

# **PROJECT MANUAL**

**FOR THE**

**BL053-24**

## **Senior Services Loading Dock Renovation Project**

**GWINNETT COUNTY**  
**LAWRENCEVILLE, GEORGIA**

*The drawings, specifications, and other bidding documents of Lindsay Pope Brayfield & Associates for the Senior Services Loading Dock Renovation Project are provided for your use in offering bids in response to the Owner's invitation to bidders. Supplying these documents for bidding purposes does not convey any type of license for copying or transfer of ownership or intellectual property right, including copyright, to plan holders. No electronic devices, including photocopy, may be used to copy any part of these documents without the written permission of the Architect or other copyright holder.*

### **OWNER**

**GWINNETT COUNTY BOARD OF COMMISSIONERS**  
**75 LANGLEY DRIVE**  
**LAWRENCEVILLE, GEORGIA 30046-6900**

### ***Prepared by:***

**Lindsay Pope Brayfield & Associates**  
**344 W Pike Street**  
**Lawrenceville, GA 30046**  
**770.407.5699**

**3/21/2024**

**Gwinnett County Government**  
**Senior Services Loading Dock Renovation Project**  
**BL053-24**  
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**NOTICE OF BID  
FOR  
BL053-24  
Senior Services Loading Dock Renovation Project**

The Gwinnett County Board of Commissioners is soliciting competitive sealed bids from qualified contractors for the **Senior Services Loading Dock Renovation Project**. Sealed bids will be received by the Gwinnett County Purchasing Division, 75 Langley Drive, Lawrenceville, Georgia 30046 until **2:50 P.M. local time on Monday, April 29, 2024** and then publicly opened and read aloud at 3:00 P.M. Any bid received after 2:50 P.M. will not be accepted. Bid envelope should be marked on the outside with Bid Number, name of Bidder, date and time of opening. One unbound original and two (2) copies should be submitted.

The scope of this Project includes, but is not limited to, relocation and replacement of the existing overhead coiling doors and dock levelers. This will include modifications to the existing metal stud and CMU veneer exterior wall and associated electrical and plumbing systems.

When applicable, the County shall obtain all rights of way and easements required for the project unless otherwise specified.

Bidding Documents are available for viewing at:

**Gwinnett County Purchasing Division**  
75 Langley Drive, 2<sup>nd</sup> Floor  
Lawrenceville, Georgia 30046  
Attn: Alexis Holland  
Email: alexis.holland@gwinnettcounty.com

**Lindsay Pope Brayfield & Associates**  
344 W Pike Street  
Lawrenceville, GA 30046  
Attn: Margie McClary  
Email: mmclary@lpbatlanta.com

Bidding documents may be obtained from **Lindsay Pope Brayfield & Associates** the above address free of charge, only complete sets will be issued.

A **pre-bid conference** is scheduled for **10:00 A.M. on Friday, April 12, 2024 at the Senior Services Center, 567 Swanson Drive, Lawrenceville, GA 30046. All bidders are strongly urged to attend.**

Questions regarding bids should be submitted to Alexis Holland , Purchasing Associate II, via email alexis.holland@gwinnettcounty.com no later than **3:00 P.M. local time, Tuesday, April 16, 2024**. Bids are legal and binding upon the bidder when submitted.

NOTICE TO BID  
000100-1

**Notice of Bid -Page 2**  
**Senior Services Loading Dock Renovation Project**  
**BID DUE DATE: Monday, April 29, 2024**  
**Bid Number: BL053-24**  
**March 21, 2024**

Bids in the case of Corporations not chartered in Georgