCRIPTION AND LOCATION OF SITE:

1. The site of this work is located at **Northeast corner of LaFayette Court Square, LaGrange, GA. 30240.**
2. Verify with Owner exact location of storage trailer and equipment.

### G-03 ACCESS TO PROPERTY:

Access to the property is **TBD**.

## END OF SECTION G



## **SECTION H - PROJECT CLOSE-OUT**

### **H-01 GENERAL:**

In order to insure an orderly and efficient transfer of the project to the Owner, prepare, assemble and transmit to the Architect the closing documents hereinafter described.

### **H-02 TIME OF TRANSMITTAL:**

After receiving the Certificate of Substantial Completion and in no case, not later than the date of the Contractor's request for Final Inspection, the Contractor shall transmit to the Architect the closing documents. Final inspection will not take place until all required closing documents have been received by the Architect.

### **H-03 NUMBER OF COPIES:**

Unless specifically noted otherwise hereinafter, three copies of all closing documents shall be submitted.

### **H-04 IDENTIFICATION:**

All bound documents shall be identified by the use of an embossed plastic tape on the front cover, showing the project name and number, the nature of the information contained in the document (i.e. A/C Maintenance Manual for Roof Mounted Units, A/C1, A/C2, etc.), name of General Contractor and name of Subcontractor who made the installation.

### **H-05 REQUIRED PRIOR TO FINAL PAYMENTS**

1. "As-Built Plans" - **One Set**
2. Warranty by General Contractor - **Three Copies**
3. Contractor's Affidavit of Payment of Debts and Claims - **Three Copies**
4. Contractor's Affidavit of Release of Liens - **Three Copies**
5. Statutory Affidavit - **Three Copies**
6. Non-Influence Affidavit - **Three Copies**
7. Sealants Five Year Warranty - **Three Copies**
8. Roof System Warranty - **Three Copies**

### **H-06 REQUIRED CLOSING DOCUMENTS:**

- 5.1 Warranty by Roofing Contractor: Sample form is included in Section I of this project manual.

5.2 Statutory Affidavit by Roofing Contractor: Sample form is included in Section I of this project manual.

5.3 Non-influence Affidavit by Roofing Contractor: Sample form is included in Section I of this project manual.

5.4 Inspection Reports: The Contractor shall contact each of the agencies to set up inspections. The Contractor shall secure and submit to the Owner, a Certification from the local Governmental Agency or Agencies that the construction has been inspected as required by laws or ordinances and that the building (buildings) is (are) acceptable to the following authorities:

- a. Local Building Inspector (where applicable)
- b. Local Plumbing Inspector (where applicable)
- c. Local Electrical Inspector (where applicable)
- d. Local Fire Marshal w / occupancy permit
- e. State Elevator Inspector (where applicable)
- f. State Health Department (where applicable)

5.5 Project Record Documents: (one copy)

Contractor's attention is called to Section 01502 of this project manual for a complete description of the required documents.

5.6 Maintenance and Operation Manuals & Parts List:

Contractor's attention is called to the fact that various sections of this project manual require that maintenance manuals, operation manuals and parts list are to be furnished.

5.7 Warranties for Items Beyond One Year Limit:

The following items generally require a warranty in excess of the normal "one year" guarantee and are so described in various sections of this project manual; this list is not necessary all inclusive and should any warranties called for in a section of this project manual be omitted from the following list, the section requirement shall govern:

- a. 5 year warranty on workmanship

## **H-07 CHECK - OFF LIST:**

*General Contractor is to submit all close-out documents in bound and permanently labeled 3-ring notebooks and as-built drawings together at one time prior to Architect's approval of release of any retainage. Please see Section H-05 "Required for Final Payment" for check off list. Additional items may be required due to job specific requirements.*

## **END OF SECTION H**

## SECTION I - SAMPLE FORMS

### I-01 GENERAL

The Bidding Documents make reference to various forms that are required to be executed as a part of work of the project.

### I-02 FORMS

1. The specimen forms are included hereinafter for the bidders information only:
  - A. Statutory Affidavit
  - B. Warranty by General Contractor
  - C. Non-Influence Affidavit
  - D. Certificate of Final Completion
  - E. Change Order Form
  - F. Modification to Standard Form of Agreement (NOT INCLUDED)
  - G. Progress Schedule (example) (NOT INCLUDED)
  - \* H. Certificate of the Contractor of his duly authorized representative, DE Form 0263, revised Jan. 1990 (NOT INCLUDED)
  - \* I. Summary of Materials Stored, DE Form 0264 (NOT INCLUDED)
  - \* J. Schedule of Change Orders, DE Form 0265 (NOT INCLUDED)
  - K. Request For Information
  - l. Subcontractor / Vendor Directory
  
- \* Indicates that these forms are to be used with Application and Certificate for Payment, AIA Document G702 (See also Article 1-02, .2, e and f of this section).
  
2. The following documents are not bound herein, however upon written request, the Architect will furnish any Bidder a copy of any of the documents listed:
  - a. Bid Bond, AIA Document A310.
  - b. Standard Form of Agreement between Owner and Contractor where the Basis of Payment is a Stipulated Sum, AIA Document A101.
  - c. Performance Bond and Payment, AIA Document A312.
  - d. Certificate of Insurance, AIA Document G705
  - e. Application and Certificate for Payment, AIA Document G702.
  - f. Continuation Sheet, AIA Document G703.
  - g. Certification of Substantial Completion, AIA Document G704.
  - h. Contractor's Affidavit of Release of Lien's, AIA Document G706.

## END OF SECTION I

## END OF PART 1 - GENERAL REQUIREMENTS

STATUTORY AFFIDAVIT

SPECIMEN A

COUNTY OF \_\_\_\_\_

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

FROM \_\_\_\_\_ (Contractor)

TO \_\_\_\_\_ (Owner)

Re: Contract entered into the \_\_\_\_\_ day of \_\_\_\_\_, 2015, between the above-mentioned parties for the construction of a \_\_\_\_\_ at \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS:

- 1. The undersigned hereby certifies that all work required under the above contract has been performed in accordance with the terms thereof, that all materialmen, subcontractors, mechanics, and laborers have been paid and satisfied in full, and that there are no outstanding claims of any character (including disputed claims or any claims to which the contractor has or will assert any defense) arising out of the performance of the contract which have not been paid and satisfied in full,
2. The undersigned further certifies that to the best of his knowledge and belief there are no unsatisfied claims for damages resulting from injury or death to any employees, subcontractors, or the public at large arising out of the performance of the contract, or any suits or claims for any other damage of any kind, nature, or description which might constitute a lien upon the property of the owner.
3. The undersigned makes this affidavit for the purpose of receiving final payment in full settlement of all claims against the owner arising under or by virtue of the contract, and acceptance of such payment is acknowledged as a release of the owner from any and all claims arising under or by virtue of the contract.

This \_\_\_\_\_ day of \_\_\_\_\_, 2015.

\_\_\_\_\_(L.S.)

Signature

Title

COUNTY OF \_\_\_\_\_

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

Firm

Personally before me, the undersigned authority, appeared \_\_\_\_\_ who is known to me to be an official of the firm of \_\_\_\_\_, who, after being duly sworn, stated on his oath that he had read the above statement and that the same is true and correct.

Notary Public

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

This \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

# WARRANTY BY GENERAL CONTRACTOR

SPECIMEN B

**PROJECT:**  
(name,address)

**ARCHITECT:**

**TO (Owner)**

**ARCHITECT'S PROJECT NUMBER:**

**CONTRACTOR:**  
**CONTRACT FOR:**

**DATE OF ISSUANCE:**

**CONTRACT DATE:**

\_\_\_\_\_, as General Contractor on the above job do hereby guarantee that all work executed under the Plans and Specifications will be free from defects of materials and/or workmanship for a period of, \_\_\_\_\_ beginning \_\_\_\_\_ and ending \_\_\_\_\_ and that all defects occurring within the warranty period shall be replaced or repaired at no cost to the Owner.

This guarantee covers all work as shown on the Plans and specified in the Specifications and Contract Documents.

Nothing in the above shall be deemed to imply that this guarantee shall apply to any work which has been abused or neglected by the Owner.

Legal Name of Contractor

\_\_\_\_\_

**BY:**

\_\_\_\_\_

**TITLE:**

\_\_\_\_\_

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

This \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_ .

**NON-INFLUENCE AFFIDAVIT**

SPECIMEN C

COUNTY OF \_\_\_\_\_

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

FROM \_\_\_\_\_

(Contractor)

TO \_\_\_\_\_

(Owner)

Re: Contract entered into the \_\_\_\_\_ day of \_\_\_\_\_, 2015, between the above-mentioned parties for the construction of a \_\_\_\_\_ at \_\_\_\_\_

**KNOW ALL MEN BY THESE PRESENTS:**

I do solemnly swear on my oath that as to the contract dated \_\_\_\_\_, 20\_\_\_\_, between \_\_\_\_\_ and the \_\_\_\_\_

I have no knowlege of the exertion of any influence or the attempted exertion of any influence on the firm on behalf of which this affidavit is made in any way, manner, or form in the purchase of materials, equipment, or other items involved in construction, manufacture, or employment of labor under the aforesaid contract by the Owner or any employee of the Owner, or any person connected with the Owner in any way whatsoever.

In witness whereof, the undersigned has signed and sealed this instrument

This \_\_\_\_\_ day of \_\_\_\_\_, 2015.

(L.S.)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

COUNTY OF \_\_\_\_\_

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

\_\_\_\_\_  
Firm

Personally before me, the undersigned authority, appeared \_\_\_\_\_ who is known to me to be an official of the firm of \_\_\_\_\_, who, after being duly sworn, stated on his oath that he had read the above statement and that the same is true and correct.

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

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

This \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

# CERTIFICATE OF FINAL COMPLETION

Distribution to:

OWNER	
ARCHITECT	
CONTRACTOR	
FIELD	
OTHER	

PROJECT:  
(name,address)

ARCHITECT:

ARCHITECT'S PROJECT NUMBER:

TO (Owner):

CONTRACTOR:

CONTRACT FOR:

DATE OF ISSUANCE:

CONTRACT DATE:

In accordance with the Contract documents and to the best of his or her knowledge, information and belief, and on the basis of his observations, on-site observation and final observation held on \_\_\_\_\_, the Architect certifies to the Owner that the work has been completed in accordance with the terms and conditions of the Contract Documents; and that the Contractor is entitled to Final Payment as certified by him in Contractor's Application for Payment.

Acceptance of this Certificate of Final Completion by the Owner and the Contractor shall in no way waive or void any terms or conditions of the Contract Documents.

SMITH DESIGN GROUP, INC.

By: \_\_\_\_\_  
Project Architect

APPROVED AND AGREED:

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

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

**\*\* CHANGE ORDER \*\***

SPECIMEN E

**SMITH DESIGN GROUP. INC.**

206 West Haralson Street  
 LaGrange, GA 30240  
 (706) 882-5511  
 Fax# (706) 883-7777

DATE: \_\_\_\_\_  
 CHANGE ORDER: \_\_\_\_\_  
 JOB NO.: \_\_\_\_\_  
 CONTRACT FOR: \_\_\_\_\_  
 \_\_\_\_\_  
 CONTRACT DATE: \_\_\_\_\_

To: (Contractor)

**You are directed to make the following changes in this contract:**

Description	Unit Price	Total

Original Contract sum: \$ \_\_\_\_\_  
 Net(Addition)(Deduction)of all approved change orders: \$ \_\_\_\_\_  
 Total Adjusted Contract Price prior to this change order: \$ 0.00  
 This Change Order No. \_\_\_\_\_ (Add)(Deduct): \$ 0.00  
 Total Current Adjusted Contract Price: \$ 0.00

**Recommended For Owner's Acceptance:**

**Approved And Agreed:**

**SMITH DESIGN GROUP, INC.**

\_\_\_\_\_  
 Contractor

By: \_\_\_\_\_  
 project architect/administrator

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

Owner: \_\_\_\_\_  
 Architect: \_\_\_\_\_  
 Contractor \_\_\_\_\_  
 Other: \_\_\_\_\_

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



# REQUEST FOR INFORMATION

SPECIMEN K

TO: Smith Design Group, Inc.  
206 West Haralson Street  
LaGrange, GA 30240

REQUEST FOR INFORMATION # \_\_\_\_\_

DATE: \_\_\_\_\_ JOB# \_\_\_\_\_

REFERENCE SHEET

ATTENTION:

NO.: \_\_\_\_\_ DETAIL: \_\_\_\_\_

PROJECT:

VIA:

FAX: \_\_\_\_\_ MAIL: \_\_\_\_\_

QUESTION:

SIGNED: \_\_\_\_\_

DATE: \_\_\_\_\_

ANSWER REQUIRED BY (DATE): \_\_\_\_\_

ATTACHMENTS: YES ( ) NO ( )

COPIES TO: \_\_\_\_\_

ANSWER:

SIGNED: \_\_\_\_\_

DATE: \_\_\_\_\_

THIS REQUEST FOR INFORMATION RESULTED IN PROPOSED CHANGE NUMBER \_\_\_\_.

<b>SUBCONTRACTOR / VENDOR DIRECTORY</b>		PROJECT: <span style="float: right;">SPECIMEN L</span>		
		DATE:	JOB NO.:	
		BY:	PAGE:	OF
#	COMPANY NAME ADDRESS	CONTACT NAME PHONE / FAX	DIV. #	WORK DESCRIPTION



## PART 2 | TECHNICAL SPECIFICATIONS

### SECTION 01021 - CASH ALLOWANCES

#### PART 1.00 - GENERAL

1.01 Quality Assurance: Quality assurance for items furnished under "Cash Allowances" is described in sections of this project manual as referenced in Article 2.01 of this section for each specific cash allowance established.

1.02 Definitions: See Article 3.8 of General Conditions of the Contract for Construction, AIA Document A201, 2007 Edition.

1.03 Submittals: Submittals pursuant to items furnished under "Cash Allowances" are described in sections of this project manual as referenced in Article 2.01 of this section for each specific cash allowance.

1.04 Product Handling: Product handling of items furnished under "Cash Allowances" are described in sections of this project manual as referenced in Article 2.01 of this section for each specific cash allowance.

1.05 Job Conditions: Job conditions affecting the installations of items furnished under "Cash Allowances" are described in sections of this project manual as referenced in Article 2.01 of this section for each specific cash allowance.

#### PART 2.00 - PRODUCTS

2.01 Materials: Items required will be furnished under "Cash Allowances" as follows:

A. Cash Allowances: The Contractor shall allow cash allowances for the purchase and installation of items as follows:

1. Cash allowance of \$1,000.00/thousand for face brick and \$20/bag for colored mortar.

B. Contract Adjustment: The contract sum will be adjusted by change order based on the actual cost of the items purchased.

2.02 Fabrication: Fabrication of items furnished under "Cash Allowances" is described in sections of this project manual as referenced in Article 2.01 of this section for each specific cash allowance.

#### PART 3.00 - EXECUTION

3.01 Inspection: Inspection pursuant to commencing installation of items furnished under "Cash Allowances" is described in other sections of this project manual as referenced in Article 2.01 of this section for each specific cash allowance.

3.02 Installation: Installation of items furnished under "Cash Allowances" is described in other sections of this project manual as referenced in Article 2.01 of this section for each specific cash allowance.

3.03 Field Quality Control: Field quality control of the installation of items furnished under "Cash Allowances" is described in other sections of this project manual as referenced in Article 2.01 of this section for each specific cash allowance.

## **END OF SECTION 01021 - CASH ALLOWANCES**

## SECTION 01027 - APPLICATIONS FOR PAYMENT

### PART 1.00 - GENERAL

#### 1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements governing the Contractor's Applications for Payment.
1. Coordinate the Schedule of Values and Applications for Payment with the Contractor's Construction Schedule, Submittal Schedule, and List of Subcontractors.
- B. Related Sections: The following Sections contain requirements that relate to this Section.
1. Schedules: The Contractor's Construction Schedule and Submittal Schedule are specified in Division 1 Section "Submittals."

#### 1.2 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of the Contractor's Construction Schedule.
1. Correlate line items in the Schedule of Values with other required administrative schedules and forms, including:
    - a. Contractor's Construction Schedule.
    - b. Application for Payment forms, including Continuation Sheets.
    - c. List of subcontractors.
    - d. List of products.
    - e. List of principal suppliers and fabricators.
  2. Submit the Schedule of Values to the Architect at the earliest possible date but no later than 7 days before the date scheduled for submittal of the initial Applications for Payment.
  3. Subschedules: Where Work is separated into phases requiring separately phased payments, provide subschedules showing values correlated with each phase of payment.
- B. Format and Content: Use the Project Manual table of contents as a guide to establish the format for the Schedule of Values. Provide at least one line item for each Specification Section.
1. Identification: Include the following Project identification on the Schedule of Values:
    - a. Project name and location.
    - b. Name of the Architect.
    - c. Project number.
    - d. Contractor's name and address.
    - e. Date of Submittal.

2. Arrange the Schedule of Value in tabular form with separate columns to indicate the following for each item listed:
  - a. Related Specification Section or Division.
  - b. Description of Work.
  - c. Name of subcontractor.
  - d. Name of manufacturer or fabricator.
  - e. Name of Supplier.
  - f. Change Orders (numbers) that affect value.
  - g. Dollar value.
    - 1) Percentage of Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
3. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Break principal subcontract amounts down into several line items.
4. Round amounts to nearest whole dollar; the total shall equal the Contract Sum.
5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment, purchased or fabricated and stored, but not yet installed.
  - a. Differentiate between items stored on-site and items stored off-site. Include requirements for insurance and bonded warehousing, if required.
6. Provide separate line items on the Schedule of Values for initial cost of the materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
7. Margins of Cost: Show line items for indirect costs and margins on actual costs only when such items are listed individually in Applications for Payment. Each item in the Schedule of Values and Applications for Payment shall be complete. Include the total cost and proportionate share of general overhead and profit margin for each item.
  - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values.
8. Schedule Updating: Update and resubmit the Schedule of Values prior to the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

### 1.3 APPLICATIONS FOR PAYMENT

A. Each Application for Payment shall be consistent with previous applications and payments as certified by the Architect and paid for by the Owner.

1. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.

B. Payment-Application Times: Progress-payment date is as agreed to by the Owner and Contractor.

C. Payment-Application Forms: Use AIA Document G702 and Continuation Sheets G703 as the form for Applications for Payment.

D. Application Preparation: Complete every entry on the form. Include notarization and execution by a person authorized to sign legal documents on behalf of the Contractor. The Architect will return incomplete applications without action.

1. Entries shall match data on the Schedule of Values and the Contractor's Construction Schedule. Use update schedules if revisions were made.

2. Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.

E. Transmittal: Submit 3 signed and notarized original copies of each Application for Payment to the Architect by a method ensuring receipt within 24 hours. One copy shall be complete, including waivers of lien and similar attachments, when required.

1. Transmit each copy with a transmittal form listing attachments and recording appropriate information related to the application, in a manner acceptable to the Architect.

F. Waivers of Mechanics Lien: With each Application for Payment, submit waivers of mechanics lien from every entity who is lawfully entitled to file a mechanics lien arising out of the Contract and related to the Work covered by the payment.

G. Initial Application for Payment: Administrative actions and submittals, that must precede or coincide with submittal of the first Application for Payment, include the following:

1. List of subcontractors.
2. List of principal suppliers and fabricators.
3. Schedule of Values.
4. Contractor's Construction Schedule (preliminary if not final).
5. Schedule of principal products.
6. List of Contractor's staff assignments.
7. List of Contractor's principal consultants.
8. Copies of building permits.
9. Copies of authorizations & licenses from governing authorities for performance of Work.
10. Initial progress report.
11. Report of preconstruction meeting.
12. Certificates of insurance and insurance policies.
13. Performance and payment bonds.
14. Data needed to acquire the Owner's insurance.

H. Application for Payment at Substantial Completion: Following issuance of the Certificate of Substantial Completion, submit an Application for Payment.

1. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
2. Administrative actions and submittals that shall precede or coincide with this application include:
  - a. Occupancy permits and similar approvals.
  - b. Warranties (guarantees) and maintenance agreements.
  - c. Test/adjust/balance records.
  - d. Maintenance instructions.
  - e. Meter readings.
  - f. Startup performance reports.
  - g. Changeover information related to Owner's occupancy, use, operation, and maintenance.
  - h. Final cleaning.
  - i. Application for reduction of retainage and consent of surety.
  - j. Advice on shifting insurance coverages.
  - k. Final progress photographs.
  - l. List of incomplete Work, recognized as exceptions to Architect's Certificate of Substantial Completion.

I. Final Payment Application: Administrative actions and submittals that must precede or coincide with submittal of the final Application for Payment include the following:

1. Completion of Project closeout requirements.
2. Completion of items specified for completion after Substantial Completion
3. Ensure that unsettled claims will be settled.
4. Ensure that incomplete Work is not accepted and will be completed without undue delay.
5. Transmittal of required Project construction records to the Owner.
6. Certified property survey.
7. Proof that taxes, fees, and similar obligations were paid.
8. Removal of temporary facilities and services.
9. Removal of surplus materials, rubbish, and similar elements.
10. Change of door locks to Owner's access.

## **PART 2.00 - PRODUCTS (Not Applicable)**

## **PART 3.00 - EXECUTION (Not Applicable)**

## **END OF SECTION 01027**



## SECTION 01101 - ALTERNATES / APPROVED MANUFACTURERS

### PART 1.00 - GENERAL

#### 1.01 Quality Assurance:

A. Work Included: To enable the owner to compare total costs where alternate materials and methods might be used. Alternates have been established as shown on the drawings or described hereinafter in this section.

#### B. Related Work Described Elsewhere:

1. Materials and methods to be used in the Base Bid and in the Alternates as shown on the drawings or described in pertinent sections of this project manual or hereinafter in this section.
2. Method for stating the alternates is described in Section B - Proposal Form, of this project manual.

#### 1.02 Definitions: Omitted

1.03 Submittals: All Alternates described hereinafter are required to be reflected on the Proposal Form submitted by bidders.

1.04 Product Handling: Alternates are additive and may be accepted by the owner as he or she may choose and in any sequence that he or she may choose.

1.05 Job Conditions: Job conditions pursuant to the installation of the various products or materials of each alternate will be as described in pertinent other sections of this project manual and in accordance with the published specifications of the manufacturer of the product or material being installed as a part of each alternate.

### PART 2.00 - PRODUCTS

#### 2.01 Alternates:

A. Deductive Alternates: SEE PROPOSAL FORM B

B. Additive Alternates:

2.2.1 Add. Alt. No. 1: \$ \_\_\_\_\_

To finish grade, install and provide 6" GAB and all concrete brick pavers as called for on the drawings. (Base Bid: the City of LaGrange will finish grade, provide and install all concrete brick pavers as called for in the drawings.)

2.2.2 Add. Alt. No. 2: \$ \_\_\_\_\_

Provide and install flagpole and all associated lighting. Cash allowance of \$9,000.00 for provision and installation of fixtures and electrical feed.

### **PART 3.00 - EXECUTION**

3.01 Inspection: Prior to beginning installation of any alternates, the contractor shall examine the areas and conditions under which the work is to be carried out; notify the Architect in writing of conditions detrimental to the completion of the work; do not proceed with the work until unsatisfactory conditions have been corrected.

3.02 Installation:

A. Advance Coordination: Immediately after award of the contract, thoroughly and clearly advise all necessary personnel and suppliers as to the nature and extent of alternates selected by the owner. Use all means necessary to alert those personnel and suppliers involved as to all changes in the work caused by the owner's selection or rejection of alternates.

B. Alternates: Selected alternates will be incorporated into the building with installation being in conformance with the drawings, pertinent other sections of this project manual and the published instructions of the manufacturers whose products are being installed as a part of each alternate.

3.03 Field Quality Control:

A. General: Field quality control pursuant to the installation of the various products or materials of each alternate is described in pertinent other sections of this project manual and in accordance with the published specifications of the manufacturer of the products or materials being installed as a part of each alternate.

B. Inspection: Materials and workmanship at all times will be subject to inspection by the Architect or his representative.

### **PART 4.00 - APPROVED MANUFACTURERS**

4.01 In addition to the manufacturers and products named or described in the project manual, the manufacturers and products listed hereinafter are acceptable provided they meet the requirements of each respective section of the project manual as well as the requirements of the drawings. All coordination and compatibility with other work necessitated by proposed substitution will be accomplished in complete and proper fashion at no cost to the owner.

4.02 Section 04201 - Unit Masonry

Brick

1. Cherokee

Block (Regular)

1. Williams Bros.

Mortar

1. Medusa

2. Boral

2. Bickerstaff

2. Blue Circle

3. Solite

3. Soloman Grind-Chem Serv.

Block (Split- Face)

Blocks (Acoustical)

Reinforcing

1. Masonry Products

1. Proudfoot

1. Dur-O-Wal

2. Williams Bros.

2. Williams Bros.

2. Ileckman Bldg. Prod.

3. Nat'l. Concrete Masonry

3. Acousta - Wal Association

3. Masonry Reinf. Corp. of Amer.

4.03 Section 05512 - Metal Spiral Stairs (Not Used)

4.04 Section 05521 - Pipe and Tube Handrails and Railings

1. Julius Blum & Co.

2. T. G. Braun

3. Lawler Machine & Foundry Co., Inc.

4.05 Section 05723 - Safety Nosings (Not Used)

1. Wooster Products

2. American Safety Tread

3. Armstrong Products, Inc.

4.06 Section 05800 - Expansion Control Devices (Not Used)

1. Metalines

2. The C/X Group

3. MM Systems

4. Balco, Inc.

4.07 Section 07114 - Below Grade Membrane Waterproofing

1. Sealtight "Melnar" by W.R. Meadows

2. Royston Waterproofing

3. America Colloid Co. (volclay)

4.08 Section 07210 - Building Insulation

1. Owens Corning

2. CertainTeed

3. Manville

4.09 Section 07535 - Reinforced Flexible Sheet Roofing System

1. Bondcote

2. Carlisle

4.10 Section 07620 - Metal Flashing and Trim (Not Used)

1. AEP SPAM
2. ASC Pacific, Inc.
3. Berridge Manufacturing Co.
4. MM Systems
5. American Building

4.11 Section 07812 - Structural Skylights (Not Used)

1. Gammans Architectural Product, Inc. , Newnan, GA

4.12 Section 07900 - Sealants

1. Dow Corning
2. G.E. Silicones
3. Sonneborn

4.13 Section 08363 - Rolling Counter Doors (Not Used)

1. Peele Rolling Pass Windows
2. Raynor Garage Doors
3. Overhead Door

4.14 Section 08401 - Aluminum Entrance & Storefronts

1. Kawneer
2. PPG
3. YKK
4. EFCO Corp.

4.15 Section 08522 - Aluminum Windows (Not Used)

1. Kawneer
2. EFCO Corp.
3. Traco (min.3-7/8" frame depth)
4. Alenco (min. 3-7/8" frame depth)

4.16 Section 08711 - Finish Hardware

Locksets & Cylinders

1. Schlage Lock Co.
2. Corbin
3. Yale
4. Best

Butts

1. Stanley
2. Hager Hinge Co.
3. H. Soss & Co.

Surface Closers

1. LCN Closers
2. Corbin
3. Norton

Flush Bolts

1. Triangle Brass
2. Ives
3. Stanley

Push / Pull Plates

1. Triangle Brass
2. Quality
3. Ives

Surface Bolts

1. Triangle Brass
2. Ives
3. Stanley

Silencers

1. Triangle Brass
2. Glyn-Johnson
3. Ives

Panic Devices

1. Von Duprin

Threshold

1. Zero International
2. National Guard
3. Hager
4. Pemko

Kick Plates

1. Quality
2. Bladwin
3. Ives

Stop / Bumpers / Holders

1. Triangle Brass
2. Glyn-Johnson
3. Ives

Weatherstripping

1. Zero International
2. National Guard
3. Pemko
4. Hager

4.17 Section 09553 - Strip Wood Flooring System (Not Used)

4.18 Section 09660 - Resilient Tile Flooring

1. Armstrong (asbestos free)
2. Azrock (asbestos free)
3. Amitco Duravynyl Tile (asbestos free)

4.19 Section 09680 - Floor Carpeting (Not Used)

1. Milliken
2. Interface
3. Shaw

4.20 Section 10441 - Building Identification Letters (Not Used)

1. Andco
2. Leeds
3. Matthews

4.21 Section 10500 - Metal Lockers (Not Used)

4.22 Section 10800 - Rest Room, Shower Room, & Locker Room Accessories

1. Bradley
2. Bobrick
3. A & J
4. ASI

4.23 Section 10900 - Wardrobe & Closet Specialties

1. Parker/Nutone, Inc.
2. Stanley
3. REI

4.24 Section 11050 - Library Equipment (Not Used)

4.25 Section 11181 - Dark Room Equipment (Not Used)

4.26 Section 11400 - Commercial Food Service Equipment (Not Used)

4.27 Section 11461 Unit Kitchen (Not Used)

4.28 Section 11873 - Dock Bumpers (Not Used)

1. Dura - Lock
2. Pawling Corp.
3. Serco Corp.

**END OF SECTION 01101**

## SECTION 01200 - PROJECT MEETINGS

### PART 1.00 - GENERAL

#### 1.1 SUMMARY

A. This Section specifies administrative and procedural requirements for project meetings, including, but not limited to, the following:

1. Preconstruction conferences.
2. Progress meetings.

#### 1.2 PRECONSTRUCTION CONFERENCE

A. Schedule a preconstruction conference before starting construction, at a time convenient to the Owner and the Architect, but no later than 10 days after execution of the Agreement. Hold the conference at the Project Site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.

B. Attendees: Authorized representatives of the Owner, Architect, and their consultants; the Contractor and its superintendent; major subcontractors; manufacturers; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.

C. Agenda: Discuss items of significance that could affect progress, including the following:

1. Tentative construction schedule.
2. Critical work sequencing.
3. Designation of responsible personnel.
4. Procedures for processing field decisions and Change Orders.
5. Procedures for processing Applications for Payment.
6. Distribution of Contract Documents.
7. Submittal of Shop Drawings, Product Data, and Samples.
8. Preparation of record documents.
9. Use of the premises.
10. Parking availability.
11. Office, work, and storage areas.
12. Equipment deliveries and priorities.
13. Safety procedures.
14. First Aid.
15. Security.
16. Housekeeping.
17. Working hours.

#### 1.3 PROGRESS MEETINGS

A. Conduct progress meetings at the Project Site at weekly intervals. Notify the Owner and the Architect of scheduled meeting dates.

B. Attendees: In addition to representatives of the Owner and the Architect, each subcontractor, supplier, or other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.

C. Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the status of the Project.

1. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to insure that current and subsequent activities will be completed within the Contract Time.

2. Review the present and future needs of each entity present, including the following:

- a. Interface requirements.
- b. Time.
- c. Sequences.
- d. Status of submittals.
- e. Deliveries.
- f. Off-site fabrication problems.
- g. Access.
- h. Site utilization.
- i. Temporary facilities and services.
- j. Hours of work.
- k. Hazards and risks.
- l. Housekeeping.
- m. Quality and work standards.
- n. Change Orders.
- o. Documentation of information for payment requests.

D. Reporting: No later than 3 days after each meeting, general contractor is to distribute typed minutes of the meeting to each party present and to parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.

1. Schedule Updating: Revise the Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the report of each meeting.

## **PART 2 - PRODUCTS (Not Applicable)**

## **PART 3 - EXECUTION (Not Applicable)**

### **END OF SECTION 01200**



## SECTION 01300 - SUBMITTALS

### PART 1.00 - GENERAL

#### 1.1 SUMMARY

A. This Section includes administrative and procedural requirements for submittals required for performance of the Work, including the following:

1. Contractor's construction schedule.
2. Daily construction reports.
3. Shop Drawings.
4. Product Data.
5. Samples.
6. Quality assurance submittals.

B. Administrative Submittals: Refer to other Division 1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to, the following:

1. Permits.
2. Applications for Payment.
3. Performance and payment bonds.
4. Insurance certificates.
5. List of subcontractors.

C. Related Sections: The following Sections contain requirements that relate to this Section:

1. Division 1 Section "Applications for Payment" specifies requirements for submittal of the Schedule of Values.
2. Division 1 Section "Project Meetings" specifies requirements for submittal and distribution of meeting and conference minutes.
3. Division 1 Section "Quality Control" specifies requirements for submittal of inspection and test reports.
4. Division 1 Section "Contract Closeout" specifies requirements for submittal of Project Record Documents and warranties at project closeout.

#### 1.2 DEFINITIONS

A. Coordination Drawings show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or to function as intended.

1. Preparation of Coordination Drawings is specified in Division 1 Section "Coordination" and may include components previously shown in detail on Shop Drawings or Product Data.

- B. Field samples are full-size physical examples erected on-site to illustrate finishes, coating, or finish materials. Field samples are used to establish the standard by which the Work will be judged.
- C. Mockups are full-size assemblies for review of construction, coordination, testing, or operation; they are not Samples.

### 1.3 SUBMITTAL PROCEDURES

A. Coordination: Coordination preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
  - a. The Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
3. Processing: To avoid the need to delay installation as a result of the time required to process submittals, allow sufficient time for submittal review, including time for resubmittals.
  - a. Allow 2 weeks for initial review. Allow additional time if the Architect must delay processing to permit coordination with subsequent submittals.
  - b. If an intermediate submittal is necessary, process the same as the initial submittal.
  - c. Allow 2 weeks for reprocessing each submittal.
  - d. No extension of Contract Time will be authorized because of failure to transmit submittals to the Architect sufficiently in advance of the Work to permit processing.

B. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.

1. Provide a space approximately 4 by 5 inches (100 by 125 mm) on the label or beside the title block on Shop Drawings to record the Contractor's review and approval markings and the action taken.
2. Include the following information on the label for processing and recording action taken.
  - a. Project name.
  - b. Date.
  - c. Name and address of the Architect.
  - d. Name and address of the Contractor.
  - e. Name and address of the subcontractor.
  - f. Name and address of the supplier.
  - g. Name of the manufacturer.
  - h. Number and title of appropriate Specification Section.

- i. Drawing number and detail references, as appropriate.

C. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from the Contractor to the Architect using a transmittal form. The Architect will not accept submittals received from sources other than the Contractor.

1. On the transmittal, record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.

#### 1.4 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Bar-Chart Schedule: Prepare a fully developed, horizontal bar-chart-type, contractor's construction schedule. Submit within 30 days after the date established for "Commencement of the Work."

1. Provide a separate time bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week. Use the same breakdown of units of the Work as indicated in the "Schedule of Values."
2. Within each time bar, indicate estimated completion percentage in 10 percent increments. As Work progresses, place a contrasting mark in each bar to indicate Actual Completion.
3. Prepare the schedule on a sheet, or series of sheets, of stable transparency, or other reproducible media, of sufficient width to show data for the entire construction period.
4. Secure time commitments for performing critical elements of the Work from parties involved. Coordinate each element on the schedule with other construction activities; include minor elements involved in the sequence of the Work. Show each activity in proper sequence. Indicate graphically the sequences necessary for completion of related portions of the Work.
5. Coordinate the Contractor's Construction Schedule with the Schedule of Values, list of subcontractors, Submittal Schedule, progress reports, payment requests, and other schedules.
6. Indicate completion in advance of the date established for Substantial Completion. Indicate Substantial Completion on the schedule to allow time for the Architect's procedures necessary for certification of Substantial Completion.

B. Work Stages: Indicate important stages of construction for each major portion of the Work, including submittal review, testing, and installation.

C. Area Separations: Provide a separate time bar to identify each major construction area for each major portion of the Work. Indicate where each element in an area must be sequenced or integrated with other activities.

D. Cost Correlation: At the head of the schedule, provide a cost correlation line, indicating planned and actual costs. On the line, show dollar volume of Work performed as of the dates used for preparation of payment requests.

1. Refer to Division 1 Section "Applications for Payment" for cost reporting and Payment procedures.

E. Distribution: Following response to the initial submittal, print and distribute copies to the Architect, Owner, subcontractors, and other parties required to comply with scheduled dates. Post copies in the Project meeting room and temporary field office.

1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.

F. Schedule Updating: Revise the schedule after each meeting, event, or activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.

## 1.5 DAILY CONSTRUCTION REPORTS

A. Prepare a daily construction report recording the following information concerning events at the site, and submit duplicate copies to the Architect at weekly intervals:

1. List of subcontractors at the site.
2. Approximate count of personnel at the site.
3. High and low temperatures, general weather conditions.
4. Accidents and unusual events.
5. Meetings and significant decisions.
6. Stoppages, delays, shortages, and losses.
7. Meter readings and similar recordings.
8. Emergency procedures.
9. Orders and requests of governing authorities.
10. Change Orders received, implemented.
11. Services connected, disconnected.
12. Equipment or system tests and startups.
13. Partial Completions, occupancies.
14. Substantial Completions authorized.

## 1.6 SHOP DRAWINGS

A. Submit newly prepared information drawn accurately to scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not a Shop Drawing.

B. Shop Drawings include fabrication and installation Drawings, setting diagrams, schedules, patterns, templates and similar Drawings. Include the following information:

1. Dimensions.
2. Identification of products and materials included by sheet and detail number.
3. Compliance with specified standards.
4. Notation of coordination requirements.
5. Notation of dimensions established by field measurement.
6. Sheet size: Except for templates, patterns and similar full-size Drawings, submit shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 24 by 36 inches.
7. Initial Submittal: Submit one correctable, translucent, reproducible print and three blue- or black-line prints for the Architect's review. The Architect will return the reproducible print.
8. Final Submittal: Submit 4 blue- or black-line prints and 2 additional prints where required for maintenance manuals, plus the number of prints needed by the Architect for distribution. The Architect will retain 3 prints (one each for Architect, Engineer, and Owner) and return the remainder.
  - a. One of the prints returned shall be marked up and maintained as a "Record Document."
9. Do not use Shop Drawings without an appropriate final stamp indicating action taken.

## 1.7 PRODUCT DATA

A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams, and performance curves.

1. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products that are not required, mark copies to indicate the applicable information. Include the following information:
  - a. Manufacturer's printed recommendations.
  - b. Compliance with trade association standards.
  - c. Compliance with recognized testing agency standards.
  - d. Application of testing agency labels and seals.
  - e. Notation of dimensions verified by field measurement.
  - f. Notation of coordination requirements.

2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.
3. Preliminary Submittal: Submit a preliminary single copy of Product Data where selection of options is required.
4. Submittals: Submit 4 copies of each required submittal; submit 5 copies where required for maintenance manuals. The Architect will retain two and will return the other marked with action taken and corrections or modifications required.
  - a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
5. Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.
  - a. Do not proceed with installation until a copy of Product Data is in the Installer's possession.
  - b. Do not permit use of unmarked copies of Product Data in connection with construction.

## 1.8 SAMPLES

A. Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture, and pattern.

1. Mount or display Samples in the manner to facilitate review of qualities indicated. Prepare Samples to match the Architect's sample. Include the following:
  - a. Specification Section number and reference.
  - b. Generic description of the Sample.
  - c. Sample source.
  - d. Product name and or name of the manufacturer.
  - e. Compliance with recognized standards.
  - f. Availability and delivery time.
2. Submit Samples for review of size, kind, color, pattern, and texture. Submit Samples for a final check of these characteristics with other elements and a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
  - a. Where variation in color, pattern, texture, or other characteristic is inherent in the material or product represented, submit at least 3 multiple units that show approximate limits of the variations.
  - b. Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication, techniques, details of assembly, connections, operation, and similar construction characteristics.

- c. Refer to other Sections for Samples to be returned to the Contractor for incorporation in the Work. Such Samples must be undamaged at time of use. On the transmittal, indicate special requests regarding disposition of Sample submittals.
- d. Samples not incorporated into the Work, or otherwise designated as the Owner's property, are the property of the Contractor and shall be removed from the site prior to Substantial Completion.

3. Preliminary Submittals: Submit a full set of choices where Samples are submitted for selection of color, pattern, texture, or similar characteristics from a range of standard choices.

- a. The Architect will review and return preliminary submittals with the Architect's notation, indicating selection and other action.

4. Submittals: Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation, and similar characteristics, submit 3 sets. The Architect will return one set marked with the action taken.

5. Maintain sets of Samples, as returned, at the Project Site, for quality comparisons throughout the course of construction.

- a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
- b. Sample sets may be used to obtain final acceptance of the construction associated with each set.

B. Distribution of Samples: Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work. Show distribution on transmittal forms.

1. Field samples are full-size examples erected on-site to illustrate finishes, coatings, or finish materials and to establish the Project standard.

- a. Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.

## 1.9 QUALITY ASSURANCE SUBMITTALS

A. Submit quality-control submittals, including design data, certifications, manufacturer's instructions, manufacturer's field reports, and other quality-control submittals as required under other Sections of the Specifications.

B. Certifications: Where other Sections of the Specifications require certification that a product, material, or installation complies with specified requirements, submit a notarized certification from the manufacturer certifying compliance with specified requirements.

1. Signature: Certification shall be signed by an officer of the manufacturer or other individual authorized to sign documents on behalf of the company.

C. Inspection and Test Reports: Requirements for submittal of inspection and test reports from independent testing agencies are specified in Division 1 Section "Quality Control."

#### 1.10 ARCHITECT'S ACTION

A. Except for submittals for the record or information, where action and return is required, the Architect will review each submittal, mark to indicate action taken, and return promptly.

1. Compliance with specified characteristics is the Contractor's responsibility.

B. Action Stamp: The Architect will stamp each submittal with a uniform, action stamp. The Architect will mark the stamp appropriately to indicate the action taken, as follows:

1. Final Unrestricted Release: When the Architect marks a submittal "No Exceptions Taken," the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents. Final payment depends on that compliance.

2. Final-But-Restricted Release: When the Architect marks a submittal "Make Corrections Noted," the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents. Final payment depends on that compliance.

3. Returned for Resubmittal: When the Architect marks a submittal "Rejected, Resubmit," do not proceed with Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal according to the notations; resubmit without delay. Repeat if necessary to obtain different action mark.

a. Do not use, or allow others to use, submittals marked "Rejected, Resubmit" at the Project Site or elsewhere where Work is in progress.

4. Other Action: Where a submittal is for information or record purposes or special processing or other activity, the Architect will return the submittal without action.

C. Unsolicited Submittals: The Architect will return unsolicited submittals to the sender without action.

#### **PART 2 - PRODUCTS (Not Applicable)**

#### **PART 3 - EXECUTION (Not Applicable)**

#### **END OF SECTION 01300**



## SECTION 01400 - QUALITY CONTROL

### PART 1.00 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for quality-control services.
- B. Quality-control services include inspections, tests, and related actions, including reports performed by Contractor, by independent agencies, and by governing authorities. They do not include contract enforcement activities performed by Architect.
- C. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with Contract Document requirements.
- D. Requirements of this Section relate to customized fabrication and installation procedures, not production of standard products.
  - 1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
  - 2. Specified inspections, tests, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with Contract Document requirements.
  - 3. Requirements for Contractor to provide quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- E. Related Sections: The following Sections contain requirements that relate to this Section:
  - 1. Division 1 Section "Submittals" specifies requirements for development of a schedule of required tests and inspections.

#### 1.2 RESPONSIBILITIES

- A. Contractor Responsibilities: Unless otherwise indicated as the responsibility of another identified entity, Contractor shall provide inspections, tests, and other quality-control services specified elsewhere in the Contract Documents and required by authorities having jurisdiction.
  - 1. Where individual Sections specifically indicate that certain inspections, tests, and other quality-control services are the Contractor's responsibility, the Contractor shall employ and pay a qualified independent testing agency to perform quality-control services.

2. Where individual Sections specifically indicate that certain inspections, tests, and other quality-control services are the Owner's responsibility, the Owner will employ and pay a qualified independent testing agency to perform those services.
  - a. Where the Owner has engaged a testing agency for testing and inspecting part of the Work, and the Contractor is also required to engage an entity for the same or related element, the Contractor shall not employ the entity engaged by the Owner, unless agreed to in writing by the Owner.

B. Retesting: The contractor is responsible for retesting where results of inspections, tests, or other quality-control services prove unsatisfactory and indicate noncompliance with Contract Document requirements, regardless of whether the original test was Contractor's responsibility.

1. The cost of retesting construction, revised or replaced by the Contractor, is the Contractor's responsibility where required tests performed on original construction indicated noncompliance with Contract Document requirements.

C. Associated Services: Cooperate with agencies performing required inspections, tests, and similar services, and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include, but are not limited to, the following:

1. Provide access to the Work.
2. Furnish incidental labor and facilities necessary to facilitate inspections and tests.
3. Take adequate quantities of representative samples of materials that require testing or assist the agency in taking samples.
4. Provide facilities for storage and curing of test samples.
5. Deliver samples to testing laboratories.
6. Provide the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.
7. Provide security and protection of samples and test equipment at the Project Site.

D. Duties of the Testing Agency: The independent agency engaged to perform inspections, sampling, and testing of materials and construction specified in individual Sections shall cooperate with the Architect and the Contractor in performance of the agency's duties. The testing agency shall provide qualified personnel to perform required inspections and tests.

1. The agency shall notify the Architect and the Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. The agency is not authorized to release, revoke, alter, or enlarge requirements of the Contract Documents or approve or accept any portion of the Work.
3. The agency shall not perform any duties of the Contractor.

E. Coordination: Coordinate the sequence of activities to accommodate required services with a minimum of delay. Coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.

1. The Contractor is responsible for scheduling times for inspections, tests, taking samples, and similar activities.

### 1.3 SUMMITTALS

A. Unless the Contractor is responsible for this service, the independent testing agency shall submit a certified written report, in duplicate, of each inspection, test, or similar service to the Architect.

B. If the Contractor is responsible for the service, submit a certified written report, in duplicate, of each inspection, test, or similar service through the Contractor.

1. Submit additional copies of each written report directly to the governing authority, when the authority so directs.

2. Report Data: Written reports of each inspection, test, or similar service include, but are not limited to, the following:

- a. Date of issue.
- b. Project title and number.
- c. Name, address, and telephone number of testing agency.
- d. Dates and locations of samples and tests or inspections.
- e. Names of individuals making the inspection or test.
- f. Designation of the Work and test method.
- g. Identification of product and Specification Section.
- h. Complete inspection or test data.
- i. Test results and an interpretation of test results.
- j. Ambient conditions at the time of sample taking and testing.
- k. Comments or professional opinion on whether inspected or tested Work complies with Contract Document requirements.
- l. Name and signature of laboratory inspector.
- m. Recommendations on retesting.

### 1.4 QUALITY ASSURANCE

A. Qualifications for Service Agencies: Engage inspection and testing service agencies, including independent testing laboratories, that are prequalified as complying with the American Council of Independent Laboratories' "Recommended Requirements for Independent Laboratory Qualification" and that specialize in the types of inspections and tests to be performed.

1. Each independent inspection and testing agency engaged on the Project shall be authorized by authorities having jurisdiction to operate in the state where the Project is located.

## **PART 2.00 - PRODUCTS (Not Applicable)**

## **PART 3.00 - EXECUTION**

### 3.1 REPAIR AND PROTECTION

- A. General: Upon completion of inspection, testing, sample taking and similar services, repair damaged construction and restore substrates and finishes.
- B. Protect construction exposed by or for quality-control service activities, and protect repaired construction.
- C. Repair and protection is Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing, or similar services.

**END OF SECTION 01400**

## SECTION 01421 - REFERENCES, STANDARDS, AND DEFINITIONS

### PART 1.00 - GENERAL

#### 1.1 DEFINITIONS

- A. General: Basic contract definitions are included in the Conditions of the Contract.
- B. "Indicated": The term "indicated" refers to graphic representations, notes, or schedules on the Drawings; or to other paragraphs or schedules in the Specifications and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the user locate the reference. Location is not limited.
- C. "Directed": Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by the Architect, requested by the Architect, and similar phrases.
- D. "Approved": The term "approved," when used in conjunction with the Architect's action on the Contractor's submittals, applications, and requests, is limited to the Architect's duties and responsibilities as stated in the Conditions of the Contract.
- E. "Regulations": The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": The term "furnish" means to supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": The term "install" describes operations at the Project site including the actual unloading, temporary storage, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": The term "provide" means to furnish and install, complete and ready for the intended use.
- I. "Installer": An installer is the Contractor or another entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier, to perform a particular construction activity, including installation, erection, application, or similar operations. Installers are required to be experienced in the operations they are engaged to perform.
  - 1. The term "experienced," when used with the term "installer," means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with the special requirements indicated; and having complied with requirements of authorities having jurisdiction.

2. Trades: Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespersons of the corresponding generic name.

J. "Project site" is the space available to the Contractor for performing construction activities, either exclusively or in conjunction with others performing other work as part of the Project. The extent of the Project site is shown on the Drawings and may or may not be identical with the description of the land on which the Project is to be built.

K. "Testing Agencies": A testing agency is an independent entity engaged to perform specific inspections or tests, either at the Project site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

## 1.2 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with standards in effect as of the date of the Contract Documents.

C. Conflicting Requirements: Where compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to the Architect for a decision before proceeding.

1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements. Refer uncertainties to the Architect for a decision before proceeding.

D. Copies of Standards: Each entity engaged in construction on the Project must be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed to perform a required construction activity, the Contractor shall obtain copies directly from the publication source and make them available on request.

E. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where abbreviations and acronyms are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards-producing

organization, authorities having jurisdiction, or other entity applicable to the context of the text provision. Refer to Gale Research's "Encyclopedia of Associations" or Columbia Books' "National Trade & Professional Associations of the U.S.," which are available in most libraries.

### 1.3 SUBMITTALS

A. Permits, Licenses, and Certificates: For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of Work.

### **PART 2.00 - PRODUCTS (Not Applicable)**

### **PART 3.00 - EXECUTION (Not Applicable)**

### **END OF SECTION 01421**

## **SECTION 01501 - TEMPORARY FACILITIES AND CONTROLS**

### **PART 1.00 - GENERAL**

1.01 Quality Assurance: Temporary facilities and controls shall comply with laws, codes and regulations of the place where the project is located.

1.02 Definitions: Omitted

1.03 Submittals: Omitted

1.04 Product Handling:

A. Use all means necessary to maintain temporary facilities and controls in proper and safe condition throughout the progress of the work.

B. Replacements. In the event of loss or damage, immediately make all replacements and repairs necessary to the approval of the Architect and at no additional cost to the Owner.

1.05 Job Conditions: Make all required connections to existing utility systems necessary to provide temporary utility services described hereinafter in accordance with provisions of this project manual.

### **PART 2.00 - PRODUCTS**

2.01 Temporary Facilities:

A. Field Offices and Sheds:

1. Furnish, install and maintain throughout the work in this project, a field office building adequate in size and accommodation for all of Contractor's offices, superintendent's office, supply and tool room.

2. The field office shall be available to the Architect and /or his representative, the Owner and/or his representative and cooperating agencies throughout the work in this project.

3. The Contractor and his subcontractors may maintain such other offices and storage facilities as may be necessary to the proper conduct of the work in this project.

B. Toilet Facilities: Furnish, install and maintain in a clean and sanitary condition throughout the work in this project, adequate enclosed toilet and washing facilities for use by persons employed on this project.

2.02 Temporary Enclosures and Controls: Furnish, install and maintain, throughout the work in this project, all required scaffolds, tarpaulins, barricades, canopies, warning signs, steps, bridges, platforms and other temporary construction necessary for the proper and safe execution of the work in this project in compliance with all pertinent safety codes and other regulations.



## 2.03 Temporary Utilities:

### A. Water and Sewer:

1. Furnish, install and maintain all necessary temporary water lines, sewer lines and service throughout the work in this project.
2. Cost of furnishing, installing and maintaining temporary water and sewer lines and services shall be paid for by the Contractor.

### B. Gas:

1. Furnish, install and maintain all necessary temporary gas service throughout the work of this project.
2. Cost of furnishing, installing and maintaining temporary gas service shall be paid for by the Contractor.

### C. Electricity:

1. Furnish, install and maintain all necessary temporary electrical lines and service throughout the work of this project.
2. Furnish and install area distribution boxes so located that individual trades may use 100 feet maximum length extension cords to obtain adequate power and artificial lighting at all points where required for the work, for inspection and for safety.
3. Cost of furnishing, installing and maintaining temporary electrical services shall be paid for by the Contractor.

### D. Telephone and Fax (on separate lines):

1. Make all necessary arrangements and pay all costs for installation and operation of telephone service and fax service to the Contractor's field office throughout the work in this project.
2. This telephone and fax shall be made available for use by the Architect or his representative and the Owner or his representative.
3. The Contractor and his or her subcontractors may have other telephones as may be necessary to the proper conduct of the work of this project, making all arrangements for and paying all costs for said additional telephones and service.

### E. Heat:

1. Provide, maintain and pay all costs for, throughout the work of this project, temporary heat as necessary to protect all work and materials from damage due to cold or dampness.
2. Fuel, equipment and heating shall not constitute a non-insurable fire hazard and shall be approved by the Architect prior to use.

2.04 Fencing of Construction Area: See Drawings

2.05 Haul Roads: Omitted

## **PART 3.00 - EXECUTION**

3.01 Inspection: Omitted

3.02 Installation: Install (locate) field offices, storage sheds, toilet facilities and all other temporary facilities as directed or approved by the Architect.

3.03 Field Quality Control:

A. Maintenance: Maintain all temporary facilities and controls and pay all costs related thereto, in a safe, functioning and sanitary condition throughout work in this project.

B. Removal:

1. Field offices, sheds, toilet facilities, temporary enclosures and controls shall be removed only after approval of their removal by the Architect.
2. Temporary utilities may be removed as soon as permanent utility services are provided and are properly working; cost for maintaining permanent utility service shall be paid by the Contractor until date as determined at time of issuing of the Architect's Certificate of Substantial Completion.

## **END OF SECTION 01501**

## SECTION 01700 - CONTRACT CLOSEOUT

### PART 1.00 - GENERAL

#### 1.1 SUMMARY

A. This Section includes administrative and procedural requirements for contract closeout including, but not limited to, the following:

1. Inspection procedures.
2. Project record document submittal.
3. Operation and maintenance manual submittal.
4. Submittal of warranties.
5. Final cleaning.

B. Closeout requirements for specific construction activities are included in the appropriate Sections in Divisions 2 through 16.

#### 1.2 SUBSTANTIAL COMPLETION

A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.

1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete.
  - a. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
  - b. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
2. Advise the Owner of pending insurance changeover requirements.
3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents.
4. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
5. Submit record drawings, maintenance manuals, and similar final record information.
6. Deliver tools, spare parts, extra stock, and similar items.
7. Make final changeover of permanent locks and transmit keys to the Owner. Advise the Owner's personnel of changeover in security provisions.

8. Complete startup testing of systems and instruction of the Owner's operation and maintenance personnel. Discontinue and remove temporary facilities from the site, along with mockups, construction tools, and similar elements.
9. Complete final cleanup requirements, including touchup painting.
10. Touch up and otherwise repair and restore marred, exposed finishes.

B. Inspection Procedures: On receipt of a request for inspection, the Architect will either proceed with inspection or advise the Contractor of unfilled requirements. The Architect will prepare the Certificate of Substantial Completion following inspection or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.

1. The Architect will repeat inspection when requested and assured that the Work is substantially complete.
2. Results of the completed inspection will form the basis of requirements for final acceptance.

### 1.3 FINAL ACCEPTANCE

A. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.

1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include insurance certificates for products and completed operations where required.
2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
3. Submit a certified copy of the Architect's final inspection list of items to be completed or corrected, endorsed and dated by the Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance and shall be endorsed and dated by the Architect.
4. Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the date of Substantial Completion or when the Owner took possession of and assumed responsibility for corresponding elements of the Work.
5. Submit consent of surety to final payment.
6. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

B. Reinspection Procedure: The Architect will reinspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to the Architect.

1. Upon completion of reinspection, the Architect will prepare a certificate of final acceptance. If the Work is incomplete, the Architect will advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
2. If necessary, reinspection will be repeated.

#### 1.4 RECORD DOCUMENT SUBMITTALS

A. General: Do not use record documents for construction purposes. Protect record documents from deterioration and loss in a secure, fire-resistant location. Provide access to record documents for the Architect's reference during normal working hours.

B. Record Drawings: Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark which drawing is most capable of showing conditions fully and accurately. Where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.

1. Mark record sets with red erasable pencil. Use other colors to distinguish between variations in separate categories of the Work.
2. Mark new information that is important to the Owner but was not shown on Contract Drawings or Shop Drawings.
3. Note related change-order numbers where applicable.
4. Organize record drawing sheets into manageable sets. Bind sets with durable-paper cover sheets; print suitable titles, dates, and other identification on the cover of each set.

C. Record Specifications: Maintain one complete copy of the Project Manual, including addenda. Include with the Project Manual one copy of other written construction documents, such as Change Orders and modifications issued in printed form during construction.

1. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications.
2. Give particular attention to substitutions and selection of operations and information on concealed construction that cannot otherwise be readily discerned later by direct observation.
3. Note related record drawing information and Product Data.

4. Upon completion of the Work, submit record Specifications to the Architect for the Owner's records.

D. Record Product Data: Maintain one copy of each Product Data submittal. Note related Change Orders and markup of record drawings and Specifications.

1. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site and from the manufacturer's installation instructions and recommendations.
2. Give particular attention to concealed products and portions of the Work that cannot otherwise be readily discerned later by direct observation.
3. Upon completion of markup, submit complete set of record Product Data to the Architect for the Owner's records.

E. Record Sample Submitted: Immediately prior to Substantial Completion, the Contractor shall meet with the Architect and the Owner's personnel at the Project Site to determine which Samples are to be transmitted to the Owner for record purposes. Comply with the Owner's instructions regarding delivery to the Owner's Sample storage area.

F. Miscellaneous Record Submittals: Refer to other Specifications Sections for requirements of miscellaneous record keeping and submittals in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order. Identify miscellaneous records properly and bind or file, ready for continued use and reference. Submit to the Architect for the Owner's records.

G. Maintenance Manuals: Organize operation and maintenance data into suitable sets of manageable size. Bind properly indexed data in individual, heavy-duty, 2-inch (51 mm), 3-ring, vinyl-covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder. Include the following types of information:

1. Emergency instructions.
2. Spare parts list.
3. Copies of warranties.
4. Wiring diagrams.
5. Recommended "turn-around" cycles.
6. Inspection procedures.
7. Shop Drawings and Product Data.
8. Fixture lamping schedule.

## **PART 2.00 - PRODUCTS (Not Applicable)**

## **PART 3.00 - EXECUTION**

### 3.1 CLOSEOUT PROCEDURES

A. Operation and Maintenance Instructions: Arrange for each Installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. Provide instruction by manufacturer's representatives if installers are not experienced in operation and maintenance procedures. Include a detailed review of the following items:

1. Maintenance manuals.
2. Record documents.
3. Spare parts and materials.
4. Tools.
5. Lubricants.
6. Fuels.
7. Identification systems.
8. Control sequences.
9. Hazards.
10. Cleaning.
11. Warranties and bonds.
12. Maintenance agreements and similar continuing commitments.

B. As part of instruction for operating equipment, demonstrate the following procedures:

1. Startup.
2. Shutdown.
3. Emergency operations.
4. Noise and vibration adjustments.
5. Safety procedures.
6. Economy and efficiency adjustments.
7. Effective emergency utilization.

### 3.2 FINAL CLEANING

A. General: The General Conditions require general cleaning during construction. Regular site cleaning is included in Division 1 Section "Construction Facilities and Temporary Controls."

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion.
  - a. Remove labels that are not permanent labels.
  - b. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other substances that are noticeable vision-

obscuring materials. Replace chipped or broken glass and other damaged transparent materials.

c. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films, and similar foreign substances. Restore reflective surfaces to their original condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.

d. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.

e. Clean the site, including landscape development areas, of rubbish, litter, and other foreign substances. Sweep paved areas broom clean; remove stains, spills, and other foreign deposits. Rake grounds that are neither paved nor planted to a smooth, even-textured surface.

C. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid the Project of rodents, insects, and other pests.

D. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.

E. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the site and dispose of lawfully.

1. Where extra materials of value remain after completion of associated Work, they become the Owner's property. Dispose of these materials as directed by the Owner.

## **END OF SECTION 01700**



## SECTION 01740 - WARRANTIES

### PART 1.00 - GENERAL

#### 1.1 SUMMARY

A. This Section includes administrative and procedural requirements for warranties required by the Contract Documents, including manufacturers standard warranties on products and special warranties.

1. Refer to the General Conditions for terms of the Contractor's period for correction of the Work.

B. Related Sections: The following Sections contain requirements that relate to this Section:

1. Division 1 Section "Submittals" specifies procedures for submitting warranties.

2. Division 1 Section "Contract Closeout" specifies contract closeout procedures.

3. Division 2 through 16 Sections for specific requirements for warranties on products and installations specified to be warranted.

4. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.

C. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products. Manufacturer's disclaimers and limitations on product warranties do not relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

#### 1.2 WARRANTY REQUIREMENTS

A. Related Damages and Losses: When correcting failed or damaged warranted construction, remove and replace construction that has been damaged as a result of such failure or must be removed and replaced to provide access for correction or warranted construction.

B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.

C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.

D. Owner's Recourse: Expressed warranties made to the Owner are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods shall not be interpreted as limitations on the time in which the Owner can enforce such other duties, obligations, rights, or remedies.

1. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.

E. Where the Contract Documents require a special warranty, or similar commitment on the Work or part of the Work, the Owner reserves the right to refuse to accept the Work, until the Contractor presents evidence that entities required to countersign such commitments are willing to do so.

### 1.3 SUBMITTALS

A. Submit written warranties to the Architect prior to the date certified for Substantial Completion. If the Architect's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the work, or a designated portion of the Work, submit written warranties upon request of the Architect.

1. When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Architect within 15 days of completion of that designated portion of the Work.

B. When the Contract Documents require the Contractor, or the Contractor and a subcontractor, supplier or manufacturer to execute a special warranty, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner, through the Architect, for approval prior to final execution.

1. Refer to Divisions 2 through 16 Sections for specific content requirements and particular requirements for submitting special warranties.

C. Bind warranties and bonds in heavy-duty, commercial-quality, durable 3-ring, vinyl-covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8 1/2 -by- 11-inch (115 -by- 280-mm) paper.

1. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address, and telephone number of the Installer.

2. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project title or name, and name of the Contractor.

3. When warranted construction requires operation and maintenance manuals, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

**PART 2.00 - PRODUCTS (Not Applicable)**

**PART 3.00 - EXECUTION (Not Applicable)**

**END OF SECTION 01740**

## **SECTION 02110 - DEMOLITION**

### **PART 1.00 - GENERAL**

#### 1.01 Quality Assurance:

- A. **Qualifications of Workmen:** Provide at least one person who shall be present at all times during demolition operations and who shall be thoroughly familiar with the requirements of this portion of the work and the methods by which the same is accomplished.
- B. **Codes and Standards:** In addition to complying with all pertinent codes and regulations, comply with the requirements of those insurance carriers providing coverage for this work.
- C. **Contractor's Responsibility:** It shall be the Contractor's responsibility to protect all existing construction designated to remain and to provide for the public safety during all demolition operations.

#### 1.02 Definitions: Omitted

#### 1.03 Submittals: Omitted

#### 1.04 Product Handling:

- A. **Damage to Existing Construction:** In the event of damage to any construction and/or equipment not scheduled to be demolished or removed, the Contractor shall immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner. The Contractor is to provide all necessary barricades, coverings, floor protection, wall protection, door and frame protection to prevent damage to any construction that is to remain.

#### 1.05 Job Conditions:

- A. **Dust Control:** Use all means necessary to prevent the spread of dust during the performance of the work of this section.
- B. **Burning:** On-site burning will not be permitted.
- C. **Hazardous Materials:** Should, during the course of demolition, any suspect hazardous materials be encountered, stop work in suspect area and immediately notify the Architect. See Section F. Items 19 & 20 for additional information.

### **PART 2.00 - PRODUCTS**

#### 2.01 Materials:

- A. **Barricades:** Use only new and solid lumber and plywood of utility grade or better for construction of all temporary barricades.

B. Other Materials: All other material, not specifically described but required for the proper execution of the work of this section shall be selected by the Contractor, subject to approval by the Architect.

## **PART 3.00 - EXECUTION**

### 3.01 Inspection:

A. The Contractor shall examine the areas and conditions under which the demolition operations are to be carried out; notify the Architect in writing of conditions detrimental to the completion of the demolition; do not proceed with the work until unsatisfactory conditions have been corrected.

### 3.02 Installation:

#### A. Preparation:

1. Notification: Notify the Architect at least two full working days prior to commencing the work of this section.
2. Site Inspection: Prior to all work of this section, carefully inspect the entire site and all objects designated to be removed and to be preserved.
3. Clarification: The drawings show generally all existing construction that is to be removed; however,
  - a. Remove existing ceilings as shown on the drawings.
  - b. Removal of various mechanical and electrical items as shown.
  - c. Removal of existing walls, doors, windows, frames, millwork, concrete slabs and floor finishes as shown. **Do not remove any structural columns in walls.**
  - d. Before commencing the work of this section, verify with the Architect all construction that is to be removed.
4. Scheduling:
  - a. Schedule all work in a careful manner with all necessary consideration for neighbors and the public.
  - b. Avoid interference with the use of and passage to and from adjacent buildings and facilities.

### 3.03 Field Quality Control:

A. Temporary Barricade: Construct temporary barricades to protect existing construction and the public from damage or harm caused by the work of this section; barricades shall be constructed in accordance with all pertinent codes and regulations.

B. Disconnection of Utilities: Before starting site operations, disconnect or arrange for disconnection of all utility services designated to be removed, performing all such work in accordance with the requirements of the utility company or agency involved.

C. Protection of Utilities: Preserve in operating condition all active utilities traversing the site. all active utilities designated to remain, and make all necessary temporary connections to maintain all utilities to existing building at all times.

D. Demolition: Demolish existing construction designated to be removed on the drawings or as determined under Article 3.02, A, 3, in their entirety.

E. Disposal of Debris: Remove from the site all debris resulting from the demolition operations; burning of debris on site will not be permitted; place of disposal for demolished items shall be the Contractor's responsibility, and should be a permitted dump site approved by State of Georgia EPD. Provide Dump Tickets to Owner and Architect

**END OF SECTION 02110**

## SECTION 02251 - TERMITE CONTROL

### PART 1.00 - GENERAL

1.01 Quality Assurance: The applicator of chemicals described hereinafter shall have been successfully engaged in the business of termite control for a period of not less than five years immediately prior to performing work of this section.

1.02 Definitions: Omitted

1.03 Submittals:

A. Proof of Compliance: Prior to commencing any work of this section, submit in triplicate to the Architect:

1. a certified statement of qualifications and
2. a certified statement to the effect that all products proposed to be used meet the requirements of this section.

B. Guarantee: Upon completion of the work, and as a condition of its acceptance, deliver to the Owner, via the Architect, three copies of guarantee in the form and with provisions as follows:

1. Form of Guarantee: The guarantee shall be in form acceptable to the Architect and shall be drawn in favor of the Owner, his successor, and his assigns.
2. Provisions Required:
  - a. All soil poisoning has been performed in accordance with all requirements of this section of the project manual.
  - b. The effectiveness of the soil treatment against termite infestation will continue for not less than five years after the date of treatment.
  - c. All evidence of reinfestation within the guarantee period will be treated in accordance with the referenced standards and without additional cost to the Owner.
  - d. Complete performance of the guarantee is assured by Surety acceptable to the Owner.
3. Performance of Guarantee: Treat, in accordance with all terms of the guarantee, all evidence of termite re-infestation which is discovered within the guarantee period.

1.04 Product Handling:

A. Protection: Protect the products of this section from damage during delivery, storage, installation and until date of Architect's final certificate and to protect the installed work and materials of all other trades.

B. Replacements: In the event of damage, immediately make all repairs and replacements as directed by the Architect.

#### 1.05 Job Conditions:

A. Coordination: Carefully coordinate all soil poisoning activities with the schedule for preparation of other under slab work and for placing the concrete slabs, in order to ensure orderly progress of the total work.

B. Environmental Conditions: Do not apply soil poison when the soil is wet or there is an immediate likelihood of rain.

C. Signs: Post signs in the areas of application of soil poison warning workers that soil poison has been applied; remove signs when treated areas are covered by other construction.

## **PART 2.00 - PRODUCTS**

### 2.01 Materials:

A. Chemicals: FT Termiticide by FMC Corp. Philadelphia, PA 19103 or equal.  
Active Ingredient: Cypermethrin 24.8% by weight  
Inert Ingredients 75.2% by weight

B. Water: all water shall be potable.

2.02 All materials must bear a current EPA registration number and all residue and excess material must be disposed of in accordance with FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) 7USC136-136Y.

## **PART 3.00 - EXECUTION**

3.01 Inspection: The Contractor shall examine the areas and conditions under which the work of this section is to be performed; notify the Architect in writing of conditions detrimental to the completion of the work; do not proceed with the work until unsatisfactory conditions have been corrected.

### 3.02 Installation:

A. Surface Preparation: Remove all foreign matter from areas to be treated.

B. Application and Rates: Apply chemical solutions as follows:

1. Within building area, with or without slabs-on-grade at the rate of 1-1/2 gallons per 10 square feet (or as per manufacturer's recommendation and EPA regulations).
2. Along interior side of perimeter foundation walls and along both sides of interior foundation walls, at a rate of 4 gallons per 10 lineal feet.



3. Below expansion joints, control joints and around penetrations through concrete slabs, at a rate of 4 gallons per 10 lineal feet.
4. Outside building perimeter, in a strip at least 2 feet wide, under areaways, aprons, pads, landings, walks, paved extensions and where paving abuts perimeter of building, at a rate of 1 gallon per 10 square feet.
5. Under foundations and footings, including but not limited to horizontal and vertical surfaces of excavations, at the rate of 1-1/2 gallons per 10 square feet.

### 3.03 Field Quality Control:

- A. Inspection: Materials and workmanship at all times will be subject to inspection by the Architect or his representative.
- B. Drying: Allow not less than twelve hours for drying after application before proceeding with construction activities that will cover the treated areas.
- C. Protection of Treated Areas: Treated surfaces shall be protected from disturbance until covered by subsequent construction.
- D. Retreatment: Should treated surfaces be disturbed reapply soil poisoning to the disturbed areas at the rates hereinbefore described.

### **END OF SECTION 02251**

## SECTION 03300 - CAST-IN-PLACE CONCRETE

### PART 1.00 - GENERAL

#### 1.01 Quality Assurance:

##### A. Qualifications of Installers:

1. For actual erection of unit masonry, use only skilled journeyman masons who are thoroughly experienced with the materials and methods described and thoroughly familiar with the design requirements of this work.
2. In acceptance or rejection of installed unit masonry, no allowance will be made for lack of skill on the part of workmen.
3. Provide one skilled journeyman mason who shall be present at all times during execution of the work of this section and who shall personally direct the execution of this portion of this work.

#### 1.02 References:

##### A. Codes & Standards: (Comply with standards specified in this section.)

1. ACI 301-96, "Specifications for Structural Concrete for Buildings".
2. ACI 304R-89, "Recommended Practice Measuring, Mixing, Transporting and Placing Concrete".
3. ACI 305R-91, "Hot Weather Concreting".
4. ACI 306R-88, "Cold Weather Concreting".
5. ACI 309R-87, "Guide for Consolidation of Concrete".
6. ACI 315-92, "Details and Detailing of Concrete Reinforcement".
7. ACI 318-05, "Building Code Requirements for Structural Concrete".
8. ASTM A82-01, "Cold-Drawn Steel Wire for Concrete Reinforcement".
9. ASTM A615-01b, "Deformed and Plain Billet-Steel Bars for Concrete Reinforcement".
10. ASTM C31-00e1, "Making and Curing Concrete Test Specimens in the Field".
11. ASTM C33-01a, "Concrete Aggregates".
12. ASTM C42-99, "Obtaining and Testing Drilled Cores and Sawed Beams of Concrete".
13. ASTM C78-92, "Test Method for Flexural Strength of Concrete".
14. ASTM C94-00e2, "Ready-Mixed Concrete".
15. ASTM C143-00, "Test Method for Slump of Hydraulic Cement Concrete".
16. ASTM C150-02, "Portland Cement".
17. ASTM C171-97a, "Sheet Materials for Curing Concrete".
18. ASTM C172-99, "Sampling".
19. ASTM C173-01e1, "Test Method For Air Content of Freshly Mixed Concrete by the Volumetric Method".
20. ASTM C192-00, "Making and Curing Cylinder".
21. ASTM C231-97e1, "Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method".
22. ASTM C260-01, "Air-Entraining Admixtures for Concrete".
23. ASTM C309-98a, "Liquid Membrane-Forming Compounds for Curing Concrete".

24. ASTM C494-99ae1, "Chemical Admixtures for Concrete".

25. ASTM E329-00b "Inspection and Testing Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction."

### 1.03 Submittals:

#### A. Manufacturer's Data:

1. Specifications and instructions for installation shall be submitted for each of the products listed in part 2. Indicate instructions for storage, handling, and protection for each product.

#### B. Mix Designs: Submit to the Architect for each type of concrete used on project, in advance of proposed use. Verify the design mix in accordance with Section 3.9 or 3.10 of ACI 301.

1. Previous Field Experience or Trial Mixtures: Concrete proportions may be established on the basis of previous field experience if sufficient and timely data is available for full compliance with Section 3.9 of ACI 301. Where acceptable records are not available trial mixtures shall be submitted to an approved testing laboratory for mix designs in accordance with Section 3.9.3.3 of ACI 301.

2. Where acceptable field test records or trial mixture data are not available the contractor may submit mix designs based on proportioning by empirical data in accordance with Section 3.10 of ACI 301.

#### C. Prequalify ready-mixed concrete suppliers according to the requirements of ASTM Specification C94, entitled "Ready-Mixed Concrete". Mix and transport concrete as required by ASTM C94, Paragraph 15.1 and 15.2.

#### D. Complete description of proposed curing methods.

#### E. The contractor shall submit construction and control plan for approval.

#### F. The contractor shall check all shop drawings prior to submittal. All unchecked shop drawings will be rejected.

#### G. Concrete placement shall not begin until mix designs have been stamped "No Exceptions" or "Make Corrections Noted" and corrections have been made and corrected and file copies submitted to Architect.

### 1.04 Job Conditions:

#### A. Weather:

1. Precaution shall be taken to prevent high temperatures in fresh concrete during hot weather, in accordance with ACI 305. Water reducing set retarding admixtures shall be used in such quantities as recommended by concrete supplier to assure that concrete remains workable and lift lines will not be visible.

2. Cold weather placement shall be in accordance with ACI 306.

1.05 Definitions:

A. Normal Weight Concrete: Composed of ASTM C33 aggregate, cement and water, weighing 145 - 150 pounds/cubic foot, cured and air dried.

1.06 Quality Criteria:

A. Allowable Tolerances in Finished, Exposed Work:

1. In linear buildings lines, elevations and conspicuous lines and arises: As specified in above standards.
2. In cross-sectional dimension: As specified in above standards.
3. Finish all interior concrete elevated slabs and slabs on grade using techniques, which will provide the following flatness criteria:

	Overall:	Min. Local:
Office Area Slab on Grade	FF25/FL20	FF20/FL15
Manufacturing Area Slab on Grade	FF35/FL25	FF30/FF20
Warehouse Area Slab on Grade	FF35/FL25	FF30/FF20

- a. ACI 301, "Specification for Structural Concrete for Buildings".
- b. FL for elevated floors is only applicable when concrete forms are shored and shoring is provided in accordance with section 03100 Concrete Forming. FL shall be measured prior to removal of forms. FL does not apply to sloping slabs.
- c. For unshored construction, FL values do not apply except when required FL values for elevated slabs are greater than or equal to 50.
- d. All flatness tests for a given slab shall be performed within 72 hours of pour.
- e. Slabs that do not meet the required flatness (FF) and levelness (FL) criteria shall be repaired by grinding, planing, surface repair, retopping, or removal of the slab. Detailed drawings showing repair action and manufacture specification of materials to be used shall be submit and approved prior to corrective action. Measures shall be taken to adjust finishing techniques to obtain the flatness and levelness criteria specified prior to additional placement of additional elevated or slab on grade.

B. Location Tolerances for Cast-in items:

1. Inserts, pipe sleeves, bolts, etc., plus or minus 3/8"
2. Flashing reglets, at edge of panel, plus or minus 1/4" total
3. Reglets for glazing gasket, plus or minus 1/8"
4. Groove width for glazing gaskets, plus or minus 1/16"
5. Electrical outlets, hose bibs, etc., plus or minus 1/2"

**PART 2.00 - PRODUCTS**

2.01 Materials:

- A. Portland Cement: Meeting ASTM C150, Type I or III, natural color, domestic manufacture. Only one brand of cement shall be used for exposed Architectural concrete throughout.
- B. Mineral Admixtures: Mineral admixtures including Fly Ash shall not be used to replace Portland Cement.
- C. Normal Weight Aggregate: Fine and coarse aggregate meeting ASTM C33.
- D. Coarse aggregate: Crushed stone or gravel conforming to ASTM C 33, for normal weight. Maximum size shall be 1" for slabs and walls; 1-1/2" for reinforced footings and pile caps; or not more than 1/5 the narrowest dimension between the sides of the forms or 3/4 the minimum clear distance between parallel reinforcing--whichever is smaller. Coarse aggregate shall conform to a well-distributed gradation. Minimum aggregate size for all concrete mixes shall be 3/4", unless permitted otherwise in writing. Contractor shall examine in-place formwork and reinforcing and coordinate with engineer and architect regarding possible use of smaller aggregates if consolidation of concrete in congested areas is in question, based on contractor's examination and judgment.
- E. Air-Entraining Admixture: Meeting ASTM C260. Add to produce air entrainment in accordance with ACI-318.
- F. Water-Reducing Admixture: Meeting ASTM C494.
- G. Chemical Retarders and Accelerators: Meeting ASTM C494. Add as required for weather conditions encountered.
- H. Nonshrink Grout:
1. Acceptable products:
    - a. Gifford-Hill and Co., Supreme.
    - b. L&M Construction Chemicals Co., Crystex.
    - c. Master Builders Co., Master Flow 713.
    - d. Sonneborn Building Products, SonogROUT.
    - e. The Upco Co., Upcon High Flow 261.
    - f. U.S. Grout Corp., Five Star Grout.
    - g. W.R. Bonsal Co., Type A Construction Grout.
    - h. W .R. Meadows, Inc., 588.
  2. Characteristics: High flow, non-metallic, controlled expansive type grout.
- I. Water: Clean, potable and free of deleterious amounts of acids, alkalis, and organic matter.
- J. Expansion Joint Filler Strips: Non-extruding, non-asphaltic cork or cane fiber.
- K. Calcium chloride or admixtures containing calcium chloride shall not be used in concrete without Architect's approval.

L. Water stops shall be extruded polyvinyl chlorides as manufactured by W.R. Meadows or approved equal. Size shall be 4" wide by 3/16" thick of the center bulb multi-rib type. Alternatively, waterstops may be RX type as manufactured by Volclay, or approved equal.

M. Curing Compound: Conform to ASTM C309, Type II, Class B curing compound shall be compatible with floor finishes and flooring adhesives. Contractor responsible for verifying material is compatible for all floor finishes and adhesives. Curing and sealing compounds, if used, shall likewise be compatible with floor finishes and flooring adhesives.

## 2.02 Concrete Types

A. Concrete shall be type, weights, and strength as listed herein, shown in the drawings, and as otherwise directed and specified.

B. Concrete type:

<u>Item Description</u>	<u>Min. Strength</u>	<u>Unit Weight</u>	<u>Slump</u>
	at 28 Days		
As shown on drawings	4000 psi	145-150 pct (NW)	3"-5"
As shown on drawings	3000 psi	145-150 pct (NW)	3"-5"

C. Only concrete permanently exposed to weather shall be air-entrained.

## **PART 3.00 - EXECUTION**

3.01 Inspection: Examine surfaces designated to receive work described in this section for conditions adversely affecting the finished work. Repair or replace surfaces not meeting tolerances or quality requirements imposed within specifications governing substrate construction prior to initiating this work.

3.02 Vapor Barrier:

A. Vapor Barrier (Moistop or equal): Place, protect, and repair vapor barrier according to ASTM E 1643 and manufacturer's written instructions.

1. Lap Joints 6 inches and seal with manufacturer's recommended tape.

3.03 Proportioning of Concrete Mixtures:

A. Proportion ingredients for concrete by weight when both the air content and slump are the maximum permitted to produce an average compressive strength at 28 days which exceeds by 25% the compressive test strength specified.

B. Air content of freshly mixed air-entrained concrete as determined by the method of ASTM C 173 shall be 6%. A field tolerance of 1% plus or minus is acceptable. Only concrete permanently exposed to freezing weather shall be air-entrained, unless specified otherwise on drawings.

C. Water reducing admixture shall be used in all concrete to reduce the total water requirement per cubic yard of concrete without loss of workability or test strength.

D. Retarding admixture shall be used to retard the setting time when anticipated ambient temperature exceeds 75 degrees F. during placing or finishing operations.

### 3.04 Batching & Mixing:

A. Measure cement by weight on a scale separate from those used for other materials. Cement may be measured in bags of standard weight of 94 pounds; however, no fraction of a bag shall be used in any batch.

B. Measure aggregates by weight. Batch weights shall be based on saturated surface dry materials corrected for the actual moisture condition of the aggregate.

C. Measure water by volume or by weight by devices not subject to variation due to variable pressure in the water supply line. Measuring tanks shall be provided with means for checking their calibration.

D. Devices for measuring quantities of cement, aggregates, water and admixtures shall be accurate within 1% under operating conditions.

E. Furnish delivery ticket for each batch of concrete before unloading at the site. Weights of fine and coarse aggregate, amount of cement, and total water as batches shall be printed on ticket by an automatic printing device. Delivery tickets shall, in addition, include the following:

1. Name of batch plant.
2. Serial number of ticket.
3. Date and truck number.
4. Name of contractor.
5. Job name of location.
6. Type/Purpose of concrete and slump.
7. Cubic yards of concrete.
8. Time loaded.
9. Amount water added at job.
10. Initials of Job Superintendent.

F. Batch and mix concrete in accordance with ASTM C94, except where more stringent requirements are specified. Ready-mixed concrete shall be produced and delivered in accordance with the requirements of ASTM C 94.

G. Truck mixer drums shall be thoroughly cleaned prior to each batching of concrete. Truck mixtures shall be loaded at only capacity which will insure uniform batch at slump specified. Non-uniform mixing shall be rejected.

H. Mixing time shall start after all ingredients are in mixer. Minimum mixing shall be 70 revolutions at mixing speed, if charged to maximum capacity; 50 revolutions at mixing speed, if charged to less

than maximum capacity. Discharge mixture from mixes within one hour of initial mixing.

I. Additional water shall not be added to the mix except as directed by Architect, or allowed herein for hot weather concreting.

J. Concrete shall be delivered at such a rate as will assure prompt discharge upon truck arrival. Place no concrete which has been discharged from mixer truck for longer than thirty minutes.

K. Truck mixers with unacceptable batch of concrete will be rejected. Dispose of concrete legally and clean mixer prior to refill. Rejected mixers will be singled out on new delivery for slump and mix test.

### 3.05 Placing:

#### A. General:

1. Place concrete in compliance with practices and recommendations of ACI 304, and as herein specified.
2. Provide sufficient notice to Special Inspector and Architect at least 48 hours before placing concrete in any portion of the structure to permit inspection of the forms and reinforcement. Do not place concrete without approval of forms and reinforcement by Special Inspector. All embedded items of whatever nature shall be in place prior to inspection.

#### B. Procedures

1. Do not place any concrete which does not meet slump requirements for concrete specified.
2. Deposit concrete continuously in layers of such thickness that no concrete will be placed on concrete which has hardened sufficiently to cause the formation of seams or planes of weakness.
3. If a section cannot be placed continuously, provide construction joints as herein specified.
4. Perform concrete placing at such rate that concrete which is being integrated with fresh concrete is still plastic.
5. Deposit concrete as nearly as practicable in its final location to avoid segregation due to rehandling and flowing.
6. Do not subject concrete to any procedure which will cause segregation.
7. Screed concrete which is to receive other construction to the proper level to avoid excessive skimming and grouting.
8. Do not use concrete which becomes nonplastic and unworkable, or does not meet the required quality control limits, or which has been contaminated by foreign materials.
9. No concrete shall be placed in forms after initial set has taken. Retempering of concrete which has partially set is prohibited. Place concrete in the forms within 1-1/2 hours after initial batching. No placing will be permitted when the sun, temperature, wind or limitations of facilities prevent proper finishing and curing.
10. Remove rejected concrete from the site and dispose of it in an approved location.

C. Placement schedule: Place concrete in conformance with the placement schedule to ensure an even distribution of loads throughout the entire structure.

#### D. Concrete conveying:



1. Handle concrete from the point of delivery and transfer to concrete conveying equipment, and to the locations of final deposit, as rapidly as practicable and by methods which will prevent segregation and loss of concrete mix materials.
2. Keep interior surfaces of conveying equipment, including chutes and tremies, free from hardened concrete, debris, water, and other deleterious materials.
3. Use chutes or tremies for placing concrete where a drop of more than 72 inches is required.
4. Where free drop through tremies exceeds 18 inches, use flow checking devices.
5. Transport and place pumped concrete in accordance with ACI requirements. Make provisions in formwork design and construction to handle effects of pump hammer. Equipment used to transport concrete shall be compatible with concrete reinforcing and desired finishes.

E. Placing concrete in forms:

1. Deposit concrete in forms in horizontal layers not deeper than 24 inches, avoiding inclined construction joints.
2. Where placement consists of several layers, place each layer while preceding layer is still plastic to avoid cold joints.
3. Remove temporary spreaders in forms when concrete placing has reached the elevation of such spreaders.
4. Do not place concrete in supporting elements until the concrete previously placed in columns and walls is no longer plastic.

F. Placing concrete slabs:

1. Immediately before placing concrete, ensure that any required subgrade, waterproofing, vapor barriers, bond breaks, and/or joint forms have been properly installed.
2. Install wire mesh and/or steel reinforcement as indicated and
3. Deposit and consolidate concrete in a continuous operation, within the limits of the construction joints, until the placing of a panel or area is complete.
4. Consolidate concrete during placement by use of Contractor approved equipment, thoroughly working concrete around the reinforcement and into corners.
5. Consolidate concrete placed against bulkheads of slabs on grade, as specified for formed concrete.
6. Consolidate concrete in remainder of slabs by vibrating bridge screeds, roller pipe screed, or other methods acceptable to the Architect.
7. Scream to correct level with straightedge to bring surface to the required finish elevation with no coarse aggregate visible.
8. Immediately following screeding finish the surface to a true even plane using bullfloats or darbies. After concrete has stiffened sufficiently to support one man's weight without imprint and the water sheen has disappeared, it shall be wood floated.
9. Unless noted otherwise on the drawings, immediately following wood floating, the surfaces shall be steel troweled to produce a smooth, dense surface free from blemishes including trowel marks. In lieu of hand finishing, an approved power finishing machine may be used in accordance with the directions of the machine manufacturer. A final hard steel troweling shall be done by hand.
10. Do not sprinkle water on the plastic surface; do not disturb the slab surfaces prior to start of finishing operations.

### 3.06 Consolidation:

- A. Consolidate all concrete in forms in accordance with provisions of ACI 309.
- B. Use vibrators for concrete consolidation. Place vibrators in concrete rapidly so as to penetrate into previous lift blending two layers and minimizing or eliminating entrapped air between concrete and form.
- C. Vibrator head shall not be allowed to come within 3" of form face. Do not vibrate reinforcing.
- D. Use vibrators with steady, continuous motion in concrete mass and for long enough duration at each position in a pattern to permit maximum escape of air from concrete.
- E. Vibrators shall be 2-1/2" to 2-5/8" in diameter, with minimum frequency of 10,000 impulses per minute. Furnish number of vibrators as required to vibrate all concrete immediately upon placing. Maintain spare vibrators at project site in case of breakdown.

### 3.07 Cold Weather Concreting:

- A. Take cold weather precautions when temperature on job site is at or below 40 degrees F.
- B. Heat water, aggregates, or both, to maintain the temperature of the concrete at the time of delivery at not less than 55 degrees F. Provide tarps, heaters, insulated forms, or other means to maintain the temperature of deposited concrete at not less than 40 degrees F for the first 7 days after placement. Calcium chloride or other accelerating admixtures will not be permitted unless approved in writing by the Architect.

### 3.8 Hot Weather Concreting:

- A. Take hot weather precautions when temperatures on job site are at or above 75 degrees F.
- B. Add retarders to the concrete mix at the batch plant according to the mix design approved by the testing agency. Where necessary, cool aggregates or use chilled water or both to maintain concrete temperatures as delivered to the job site at or below 90 degrees F. Reject any truck mixer in which concrete temperatures are above 90 degrees F. Maintain truck discharge time within 1 hour of initial mixing and placement of discharged concrete within 30 minutes of initial discharge.
- C. In hot weather, up to 10% of design mix water may be added to truck mixers at the job site to replace water lost by evaporation. Mix for a minimum of 30 additional revolutions after water is added. Make slump test and take cylinders for compression test specimens from each truck to which water has been added. These additional cylinders shall not be counted in determining "frequency of testing" as defined in Concrete Testing Section. Cost for this additional testing shall be paid for by the Contractor.

### 3.09 Curing:

#### A. General:

1. All concrete shall be cured by an approved method for the period of time given below:  
Type I, II, IP of IS cement 7 days
2. Immediately after placement, concrete shall be protected from premature drying extremes in temperatures, rapid temperature change, mechanical injury and injury from rain and flowing water. All materials and equipment needed for adequate curing and protection shall be available and accessible prior to placing concrete. No fire or excessive heat shall be permitted near or in direct contact with the concrete at any time. Curing shall be accomplished by any of the following methods, or combination thereof, as approved by Contractor.

B. Moist curing: Concrete to be moist-cured shall be maintained continuously wet for the entire curing period. If water or curing materials used, stains or discolors concrete surfaces which are to be permanently exposed, the concrete surfaces shall be cleaned. When wooden forms are left in place during curing, they shall be kept wet at all times. If the forms are removed before the end of the curing period, curing shall be carried out as on unformed surfaces, using suitable materials. Horizontal surfaces shall be cured by covering with waterproof paper, polyethylene sheet, polyethylene-coated burlap or saturated burlap.

#### C. Membrane curing:

1. Membrane curing shall not be used on surfaces that are to receive any subsequent treatment depending on adhesion or bonding to the concrete; except a styrene acrylate or chlorinated rubber compound meeting Class B requirements may be used for surfaces which are to be painted or are to receive bituminous roofing or waterproofing, or floors that are to receive adhesive applications of vinyl composition tile.
2. Membrane curing compound shall not be used on surfaces that are maintained at curing temperatures with free steam.
3. The curing compound shall be applied to formed surfaces immediately after the forms are removed and prior to any patching or other surface treatment except the cleaning of loose sand, mortar, and debris from the surface.
4. The surfaces shall be thoroughly moistened with water and the curing compound shall be applied to slab surface as soon as the bleeding water has disappeared, with the tops of joints being temporarily sealed to prevent entry of the compound and to prevent moisture loss during the curing period.
5. The compound shall be applied in a one-coat continuous operation, at a uniform coverage in accordance with manufacturer's printed instructions.
6. Concrete surfaces which have been subjected to rainfall within three hours after curing compound has been applied shall be recoated at the same coverage rate and method herein specified. On surfaces permanently exposed to view, the surface shall be shaded from direct rays of the sun for the duration of the curing period. Surfaces coated with curing compound shall be kept free of foot and vehicular traffic and from other sources of abrasion and contamination

during the curing period.

### 3.10 Acceptance of Concrete:

A. The strength of concrete will be considered satisfactory if the averages of all sets of three consecutive strength test results equal or exceed the required 28- day strength and no individual strength test result is more than 500 psi below the required 28-day strength. Whenever this criteria is not met, core tests as described in Concrete Testing Section shall be taken in those areas with questionable concrete, as directed by the Architect.

**END OF SECTION 03300**

## **SECTION 03350 - CONCRETE FINISHES**

### **PART 1.00 - GENERAL**

#### 1.01 Related Work:

- A. Forming, mixing, and placing of concrete.

### **PART 2.00 - PRODUCTS**

#### 2.01 Sealer:

- A. Sealer shall be wax free, resin free and varnish free compound, which seals and hardens the concrete surface. Approved "Guardian Clear Bond".

#### 2.02 Abrasive Aggregate:

- A. Abrasive aggregate shall be aluminum oxide or emery graded from particles retained on a #50 mesh screen to particles passed by a 1/8" screen.

### **PART 3.00 - EXECUTION**

#### 3.01 Patching:

- A. Concrete which is not formed as shown on the plans, or for any reason is out of alignment or level or shows a defective surface shall be considered as not conforming with the intent of these specifications and shall be removed from the job by the Contractor, at his or her expense, unless the Architect grants permission to patch the defective area, which shall be done in accordance with the following procedure. Permission to patch any such area shall not be considered a waiver of the Architect's right to require complete removal of the defective work if the patching does not, in his opinion, satisfactorily restore the quality and appearance of the surface.
- B. When patching is authorized by the Architect, it shall be performed in accordance with the provisions of paragraph 37, "Patching" of the Architectural Concrete Specifications, published by the Portland Cement Association, current edition.

#### 3.02 Finishes On Formed Surface:

- A. Upon completion of patching, surfaces of concrete shall be finished as follows:
  - 1. Un-exposed concrete shall be left rough.
  - 2. Common Finish:
    - a. Confine common finish to exposed concrete surfaces in mechanical, electrical, and utility spaces, and areas shown or noted in finish schedule.

b. Strip forms at earliest time permitted by provisions of "Concrete Section". Strip only those forms on areas which can be immediately finished.

c. Produce common finish by filling smoothly all the holes and honeycomb areas and knocking off and evening up burrs.

3. Smooth Rubbed Finish:

a. Provide smooth rubbed finish on vertical interior concrete exposed in the finish work, as indicated on finish schedule not to receive special textured concrete.

b. Produce smooth rubbed finish as follows: Mix 1 part Portland cement and 1-1/2 parts fine sand with sufficient water to produce a grout having the consistency of thick paint. Wet the surface of the concrete sufficiently to prevent absorption of water from the grout and apply the grout with brushes or a spray gun uniformly, completely filling air bubbles and holes. Immediately after applying the grout, float the surface with a cork or other suitable float, scouring the wall vigorously. While the grout is still plastic, the surface shall be finished with a sponge rubber float removing all excess grout. This finishing shall be done at the time when grout will not be pulled from holes or depressions. Next allow the surface to dry thoroughly, then rub it vigorously with dry burlap to completely remove any dried grout. There shall be no visible film of grout remaining after this rubbing. The entire cleaning operation for any area must be completed the day it is started. No grout shall be left on the wall overnight. After an area has been grout cleaned, if any slightly dark spots or streaks remain they shall be wiped off lightly with a fine abrasive hone without using water but the rubbing with the hone shall not be sufficient to change the texture of the concrete. This final operation shall be included as a part of the smooth rubbed finish.

3.03 Unfinished Structural Slabs:

A. Treat surfaces of structural slabs, not finished as walking surfaces or as support for resilient floor coverings as required by their intended use. Screed surfaces intended to receive cement setting beds for other materials to true planes and scraped free of a laitance or scum immediately thereafter, and roughen mechanically for bond as soon as they bear the weight of workmen. Scrub surfaces to receive setting beds before placing setting and broom a thin, neat cement grout onto the surface a short distance ahead of the fill.

3.04 Monolithic Cement Finish:

A. Apply to the surface of concrete floor slabs as follows:

1. Floors scheduled to receive resilient flooring, carpets, and all other floors, stairs, platforms or slabs scheduled or shown on the drawings to have steel troweled cement finish.

2. Screed floor slabs to an even surface by the use of straightedge grade to obtain floor level within specified tolerances after initial deflection under dead load. This means that slab is to be screeded at a center span to a rise equal to specified camber of forms, ie., + /- 0 at columns and + value at center span to attain floor slab level within the specified tolerances after removal of

forms. Float concrete with a wood float in a manner which will compact it and produce a surface free from depressions or inequalities of any kind. Floors shall be level with a tolerance of 1/8" in ten feet and shall slope no more than 1/4" except where drains occur in which case the floors shall be pitched to the drains as indicated on the drawings. After the concrete has hardened sufficiently to prevent fine materials from working to the top and allowed to stand until all water sheen has disappeared, steel trowel surface. Perform final troweling after the concrete is so hard that no mortar accumulates on the trowel and a ringing sound is produced as the trowel is drawn over the surface. The drying of the surface moisture before troweling must proceed naturally and must not be hastened by the dusting on the dry sand or cement. Perform patching required to bring slabs to specified tolerances using latex or epoxy modified Portland cement.

3.05 Sealer: (Ashford Sealer) **(Refer to drawings for exact locations)** All interior slabs which serve as the finish floor shall be covered with one coat of liquid sealer compatible with curing compound specified in "Concrete" section. Liquid sealer shall be applied in accordance with the manufacturer's recommendations immediately before releasing the building to the Owner.

**END OF SECTION 03350**

## **SECTION 03600 - CONCRETE TESTING**

### **PART 1.00 - GENERAL**

#### 1.01 Description:

A. Testing of concrete materials, proposed mix designs and resulting concrete. Testing Agency will be selected by the Contractor and paid for by the Contractor. Additional testing required because of deficiencies, or to verify the adequacy of a condition allegedly not built in accordance with contract documents, shall be performed at the expense of the Contractor under the direction of the Owner's representative.

#### 1.02 Standard:

A. Test in accordance with chapters 16, 17, and 18 of ACI 301 entitled, "Specifications For Structural Concrete For Buildings", except as otherwise indicated.

#### 1.03 Qualifications Of Testing Agency:

A. The testing agency shall meet the requirements of ASTM E329, entitled "Tentative Recommend Practice For Inspection And Testing Agencies For Concrete Steel As Used In Construction". The testing agency shall perform the following:

1. Check concrete materials for compliance with specifications and report results along with recommendations to Architect.
2. Sample concrete at job site and prepare compression test specimens, test for slump, air content, and unit weight as required by specifications.
3. Place concrete test specimens in designated locations after casting.
4. Transport test specimens to laboratory and perform compression tests according to specifications. Report results on field data sheet to Owner's representative immediately of any test specimens that do not meet design strength at 28 days or 70% of design strength at 7 days.
5. Complete field test data sheet for each set of concrete test specimens. The completed data sheet shall show all information required by ACI specifications. Include: laboratory number, date, plant, truck number, time batched, time sampled, air temperature, concrete temperature, inspector, mix design number, required strength, unit weight, air content, slump, location of placement, 7 day and 28 day strength.

#### 1.04 Record Documents:

- A. Testing agency shall distribute copies of test report to:
1. One (1) copy to Owner's representative.
  2. One (1) copy to Contractor.
  3. One (1) copy to Concrete Supplier.

### **PART 2.00 - PRODUCTS**



## 2.01 Items Provided By Testing Agency:

A. Maintain supplies, apparatus, tools and devices at job site to obtain specimens and perform on-site tests as indicated. Provide not less than the following:

1. Molds for compression test specimens.
2. Slump cones with rod for slump test.
3. Scale and unit weight measure.
4. Appropriate air meters.
5. Concrete thermometer.

## 2.02 Items Provided By Contractor:

A. Provide stable, lockable storage box thermostatically controlled to maintain temperature between 60 and 80 degrees Fahrenheit for storage of cylinders for first 24 hours after molding. Box shall be a minimum of 40 cubic feet. Locate box in a permanent lockable area of approximately 100 square feet. Limit access to laboratory personnel and Contractor' s superintendent.

## **PART 3.00 - EXECUTION**

### 3.01 Notification:

A. Notify testing agency not less than 24 hours in advance of placing concrete to enable agency to have technician available for conducting tests and obtaining specimens.

### 3.02 Design Mixes:

A. Verify proposed design mixes and report recommendations to Owner's representative in accord with ACI 318, chapter 4.

### 3.03 Compression Tests:

A. Test specimens in accordance with all applicable ASTM Standards. At the job site, prepare cylinders for testing and perform required tests on concrete. Four cylinders shall be made for each sample of concrete to be tested; one to be broken at 7 days for information and two at 28 days for strength compliance. Hold one cylinder for 56 days. For frequency, see 3.09.

### 3.04 Core Tests:

A. Core tests, at Contractor' s expense, shall be required whenever concrete fails to meet the "Acceptance of Concrete" criteria as described in Concrete Section. Cores shall be taken under the direction of the Owner' s representative. Criteria for acceptance of cores shall be as described in ACI 318, section 4.7.4.4. Additional core tests, at Contractor's expense, may be required by the Architect whenever other requirements of these specifications are not compiled with fully.

### 3.05 Load Tests:

A. Perform, at Contractor' s expense, when core testing is inconclusive or impracticable. Evaluate load tests in accordance with ACI 318, 301.

3.06 Test For Air Content:

A. Perform each time a set of cylinders prepared for compression testing in accordance with ASTM C231.

3.07 Slump Test:

A. Perform each time a set of cylinders prepared for compression testing in accordance with ASTM C143.

3.08 Shrinkage Test:

A. Perform only if directed by the Owner' s representative.

3.09 Frequency of Testing:

A. Take samples for strength tests for each class of concrete not less than once each placement, each 5,000 square feet of surface area, of the following:

<u>Class of Concrete</u>	<u>Frequency of Testing</u>
A	50 cubic yard
B	50 cubic yard
C	50 cubic yard

3.10 Additional Testing:

A. Perform testing of materials, other than concrete, to determine compliance with contract documents when directed by the Owner' s representative. Contractor shall furnish samples and deliver them to testing agency's laboratory.

**END OF SECTION 03600**

## SECTION 04201 - UNIT MASONRY

### PART 1.00 - GENERAL

#### 1.01 Quality Assurance:

##### A. Qualifications of Installers:

1. For actual erection of unit masonry, use only skilled journeyman masons who are thoroughly experienced with the materials and methods described and thoroughly familiar with the design requirements of this work.
2. In acceptance or rejection of installed unit masonry, no allowance will be made for lack of skill on the part of workmen.
3. Provide one skilled journeyman mason who shall be present at all times during execution of the work of this section and who shall personally direct the execution of this portion of this work.

#### 1.02 Definitions:

- A. Face Brick: Clay masonry units which will be exposed to view in finish work; brick scheduled to receive paint finish shall be considered face brick.
- B. Special Shaped Brick: Clay masonry units requiring special molding in order to produce the required size and/or shape; units which can be "job-cut" to the required size and/or shape are not considered special shaped brick; wherever special shaped brick are called for on the drawings, job cut units will not be acceptable.
- C. Building Brick: Clay masonry units which will not be exposed to view in finish work.
- D. Solid Brick: Clay masonry units with no holes or frogs.

#### 1.03 Submittals:

- A. Samples: Before any products of this section are delivered to the project site, submit to the Architect for review, samples of the following:
1. Face Brick: Minimum seven brick panel using full size brick for each type of face brick described hereinafter, showing full color range.
  2. Solid Brick: Full size for each type described hereinafter.
  3. Hollow Concrete Masonry Units: Full size in each thickness for each type.

4. Masonry Reinforcement: Full size x 24" long for each type including prefabricated corners and tees.
5. Wall Ties: Full size for each type described hereinafter.
6. Special Shaped Brick: Full size for each shape.

B. Manufacturer's Data: Accompanying the sample submittals, furnish manufacturer's descriptive literature and specifications and installation instructions for the following:

1. Masonry Reinforcement

C. Manufacturer's Certification: Accompanying the sample submittals, furnish three copies of the manufacturer's certification that all products furnished by them for use in this work meet the requirements of this section.

D. Mock-Up:

1. After review of the samples, but prior to commencing unit masonry operations, construct on the project site, at location selected by the Architect, a sample panel approximately 4' -0" high x 6' -0" long x 1' 1" thick.
2. The sample panel shall be typical of exterior wall veneer and shall show coursing, bond, joints, extremes in color and texture of the masonry units.
3. Upon the Architect's approval of the sample panel, unit masonry work may commence.
4. The sample panel shall remain in place and be used as a guide until all unit masonry work is complete, and until its removal is approved by the Architect.

1.04 Product Handling:

A. Delivery and Storage:

1. Cementitious materials and masonry reinforcement shall be delivered to the project site in manufacturer's original, unopened packaging with labels intact.
2. Cementitious materials and metal items shall be stored in a housed, dry and ventilated area on a platform at least 12" above ground or floor.
3. Sand shall be stored on heavy canvas, sisalkraft or extruded vinyl sheeting and not allowed to mix with the earth it rests upon.

1.05 Job Conditions: Erect no masonry unless the ambient temperature is at least 40°F and rising.

## **PART 2.00 - PRODUCTS**

### 2.01 Materials:

- A. Face Brick: Common, modular brick over existing brick; all new exterior brick to be painted.
- B. Special Shaped Brick: (NOT USED)
- C. Solid Brick: shall be same as face brick and shall be same in full color range.
- D. Building Brick: All building brick shall be No. 2 face brick meeting requirements of ASTM C62-69, Grade SW.
- E. Exterior Hollow Concrete Masonry Units: Design is based on, Type AA-1, 8" x 16" x thickness shown on drawings, hollow concrete masonry units, except 4 inch thick units shall be solid. Provide integral water-repellant system for use in block, meeting ASTM E 514- 74 Water Repellency Standard and use Dry-Block Water Repellent Mortar Admix System in the mortar.
- F. Below Grade Hollow Concrete Masonry: Hollow concrete masonry for use below grade and where exposed to weather, other than exterior face veneer hollow concrete masonry shall be normal weight, Type 1, Grade N-1 and manufactured to meet ASTM C90-75.
- G. Interior Hollow Concrete Masonry: (NOT USED)
  - 1. Hollow concrete masonry for use above grade and where exposed to view in the finished work shall be normal weight, Type 1, Grade S-1, manufactured to meet requirements of ASTM C90-75 and where called for on the drawings bear Underwriter' s Laboratories, Inc. labels as follows:
    - a. 6" thick unit: 1 hour
    - b. 8" thick unit: 4 hour
  - 2. Bull nose units shall be provided for all out corners, at window jambs and at other locations called for on the drawings.
  - 3. In lieu of the above ratings (Article 2.01, G, a) fire-resistant units may be furnished on the basis of a written certification from the masonry manufacturer stating specifically that all units to be furnished are equivalent in fire rating to those furnished by producers listed in the Underwriter' s Laboratories Building Material List.
- H. Acoustical Concrete Masonry Units: Omitted
- I. Masonry Reinforcements:
  - 1. Type 1: Design is based on Dur-O-waL, 2 rod, truss type, with cavity drip, reinforcement as manufactured by Dur-O-waL, Inc., Birmingham, Alabama, fabricated from No. 9 deformed rods,

with preformed corners and tees; reinforcement shall be hot-dip galvanized after fabrication in accordance with ASTM A153, Class B-2 (1.50 oz. zinc coating). Reinforcement to be installed at 16" O.C. Vertically. (Typical)

2. Type 2: Omitted

3. Type 3: Design is based on Dur-O-WaL, 2 rod, truss type reinforcement as manufactured by Dur-O-WaL, Inc., Birmingham, Alabama, fabricated from No. 9 deformed rods, with prefabricated corners and tees; reinforcement shall have bright basic finish.

J. Wall Ties: See detail 1/A9-1 on the drawings.

K. Masonry Mortar:

1. All masonry mortar shall conform to the requirements of ASTM C270-84, Property Specification, Type M, and Type S for use as described hereinafter.

2. Masonry cement used to produce the specified mortar types shall be premixed, consisting of Portland cement, masonry cement and hydrated lime or lime putty, and shall be of one manufacturer.

3. Masonry mortar used with face brick shall match existing color & tooling as much as possible. Split face block mortar shall match the color of split face block as much as possible with tooling flush with face split base.

L. Sand: shall be white and shall conform to the requirements of ASTM C144-84.

M. Water: All water shall be clean and potable.

N. Portland Cement: shall conform to the requirements of ASTM C150-85 and be of one manufacturer.

O. Aggregate of Cement Grout: Aggregate for cement grout shall be fine aggregate conforming to ASTM C404-70.

P. Mortar Admix System Required:

1. For Exterior Face Brick: Not Used

2. For Exterior Hollow Concrete Masonry: Provide dry-block water repellent mortar admix system in the mortar.

Q. Non-Shrink Grout: Non-shrink grout shall be one of the following:

1. SonogROUT as manufactured by Sonneborn Bldg. Prod., Minneapolis, MN.

2. Supreme as manufactured by Gifford-Hill and Co., Inc. Charlotte, NC.

3. No. 588 as manufactured by W.R. Meadows, Inc., Elgin, IL.

R. Cleaning Solution For Clay Masonry Units: All clay masonry cleaner shall be Sure Kleen No. 600 as manufactured by Pro So Co., Inc., Kansas City, KS.

## 2.02 Measurement and Mixing of Materials For Masonry Mortars:

A. General: Unless otherwise specifically noted, all mortars shall be mixed in a power mixer, adding 1/2 the sand and water to the mixer, followed by the entire amount of masonry cement, mixing for approximately 3 minutes, followed by adding the balance of the sand and water; continue mixing for not more than five minutes nor less than three minutes after all materials are in the mixer .

### B. Detailed Requirements:

#### 1. Mortar:

- a. Interior non-load bearing walls and partitions: Type N.
- b. Load bearing interior walls less than 20 feet in height: Type N.
- c. Load bearing walls 20 feet or greater in height: Type S.
- d. Masonry veneer (not counted as load bearing): Type N.
- e. Pointing mortar: Type N with maximum 2% ammonium stearate or calcium stearate per cement weight.
- f. Mortar Color: Shall be mineral oxide pigment; color as selected by Architect.

2. Pointing Mortar: By volume one part non-staining cement, two parts white sand, and sufficient lime or lime putty to make as stiff a mixture as can be worked; prepare one to two hours before using and do not retemper; pigment shall be added as required to match adjacent mortar where exposed to view in finish work.

3. Cement Grout: by volume in accordance with ASTM C476-83 as follows: One part Portland Cement and one-tenth part lime to aggregate proportioned at not less than two and one-fourth to three times the sum of volumes of cementitious materials used.

4. Non-Shrink Grout: Mix prepared product with water as directed by its manufacturer to give a minimum compressive strength of 6,800 psi at 28 days.

## **PART 3.00 - EXECUTION**

3.01 Inspection: The Contractor shall examine the areas and conditions under which the products of this section are to be installed; notify the Architect in writing of conditions detrimental to the installation of the products of this section and the completion of the work; do not proceed with the work until unsatisfactory conditions have been corrected.

### 3.02 Installation:

#### A. Preliminary Requirements:

1. Cutting Wheel: Prior to commencing masonry work, a power operated carborundum cutting wheel shall be set up on the site and used for cutting off-sets, cut-outs, miters and for sizing units.
2. Layout:
  - a. Horizontal coursing shall be carefully laid out, as shown on the drawings; lay up one course of unit masonry so that masonry jamb lines for all openings can be accurately located and marked on footing top and/or floor slab; after all guide lines and bond dimensions have been thus established, permanent work may then commence.
  - b. Vertical coursing, as shown on the drawings shall be adhered to; use story pole, carefully marked with all courses to maintain uniformity.

#### B. Precautionary Measures:

1. Cold Weather Erection:
  - a. No masonry shall be erected when temperature is below the established minimum.
  - b. Masonry shall be protected from freezing for at least 48 hours after it is in place.
  - c. No frozen materials shall be built upon or allowed to remain in the wall, but shall be removed or reconstructed.
2. Hot Weather Erection:
  - a. Do not wet concrete masonry units.
  - b. If suction due to dryness of concrete masonry units is excessive, use high water-retentive mortar.
3. Protection of Unit Masonry During Erection:
  - a. Scaffolding shall be so constructed as to permit mortar cement droppings to fall clear of wall.
  - b. At end of each work period and at the stoppage of work at any time, install non-staining tarpaulins or heavy gauge, untorn, plastic membrane across top.
  - c. Care shall be exercised at all times not to smear mortar on face of masonry work, and no mortar shall be allowed to drop in cavity between face material and back-up material.

#### C. Laying Unit Masonry:

1. General:
  - a. Unit masonry shall be laid true to line, level, and plumb, except as otherwise shown on drawings.
  - b. Coursing shall continue, unbroken, above and below openings unless otherwise shown.
  - c. Joints shall be filled solid with mortar as each course is laid.
  - d. Do not use chipped or broken units.
2. Mortars:



- a. Lay above grade masonry in Type N mortar. If over 20 Feet High-Type S
- b. Lay below grade masonry in Type S mortar.

3. Masonry Joints:

- a. Joints in exposed to view masonry shall be a uniform 3/8" wide and tooled to match existing as much as possible.
- b. Joints in exterior face veneer hollow concrete masonry shall be a uniform 3/8" wide and struck "flush" with the face of the masonry units.
- c. Joints in unexposed to view masonry shall be a uniform 3/8" wide and struck "flush" with the face of the masonry units, except:
- d. Joints in areas scheduled to receive setting beds or plaster shall be uniform 3/8" wide, raked and left rough.

4. Masonry Bond: Unless specifically shown otherwise on the drawings, all unit masonry shall be laid in "common running bond".

5. Joint Reinforcement:

- a. Install masonry reinforcement every 16" o.c. vertically and in the top course.
- b. Wall openings shall be reinforced in the first two courses above and in the first course below, and shall extend not less than 12" past each jamb.
- c. At splice point, lap reinforcement 6" minimum.

6. Wall Ties: Install wall ties at 24" on centers horizontally-and at 16"o.c. vertically where called for on the drawings.

7. Miscellaneous Built-In Items: Miscellaneous built-in items such as angle lintels, flexible flashings, anchors, frames and all other items called for in other sections of this project manual or on the drawings shall be accurately installed as the masonry work progresses.

8. Weep Holes: Where flexible thru-wall flashing occurs, install in the same joint a cut of #3 cotton twine, 4" long at 24" intervals; cut twine flush with mortar joint in face brick. Provide on all exterior walls even if not shown on the drawings.

9. Hollow Metal Frames: Where hollow metal frames occur in unit masonry work, fill head and jambs solid with mortar unless otherwise noted on the drawings.

10. Anchoring of Items to Masonry Units: Where items are shown on the drawings or described in other sections of this project manual to be anchored through the masonry units, unless otherwise specifically noted, fill two cells above and one cell below with 3,000 psi concrete as described in Section 03301 of this project manual; hold concrete in place with standard galvanized hardware cloth.

3.03 Field Quality Control:

- A. General: See Article 3.02, B of this section.
- B. Cleaning:

1. Face Brick:

- a. After laying and as soon as practical, brush wall down with soft bristles brush (metal bristles not allowed).
- b. A final cleaning shall take place after all masonry is complete using the specified cleaner, applied in strict accordance with the manufacturer' s recommendations.
- c. Use all means necessary to protect adjacent work and materials from damage during cleaning operations.
- d. Should damage occur, make all repairs or replacements necessary to the approval of the Architect and at no additional cost to the Owner.

2. Hollow Concrete Masonry:

- a. Mortar droppings which stick to hollow concrete masonry shall be allowed to dry before removing with trowel.
- b. Remaining mortar shall be removed by brushing down with dry fiber brushes (metal bristles not allowed) and/or rubbing with small piece of concrete masonry.

C. Inspection: Materials and workmanship at all times will be subject to inspection by the Architect or his representative.

**END OF SECTION 04201**

## SECTION 05501 - METAL FABRICATION

### PART 1.00 - GENERAL

#### 1.01 Quality Assurance:

##### A. Industry Standards:

1. Some products and execution are specified in this section by reference to published specifications or standards (with respective abbreviations used); these referenced publications may be subject to special conditions or limitations where specified hereinafter.

##### 2. Reference Publications:

- a. The American Society for Testing & Materials (ASTM).
- b. Federal Specifications (FS).
- c. Code for "Welding in Building Construction" by American Welding Society (AWS).

B. Qualifications of Fabricator: The fabricator of the products of this section shall have been engaged in the business of metal fabrication for a period of not less than five years immediately prior to commencing fabrication of the items hereinafter described or shown on the drawings.

C. Qualifications of Welders: All welding shall be done only by welders certified in accordance with the procedures of Standard B 3.01 of AWS.

#### 1.02 Definitions: Omitted

#### 1.03 Submittals:

A. Proof of Compliance: Prior to commencing any work of this section, submit in triplicate to the Architect:

1. a certified statement of qualifications and
2. a certified statement to the effect that all products proposed to be used meet the requirements of this section.

B. Shop Drawings: Prior to commencing fabrication of the products of this section, submit one set of sepias and two sets of bluelines in accordance with section 01301.

C. Manufacturer's Data: Accompanying the shop drawing submittal, submit to the Architect for review, manufacturer's descriptive and specification data for each manufactured item shown on the drawings or described hereinafter.

D. Certificate of Welders: Prior to commencing installation of any work of this section, furnish an affidavit to the Architect stating that all welders employed in the execution of this portion of the work have been previously qualified in accordance with Article 1.01 of this section.

#### 1.04 Product Handling:

A. Protection: Protect the products of this section from damage during delivery, storage and after installation.

B. Replacements: In the event of damage, immediately make all repairs and replacements as directed by the Architect.

#### 1.05 Job Conditions: Omitted

### **PART 2.00 - PRODUCTS**

#### 2.01 Materials:

##### A. Structural Steel:

1. Shapes, Bars and Plates: All structural steel shapes, bars and plates shall meet requirements of ASTM A36-05.
2. Tubing: All structural steel tubing shall meet requirements of ASTM A500-07.

B. High Strength Bolts, Nuts and Washers: All high strength bolts, nuts and washers shall meet requirements of ASTM A325-07a.

C. Other Bolts, Nuts and Washers: All other bolts, nuts and washers shall meet requirements of ASTM A449-84.

D. Expansion Shields: Expansion shields shall be of the sizes shown on the drawings and meet the requirements of federal specification ASTM A449.

E. Toggle Bolts: Toggle bolts shall be of the sizes shown on the drawings and meet the requirements of federal specification FF-B-588.

F. Checkered Plate: Checkered plate shall be 14 gauge steel.

##### G. Electrodes:

1. Electrodes shall be mild steel arc welded electrodes conforming to requirements of ASTM A233.
2. Electrodes for manual shielded arc welding shall be E70.18, subject to provisions as hereinafter described.
3. Electrodes for automatic inert gas shielded arc welding shall be No. 70.
4. Electrodes for automatic submerged arc welding shall SAW-2.
5. Electrodes used in both shop and field shall be kept warm and dry after the seal is broken on the original container and shall not be used if exposed to atmospheric conditions for more than one hour.

H. Pipe: shall be standard weight of diameters shown on the drawings.

- I. Anchoring Grout: All anchoring grout shall be "Por-Rok" as manufactured by Sterling Drug, Inc., Montvale, NJ.
- J. Shop and Field Primer Paint: All shop and field primer paint shall be one of the following:
  - 1. Tnemec 99 gray metal primer as manufactured by Tnemec Company.
  - 2. Rust-Oleum 769 damp-proof gray primer as manufactured by Rust-Oleum Corp.
  - 3. Southern Coatings RIP476 as manufactured by Southern Coatings and Chemical Company.
- K. This item omitted in its entirety

## 2.02 Fabrication:

- A. General: Fabricate all metal items, including but not necessarily limited to angle brackets for counters and strap anchors for masonry to the designs shown on the drawings and from the materials indicated thereon; all welds shall be ground smooth.
- B. Shop Cleaning and Priming:
  - 1. All ferrous metal items shall be thoroughly cleaned at the shop after fabrication and given one shop coat of paint.
  - 2. Dry film thickness of shop paint shall be two mils.

## **PART 3.00 - EXECUTION**

3.01 Inspection: Contractor shall examine the areas and conditions under which the products of this section are to be installed; notify the Architect in writing of conditions detrimental to the installation of the products of this section and the completion of the work; do not proceed with the work until unsatisfactory conditions have been corrected.

## 3.02 Installation:

- A. General:
  - 1. Work shall be erected plumb and true in relation to adjoining work unless otherwise shown.
  - 2. The setting of items to be built into concrete or masonry work is included in their respective sections; the erection of all other items are included herein.
  - 3. Fastening shall be concealed where shown on the drawings.
  - 4. Joints exposed to weather shall be formed to exclude water.
  - 5. Provide holes and connections for the work of all other trades.
  - 6. Use toggle bolts for anchoring into concrete masonry unless noted otherwise.
  - 7. Use metal shields for expansion bolts and screws; steel drive bolts of same size as noted for expansion bolts, with split shank, closed ends, with threads at one end may be substituted for expansion bolts into concrete.
- B. Welding: All welding shall be done in accordance with the referenced standards using shielded arc electrodes.

### 3.03 Field Quality Control:

- A. Inspection: Materials and workmanship at all times will be subject to inspection by the Architect or his representative.
- B. Touch-Up Priming: After installation is complete, touch-up all shop priming coats damaged during transportation and installation and prime all field welds, using the priming paint specified for shop painting.

**END OF SECTION 05501**

## SECTION 05521 - PIPE/TUBE RAILINGS

### PART 1.00 - GENERAL

#### 1.01 Quality Assurance:

A. Industry Standards: Some products and execution are specified in this section by reference to published specifications or standards (with respective abbreviations used); these referenced publications may be subject to special conditions or limitations where specified hereinafter.

1. Reference Publications:

- a. The American Society for Testing & Materials (ASTM).
- b. Federal Specifications (FS).
- c. Code for "Welding in Building Construction" by American Welding Society (AWS).

B. Qualifications of Fabricator: The fabricator of the products of this section shall have been engaged in the business of metal fabrication for a period of not less than five years immediately prior to commencing fabrication of the items hereinafter described or shown on the drawings.

C. Qualifications of Welders: All welding shall be done only by welders certified in accordance with the procedures of Standard B 3.01 of AWS.

#### 1.02 Definitions: Omitted.

#### 1.03 Submittals:

A. Proof of Compliance: Prior to commencing any work of this section, submit in triplicate to the Architect:

1. a certified statement of qualifications and
2. a certified statement to the effect that all products proposed to be used meet the requirements of this section.

B. Shop Drawings: Prior to commencing fabrication of the products of this section, submit to the Architect for review fabricator's shop drawings for each fabricated metal item shown on the drawings or described hereinafter.

C. Manufacturer's Data: Accompanying the shop drawing submittal, submit to the Architect for review, manufacturer's descriptive and specification data for each manufactured item shown on the drawings or described hereinafter.

D. Certificate of Welders: Prior to commencing installation of any work of this section, furnish an affidavit to the Architect stating that all welders employed in the execution of this portion of the work have been previously qualified in accordance with Article 1.01 of this section.

#### 1.04 Product Handling:

A. Protection: Protect the products of this section from damage during delivery, storage and after installation.

B. Replacements: In the event of damage, immediately make all repairs and replacements as directed by the Architect.

#### 1.05 Job Conditions: Omitted.

### **PART 2.00 - PRODUCTS**

#### 2.01 Materials:

A. Steel Pipe: Standard weight of the outside diameter (O.D.) as indicated on the drawings or described hereinafter.

B. Steel Tube: Size and gauge as indicated on the drawings or described hereinafter.

C. Aluminum Pipe: 1-1/4" nominal size, wall thickness of 0.140 inch and weighing 0.785 pound per lineal foot with clear anodized finish.

D. Wall Brackets:

1. Steel: Design is based on No. 306, Malleable Iron, as manufactured by Julius Blum & Co., Inc., Carlstadt, NJ
2. Aluminum: Design is based on No. 321, to receive paint, as manufactured by Julius Blum & Co., Inc., Carlstadt, NJ, with clear anodized finish.

E. Woven Wire Mesh: shall be not less than 10 gauge in 1-1/2" diamond pattern.

F. Accessories: Provide matching end terminals, as shown on the drawings, for all rails.

G. Bolts: Sizes as required in material compatible with items with which used.

H. Expansion Shields: Sizes as required for bolt with which they are used and meeting the requirements of Federal Specification FF-S-325.

I. Anchoring Grout: "Por-Rok" as manufactured by Sterling Drug, Inc., Montvale, NJ.

J. Shop and Field Primer Paint: All shop and field primer paint shall be one of the following:

1. Tnemec 99 red metal primer as manufactured by Tnemec Company.
2. Rust-Oleum 769 damp-proof red primer as manufactured by Rust-Oleum Corp.
3. Southern Coatings RIP476 as manufactured by Southern Coatings and Chemical Company.



## 2.02 Fabrication:

- A. General: Fabricate all handrails and railings to the designs shown on the drawings and from the materials indicated thereon; all welds shall be ground smooth.
- B. Shop Cleaning and Priming:
  - 1. All ferrous metal items shall be thoroughly cleaned at the shop after fabrication and given one shop coat of paint.
  - 2. Dry film thickness of shop paint shall be two mils.

## **PART 3.00 - EXECUTION**

3.01 Inspection: Contractor shall examine the areas and conditions under which the products of this section are to be installed; notify the Architect in writing of conditions detrimental to the installation of the products of this section and the completion of the work; do not proceed with the work until unsatisfactory conditions have been corrected.

## 3.02 Installation:

- A. General:
  - 1. Work shall be erected plumb and true in relation to adjoining work unless otherwise shown.
  - 2. The setting of items to be built into concrete or masonry work is included in their respective sections; the erection of all other items are included herein.
  - 3. Fastenings shall be concealed where shown on the drawings.
  - 4. Bolts or nuts exposed to view is finish work shall be hex.
- B. Post Mounted Handrails: Install in the locations shown on the drawings and in accordance with the details shown thereon.
- C. Wall Mounted Handrails: Install in the locations shown on the drawings, using wall brackets as shown; space brackets as shown on the drawings, but in no case more than 48 inches on centers; attach handrail to brackets as indicated with screws from under side.
- D. Welding: All welding shall be done in accordance with the referenced standards using shielded arc electrodes.

## 3.03 Field Quality Control:

- A. Inspection: Materials and workmanship at all times will be subject to inspection by the Architect or his representative.
- B. Touch-Up Priming: After installation is complete, touch-up all shop prime coats damaged during transportation, storage and installation and prime all field welds, using the prime paint specified for shop priming.

## **END OF SECTION 05521**

## SECTION 06101 - ROUGH CARPENTRY

### PART 1.00 - GENERAL

#### 1.01 Quality Assurance:

##### A. Industry Standards:

1. Some products and execution are specified in this section by reference to published specifications or standards (with respective abbreviations used); these referenced publications may be subject to special conditions or limitations where specified hereinafter.

##### 2. Referenced Publications:

- a. Southern Pine Inspection Bureau (SPIB).
- b. Federal Specifications (FS).
- c. American Wood Preservers Association (AWPA).
- d. American Plywood Association (APA).

B. Grade Mark: All lumber and plywood shall bear the grade mark as described hereinafter.

#### 1.02 Definitions: Omitted.

#### 1.03 Submittals: Omitted.

#### 1.04 Product Handling:

##### A. Protection:

1. Protect materials and products of this work from damage before, during and after delivery to the project site, and after installation into the work.

2. Deliver the materials to the project site and store in a safe area, out of way of traffic and shored up off the ground surface.

3. Store materials in such a manner as to insure proper ventilation and drainage and to protect against damage from weather.

4. Store lumber that has been treated with fire retardant chemical in a housed, dry and ventilated area.

5. Identify all framing lumber as to grades and store all grades separately from other grades.

6. Keep all material clearly identified with all grade marks legible; keep all damaged material clearly identified as damaged, and separately store to prevent its inadvertent use.

7. Do not allow installation of damage or otherwise non-complying material.

8. Protect all metal products with adequate water proof outer wrappings.

B. Replacements: In the event of damage, immediately make all repairs and replacements as directed by the Architect.

1.05 Job Conditions: Omitted.

## **PART 2.00 - PRODUCTS**

2.01 Materials:

A. Framing Lumber: All framing lumber shall be SPIB grade marked No. 2 Southern Yellow Pine, kiln dried, with not more than 19 percent moisture content.

B. Insulated Sheathing: Omitted.

C. Miscellaneous Lumber: Lumber for blocking, furring, roof curbs, roof edges and other miscellaneous items shall be SPIB grade marked No. 2 Southern Yellow Pine, kiln dried, with not more than 19 percent moisture content.

D. Plywood:

1. Exterior: Unless otherwise shown on the drawings, exterior plywood shall be AWI 200G10 fabricated with type 1 adhesives, softwood veneer surfaces, (AWI 200S-5, grade A-C); plywood shall be thickness shown on the drawings.

2. Subfloor: Plywood used for subflooring shall be C-C EXT-APA, group 1, tongue and grooved long edges and shall be 3/4" thick.

3. Underlayment: Plywood used for underlayment for carpet or resilient floor covering shall be C-C EXT-APA, UNDERLAYMENT, group 1, tongue and grooved long edges and shall be 3/4" thick.

E. Nails:

1. For application to wood, nails shall be annular thread, coated steel of the sizes and types for the particular use intended and meet the requirements of Federal Specification FF-N-105.

2. For application to concrete or masonry, nails shall be smooth shank, hardened steel, with counter-sunk heads, of the sizes and types for the particular use intended and meet the requirements of Federal Specification FF-N-105.

F. Bolts and Screws: shall be of the sizes and types shown on the drawings.

G. Framing Accessories: Omitted.

H. Wood Preservative: Wood preservative used for chemically treating lumber used in this portion of the work shall be "Osiose K-33" as manufactured by Osiose, Buffalo, NY.

I. Fire Retardant: Fire retardant chemical used for treating lumber in this portion of the work shall be "Osiose Flame Proof" as manufactured by Osiose, Buffalo, NY.

## 2.02 Fabrication:

A. Rough Carpentry: Fabricate all framing, furring, blocking, roof curbs, roof edges and other miscellaneous items from lumber as described hereinbefore and to the designs shown on the drawings.

B. Chemical Treatment of Lumber: All lumber and fabricated wood items that will be in contact with concrete slabs on grade, masonry or used in conjunction with the roofing systems, shall be treated with the specified chemical in strict accordance with AWPA Standard P-5; retention shall be in accordance with AWPA Standards C1, C2 and C9; after treatment and before delivering of any treated materials or products to the project site, reduce moisture content of the treated material to a maximum of 19 percent.

C. Fire Retardant Treatment: All wood noted on the drawings as "fire treated" shall be treated with the specified chemical and shall bear UL FR-S labels indicating that the treated products meet the following as determined by ASTM E-84:

1. Flame Spread: 25 or less
2. Fuel Contributed: 25 or less
3. Smoke Developed: 25 or less

## **PART 3.00 - EXECUTION**

3.01 Inspection: Contractor shall examine the areas and conditions under which the products of this section are to be installed; notify the Architect in writing of conditions detrimental to the installation of the products of this section and the completion of the work; do not proceed with the work until unsatisfactory conditions have been corrected.

## 3.02 Installation:

A. Workmanship: All rough carpentry shall produce joints that are true, tight, well fastened and with all members assembled in accordance with the drawings.

B. Selection of Lumber Pieces:

1. Carefully select all members; select individual pieces so that knots and obvious defects will not interfere with placing bolts or proper nailing or making proper connections.
2. Cut out and discard all defects which will render a piece unable to serve its intended function; lumber may be rejected by the Architect, whether or not it has been installed, for excessive warp, twist, or bow, crook, mildew, fungus, or mold, as well as for improper cutting and fitting.

C. Shimming: Do not shim sills, joists, short studs, trimmers, headers, lintels or other framing components.

D. General Framing:

1. In addition to all framing operations normal to the fabrication and erection indicated on the drawings, install all backing required for the work of other trades.
2. Set all horizontal or sloped members with crown up.
3. Do not notch, bore or cut members for pipes, ducts, conduits or other reasons except as shown on the drawings or as specifically approved in advance by the Architect.
4. Install miscellaneous items for which the rough carpenter trade is customarily responsible, such as "Template" setting of anchor bolts, providing frames for openings through concrete and/or masonry, insertion of hangers for suspended ceilings and like items.
5. Make all bearings full unless otherwise indicated on the drawings.
6. Finish all bearing surfaces on which structural members are to rest so as to give sure and even support; where framing members slope, cut or notch ends as required to give uniform bearing surface.
7. Install all blocking, furring plaster grounds and similar items as shown on the drawings.
8. Install roof edges and curbs in the locations shown on the drawings and in accordance with the details shown thereon.

E. Insulated Sheathing: Omitted.

F. Laying of Subfloors and Underlayments: Subfloors and underlayments should be installed in locations shown on the drawings in strict accordance with the standard specifications of American Plywood Association's publication: "Plywood, Commercial / Industrial Construction Guide"; November, 1976 edition.

G. Nailing: Using only the specified nails; do all nailing without splitting wood members, preboring as required; replace all split members.

#### H. Bolting:

1. Drill holes 1/16" larger in diameter than the bolts being used; drill straight and true from one side only.
2. Bolt threads must not bear on wood; use washers under head and nut where both bear on wood; use washers under all nuts.

#### I. Screws:

1. For lag screws and wood screws, prebore holes same diameter as root of thread; enlarge holes to shank diameter for length of shank.
2. Screw, do not drive, all lag screws and wood screws.

### 3.03 Field Quality Control:

A. Chemical Treatment of Lumber: Apply two brush coats of the specified chemical to all field cuts of chemically treated lumber.

#### B. Clean Up:

1. At the end of each working day, or more often if necessary, thoroughly sweep all surfaces where refuse from this portion of the work has settled.
2. Remove the refuse to the area of the job site set aside for its storage.
3. Upon completion of this portion of the work, thoroughly broom clean all surfaces.

C. Inspection: Materials and workmanship at all times will be subject to inspection by the Architect or his representative.

### **END OF SECTION 06101**

## **SECTION 07900 - SEALANTS**

### **PART 1.00 - GENERAL**

1.01 Quality Assurance: For actual caulking operations (installation of sealants and fillers) use only thoroughly trained and experienced mechanical who are completely familiar with the materials selected and the manufacturers recommended methods of installation and the requirements of this work.

1.02 Definitions:

A. Sealant: A weatherproof elastomer used in filling and sealing joints, having properties of adhesion, cohesion, extensibility under tension, compressibility and recovery.

B. Caulk: Term used to denote the process of filling and sealing the joints, without regard to type of material.

1.03 Submittals:

A. Manufacturer's Data:

1. Before any products are delivered to the project site, submit to the Architect for review, manufacturer's detailed descriptive and specification data for each type of sealant and joint filler described hereinafter.

2. Accompanying the data submittal, furnish manufacturer's installation instructions.

B. Samples: Accompanying the data submittal, submit samples of each type and color of sealant required and samples of the joint filler.

1.04 Product Handling:

A. Protection: Protect the products of this section from damage during delivery, storage and after installation.

B. Replacements: In the event of damage, immediately make all repairs and replacements as directed by the Architect.

1.05 Job Conditions: Do not caulk if the ambient temperature is below 32 degrees Fahrenheit.

### **PART 2.00 - PRODUCTS**

2.01 Materials:

A. Sealants:

1. Type 1: Design is based on "790 Building Sealant" as manufactured by Dow Corning Corporation, Midland, MI. Colors as selected by the Architect from manufacturer's standard colors.
2. Type 2: Sealant type 2 shall be an oleo-resinous compound, gun grade, non-staining, non-shrinking, and non-sagging plastic compound meeting or exceeding Federal Specification TT- C-598b.
3. Type 3: Design is based on "795 Building Sealant" as manufactured by Dow Corning Corporation, Midland, MI. Colors as selected by the Architect from manufacturer's standard colors.
4. Type 4: Design is based on "786 Building Sealant" as manufactured by Dow Corning Corporation, Midland, MI. Colors as selected by the Architect from manufacturer's standard colors.

B. Primer: All primer shall be as recommended by the manufacturer of the sealant being installed for the particular condition.

C. Joint Filler: Unless otherwise shown or recommended by the manufacturer of the sealant being installed, joint filler shall be polyethylene foam rod, approved by the manufacturer of the sealant material, sized to require 20% to 50% compression upon insertion.

D. Application Equipment: Sealant application equipment shall be only such equipment as is specifically recommended by the manufacturer of the sealant being installed.

## **PART 3.00 - EXECUTION**

3.01 Inspection: The Contractor shall examine the areas and conditions under which the products of this section are to be installed; notify the Architect in writing of conditions detrimental to the installation of the products of this section and the completion of the work; do not proceed with the work until unsatisfactory conditions have been corrected.

3.02 Installation:

A. Preliminary Requirements:

1. Surface Preparation:
  - a. Surfaces to be sealed shall be sound, clean, dry, frost free and free of contamination by laitance, form release agents, concrete curing compounds or other surface treatments.
  - b. Masonry and concrete surfaces shall be wire brushed.
  - c. Metal, glass and wood surfaces shall be wiped with methyl ethyl ketone.
2. Masking: Surfaces adjacent to joints shall be masked to obtain a neat sealant line.



3. Joint Filler: Joints exceeding the maximum allowable depth as hereinafter described shall be filled to within the allowable depth with the specified joint filler.

4. Primer: Apply primer to surfaces to be caulked as recommended by the manufacturer of the sealant being installed.

B. Locations:

1. As the work progresses caulk and seal all joints subject to movement or subject to passage of air or moisture.

2. Type 1 Sealant: Install all exterior locations where sealant or caulking is called for on the drawings.

3. Type 2 Sealant: Set all metal thresholds in type 2 sealant unless specifically noted otherwise on the drawings.

4. Type 3 Sealant: Install in all interior locations where sealant or caulking is called for on the drawings except where type 4 sealant is called for.

5. Type 4 Sealant: Install in all interior locations where type 4 sealant is called for on the drawings and where sealant is called for in the ceramic tile work described in Section 09310 of this project manual and where sealant is required around plumbing fixtures.

C. Application of Sealant:

1. Install sealant under pressure to fill joint, taking care to produce beads of proper width and depth; tool as recommended by the manufacturer; immediately remove all surplus sealant.

2. Width and depth of sealed joint shall not exceed the proportions of 1/2" width x 1/2" diameter and 3/4" width x 1/4" diameter, except that metal thresholds shall be set in full bed of specified sealant.

3.03 Field Quality Control:

A. Protection: To insure proper curing, sealing joints shall not be touched, washed or otherwise disturbed for 48 hours after installation unless specifically recommended otherwise by the sealant manufacturer.

B. Inspection: Materials and workmanship at all times will be subject to inspection by the Architect or his representative.

**END OF SECTION 07900**

## SECTION 09900 - PAINTING

### PART 1.00 - GENERAL

1.01 Quality Assurance: The applicator of the products described hereinafter shall have been successfully engaged in the business of painting for not less than five years immediately prior to performing the work of this section.

1.02 Definitions:

A. Paint: Term used in a general sense and has reference to sealers, primer, stains, oils, alkyd, latex, epoxy and enamel type paints.

B. Painting: Term used in a general sense and has reference to the application of "paint", without regard to the type of material to an item.

C. Back Prime: Term used in a general sense and has reference to the application of "paint" (first coat), without regard to the type of material, to the back side (unexposed to view) of an item.

1.03 Submittals:

A. Proof of Compliance: Prior to commencing work of this section, submit in triplicate to the Architect:

1. a certified statement of qualifications and
2. a certified statement to the effect that all products proposed to be used meet the requirements of this section.

B. Materials List: Prior to delivery of any paint materials to the project site, submit to the Architect for review, a complete list of all paint materials to be used in this project as described hereinafter.

C. Manufacturer's Data: Accompanying the materials list, furnish the paint manufacturer's detailed descriptive and specification data and application instructions for each type of paint required.

D. Color Samples:

1. After review of the material list and manufacturer's data, but prior to delivery of any paint to the project site, submit color samples, not less than 12" x 12" each, for each type and color of finish required.
2. Wherever possible, the material upon which the sample colors are applied shall be the same material as that on which the paint will be applied in the project.

1.04 Product Handling:

A. Protection: Protect the products of this section from damage during delivery, storage and after installation.

B. Replacements: In the event of damage, immediately make all repairs and replacements as directed by the Architect.

1.05 Job Conditions:

A. Temperature: Maintain a constant temperature of not less than 50<sup>o</sup> F. during painting and drying operations and until date of Architect's Final Certificate.

B. Ventilation: Provide ventilation to allow for the proper drying of the paint materials by using either of the following:

1. temporary air circulators (sparkproof).
2. air conditioning system.

C. Lighting: Maintain lighting of not less than three watts per square foot of floor area in all areas where painting operations are in progress.

## **PART 2.00 - PRODUCTS**

2.01 Materials:

A. Paint:

1. All paints selected for the coating system for each type of surface shall be the product of a single manufacturer and as described hereinafter.
2. Thinners, when used, shall be only those thinners recommended for that purpose by the manufacturer of the material to be thinned.
3. Colors shall be as specified in Section 09999 of this project manual.

B. Equipment:

1. Application Equipment: Brushes, rollers, spray apparatus and like application equipment are not required to be new, but they shall be capable of producing the required results specified hereinafter.
2. Accessory Equipment: Ladders, scaffolding, drop cloths, scrapers, dusters, and like items are not required to be new, but they shall be safe, adequate and capable of producing the results for which they are intended.

2.02 Fabrication: Omitted.

## **PART 3.00 - EXECUTION**

3.01 Inspection: Contractor shall examine the areas and conditions under which the products of this section are to be installed; notify the Architect in writing of conditions detrimental to the installation of the products of this section and the completion of the work; do not proceed with the work until unsatisfactory conditions have been corrected.

3.02 Installation:

A. Preliminary Requirements:

1. Surface Preparation:

- a. Protection: Prior to all surface preparation and painting operations, completely mask, remove or otherwise adequately protect all hardware, accessories, machined surfaces, plates, lighting fixtures, and similar items in contact with painted surfaces, but not scheduled to receive paint. All locksets, surface mounted closers, push and pull plates, kick plates, panic devices, door and drawer pulls and similar items shall be removed prior to commencing painting operations.
- b. Priming: Spot prime all exposed nails and other metals which are to be painted with emulsion paints, using a primer recommended by the manufacturer of the coating system.
- c. Cleaning:
  - (1) Before applying paint or other surface treatment, thoroughly clean all surfaces involved.
  - (2) Schedule all cleaning and painting so that dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.

2. Mildew:

- a. Remove and neutralize mildew by scrubbing affected areas thoroughly with a solution made by adding 2 oz. Trisodium Phosphate type cleaner and 8 oz. Sodium Hypochloride to 10 gal. of warm water.
- b. Use a scouring powder if necessary to remove mildew spores.
- c. Rinse with clear water and allow to dry thoroughly before painting.

3. Efflorescence: Scrub off with a commercial lime solvent or one part commercial muriatic acid to five parts water and then rinse with clear water and allow surface to thoroughly dry before painting.

4. Wood:

- a. Sandpaper to smooth and even surface, then dust off.
- b. Before priming coat is applied, touch up all knots, pitch streaked and resinous sapwood with shellac, four pound cut.
- c. After priming coat has dried, putty all nail holes, cracks, open joints and other defects.

- d. Putty shall be colored to match stain or paint.
  - e. Prior to installation, painted wood trim shall be back-primed and stained wood trim shall be back-sealed.
5. Plaster (Gypsum):
- a. Rake small cracks, scratches and abrasions deeply.
  - b. Undercut large crack edges, coat with shellac and fill with prepared patching plaster.
  - c. Spot coat patches with prime coat when dry and prior to applying specified prime coat.
  - d. Do not use sandpaper on plaster surfaces to be painted.
  - e. Before painting any plaster, surfaces shall be tested with a moisture testing device.
  - f. No paint or sealer shall be applied on plaster when moisture content exceeds 20%, except as may otherwise be required by the manufacturer of the paint materials to be used.
6. Gypsum Wallboard: Fill all minor irregularities with spackling compound and sand to a smooth, level surface, exercising care to avoid raising nap of paper.
7. Concrete, Unit Masonry and Exterior Plaster (Portland Cement):
- a. Patch large openings and holes with Portland cement mortar and finish flush with adjacent surface.
  - b. After priming, fill any remaining small holes with Swedish putty made by mixing dry whiting with prime coat of paint.
  - c. Remove form-oil from poured-in-place concrete by washing concrete with Xylol.
  - d. Surfaces shall be allowed to dry completely, usually 60 to 90 days in moderate weather, before painting.
  - e. No painting shall be done until surfaces are tested by moisture meter and shown to be within the acceptable limits of the specified manufacturer and safe to paint.
8. Ferrous Surfaces:
- a. Remove dirt and grease with mineral spirits and wipe dry with clean cloths.
  - b. Remove rust, mill scale and defective paint down to bare metal, using scraper, sandpaper or wire brush as necessary.
  - c. Grind if necessary to remove shoulders at edge of sound paint to prevent flaws from photographing through finish coats.
  - d. Touch up all bare metal and damaged shop coats with specified rust inhibitive primer.
9. Galvanized Surfaces:
- a. Remove dirt and grease with mineral spirits and dry with clean cloth.
  - b. All galvanized steel surfaces shall be pretreated with proprietary acid-bound resinous or crystalline zinc phosphate preparation prior to painting.
10. Lead Coated Copper: Remove dirt and grease with mineral spirits and wipe dry with clean cloth.

## B. Paint Application:

### 1. General:

- a. Paint all surfaces except aluminum, glass, face brick and prefinished items unless otherwise shown on the drawings.
- b. Paint all access panels, registers and grilles to match the color of the adjacent walls or ceilings.
- c. Prime coated butts shall be painted the same color as the door trim.
- d. Exposed piping, conduit, ductwork, and hangers, generally in finished areas, shall be painted to match the walls or ceilings adjacent to them; where adjacent surfaces are unpainted these items will be painted black.
- e. The top and bottom edges of all wood and metal doors shall be finished with two coats of paint or varnish as used for finished coat, applied after fitting but before faces are painted.
- f. The interior of all cabinets, including drawers and shelves, shall be finished the same as in the exterior surfaces.
- g. Where aluminum materials are placed in contact with or fastened to dissimilar metals, with the exception of stainless steel or galvanized metals, the contact surfaces shall be given a heavy brush coat of zinc chromate primer made with a synthetic resin vehicle, followed by two coats of aluminum metal and masonry paint.
- h. Where aluminum materials are placed in contact with, or built into masonry or plaster, they shall be given a heavy brush coat of methacrylate lacquer.
- i. Where aluminum materials are placed in contact with green or wet wood, or any absorptive material subjected to repeated wetting, or wood treated with a non-compatible preservative, the contact surfaces shall be given a heavy brush coat of aluminum pigmented bituminous paint.
- j. Dissimilar metals shall be painted if drainage from them passes over aluminum work.

### 2. Drying:

- a. Allow sufficient drying time between coats.
- b. Modify the period as recommended by the material manufacturer to suit adverse weather conditions.
- c. Oil-base and oleo-resinous solvent type paints shall be considered dry for re-coating when the paint feels firm, does not deform or feel sticky under moderate pressure of the thumb, and the application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

### 3. Environmental Conditions:

- a. Comply with the manufacturer's recommendation as to environmental conditions under which the coating systems may be applied.
- b. Do not apply paint in areas where dust is being generated.

### 4. Moisture Content:

- a. Use a moisture meter approved by the Architect to test surfaces.

b. Do not apply the initial coating until moisture meter reading is within limits recommended by the paint materials manufacturer.

5. Defects: Sand and dust between coats to remove all defects visible to the unaided eye from a distance of five feet.

6. Color of Undercoats: Slightly vary the color of succeeding coats.

C. Inspection:

1. General: Do not apply additional coats until completed coat has been inspected and approved by the Architect.

2. Number of Coats: Only inspected and approved coats of paint will be considered in determining the number of coats applied.

D. Reinstallation of Removed Items: Following completion of painting in each area, promptly reinstall all items removed for painting, using only workmen skilled in the particular trade.

E. Painting Systems Schedule:

1. Exterior: (provide mildew resistant additive to all exterior paint).

a. Exterior Gypsum Wallboard: shall be painted with one of the following:

(1) Sherwin-Williams Company

1 coat A-100 Exterior Latex Primer

2 coats Tile Clad II Enamel B-62 Series

(2) PPG Industries

1 coat Pit Glaze Pigmented Sealer

2 coats Pit Glaze

(3) Glidden

1 coat Spred Primer Sealer No. 3416

2 coats Glid-Tile Epoxide

b. Ferrous Metal: shall be painted with one of the following:

(1) Sherwin-Williams Company

1 coat Kem Kromik Primer

2 coats Industrial Primer

(2) PPG Industries

1 coat 54-208 Rust Control Primer

2 coats Quick Drying Exterior Enamel

(3) Glidden

1 coat 4570 Red Oxide Primer  
2 coats Glid-Guard Alkyd Enamel

c. Galvanized Metal; Lead Coated Copper: All galvanized metal shall be painted with one of the following:

(1) Sherwin-Williams Company

1 coat Galvite  
2 coats Industrial Enamel

(2) PPG Industries

1 coat 6-209 Galvanized Iron Primer  
2 coats Quick Drying Exterior Enamel

(3) Glidden

1 coat #5229 Galvanized Iron Primer  
2 coats Glid-Guard Alkyd Enamel

d. Cast-In-Place Concrete: All exposed to view Cast-In-Place Concrete to receive paint coating except sidewalk and stairs. Where called for on the drawings, cast-in-place concrete shall be painted with one of the following:

(1) Sonneborn Building Products

2 coats (10 mil film thickness each coat)  
Hydrocide Super Color Coat

(2) Tnemec

1 coat (7.8 mil film thickness) System 52-1

e. Wood (Painted): Where called for on the drawings; wood shall be painted with one of the following:

(1) Sherwin-Williams Company

1 coat A-100 Alkyd Primer Y24W20  
2 coats SWP Gloss Paint A2 Series

(2) PPG Industries

1 coat Sun-Proof Universal Primer  
2 coats Sun-Proof House and Trim Paint

(3) Glidden

1 coat Y-1951 Base Coat  
2 coats Y-1901 House and Trim Paint



2. Interior:

a. Concrete: Interior concrete exposed to view, except floors, shall be painted with one of the following systems:

- (1) Sherwin-Williams Company  
2 coats Pro Mar 200 Latex Semi Gloss B31W200
- (2) PPG Industries  
2 coats No. 6-510 Latex Semi Gloss
- (3) Glidden  
2 coats Spred Low Lustre Latex Enamel No. 3700

b. Hollow Concrete Masonry - Special Coating:

- (1) Sherwin-Williams Company  
1 coat H.D. Block Filler B42W46  
2 coats Tile Clad II Epoxy
- (2) PPG Industries  
1 coat Pit Glaze Block Filler 16-9  
2 coats Pit Glaze
- (3) Glidden  
1 coat 5512 Glid-Tile Block Filler  
2 coats 5550/5552 Glid-Tile Epoxide

c. Hollow Concrete Masonry: Interior hollow concrete masonry not scheduled to receive special coating shall be painted with one of the following:

- (1) Sherwin-Williams Company  
1 coat Block Filler B25W25  
2 coats Pro Mar 200 Latex Semi Gloss B31W200
- (2) PPG Industries  
1 coat Speedhide Masonry Block Filler 6-7  
2 coats No. 6-510 Latex Semi Gloss
- (3) Glidden  
1 coat 581-W-8101 Block Filler  
2 coats Spread Low Lustre Latex Enamel No. 3700

d. Plaster (Gypsum): Omitted.

e. Plaster - Special Coating: Omitted.

f. Ferrous Metal: Ferrous metal exposed to view, including but not limited to all mechanical piping, structural steel and air conditioning ducts, shall be painted with one of the following systems:

(1) Sherwin-Williams Company

1 coat Kem Kromik Primer

2 coats Industrial Enamel B54 Series

(2) PPG Industries

1 coat 54-208 Primer

2 coats Speedhide Semi Gloss Enamel

(3) Glidden

1 coat 4520 Glide Guard Red Oxide Primer  
2 coats Spred Lustre 4600 Series

g. Gypsum Wallboard: (Eggshell Finish) Gypsum wallboard scheduled to receive paint (not special coatings) shall be painted with one of the following systems:

(1) Sherwin-Williams Company

1 coat of Manufacturer's recommended primer

2 coats Pro Mar 200 Latex Eg-Shel B20W200

h. Gypsum Wallboard - Special Coating: Gypsum wallboard scheduled to receive special coating shall be painted with one of the following systems:

(1) Sherwin-Williams Company

1 coat Pro Mar 200 Primer B28W200

2 coats Tile Clad II Epoxy B62 Series

(2) PPG Industries

1 coat Pit Glaze Pigmented Sealer

2 coats Pit Glaze

(3) Glidden

1 coat Spred Primer Sealer No. 3416

2 coats Glid-Tile Epoxide

i. Wood (Stained): All wood scheduled to be stained shall be painted with one of the following:

(1) Sherwin-Williams Company

1 coat Interior Oil Stain A48 Series

1 coat Oil Base Varnish A66V91 Gloss

1 coat Oil Base Varnish Stain

(2) PPG Industries

1 coat Rez Stain

2 coats Rez Varnish Satin Finish

(3) Glidden

1 coat 200 Series Spred Wood Stain

2 coats Spred Urethane Stain Varnish 10

j. Wood (Painted): All wood scheduled to be painted shall be painted with one of the following systems:

(1) Sherwin-Williams Company

1 coat Wall and Wood Primer B49W2

1 coat Pro Mar 200 Alkyd Semi Gloss

(2) PPG Industries

1 coat 6-6 Enamel Undercoat

1 coat 27-109 Semi Gloss Enamel

(3) Glidden

1 coat Spred Wood Y-555, Enamel Undercoat

1 coat Spred Lustre 4600 Series Semi Gloss Enamel

### 3.03 Field Quality Control:

A. Inspection: Materials and workmanship at all times will be subject to inspection by the Architect or his representative.

B. Clean Up:

1. During progress of the work, do not allow the accumulation of empty containers or other excess items except in areas specifically set aside for that purpose.
2. Prevent accidental spilling of paint materials and, in event of such spill, immediately remove all spilled material and the waste or other equipment used to clean up the spill, and wash the surfaces to their original undamaged condition.
3. Upon completion of this portion of the work, visually inspect all surfaces and remove all paint and traces of paint from surfaces not scheduled to be painted.

**END OF SECTION 09900**

## **SECTION 09999 - COLOR SCHEDULE**

### **PART 1.00 - GENERAL**

- 1.01 Quality Assurance: Quality assurance is described in pertinent other sections of this project manual.
- 1.02 Definitions: Definitions are listed in pertinent other sections of this project manual.
- 1.03 Submittals:
- A. Samples, Color Charts, Manufacturer's Data: Samples, color charts, manufacturer's data and other submittals are described in pertinent other sections of this project manual.
  - B. Color Schedule:
    - 1. Upon written request from the Contractor and after receipt and review of all samples, color cards, and manufacturer's data pursuant to color and finishes, the Architect will prepare for the Contractor's use, a color schedule for each space scheduled to receive any finish material and a color board illustrating each color described in the color schedule. Colors may vary from space to space.
    - 2. The color board and/or copy of the color schedule shall be kept at the project site until date of Architect's Final Certificate and at that time it shall be returned to the Architect.
- 1.04 Product Handling: Product handling is described in pertinent other sections of this project manual.
- 1.05 Job Conditions: Job conditions are described in pertinent other sections of this project manual.

### **PART 2.00 - PRODUCTS**

- 2.01 Materials: Materials and manufacturers are described in pertinent other sections of this project manual.
- 2.02 Fabrication: Fabrication, measurement and mixing of products and materials are described in pertinent other sections of this project manual.

### **PART 3.00 - EXECUTION**

- 3.01 Inspection: Contractor shall examine the areas and conditions under which the products of this section are to be installed; notify the Architect in writing of conditions detrimental to the installation of the products of this section and the completion of the work; do not proceed with the work until unsatisfactory conditions have been corrected.
- 3.02 Installation: Installation of various finish materials and products is described in pertinent other sections of this project manual.

### 3.03 Field Quality Control:

A. Inspection: Materials and workmanship at all times will be subject to inspection by the Architect or his representative.

B. Protection and Cleaning: Protection and cleaning of the various finishes are described in pertinent other sections of this project manual.

**END OF SECTION 09999**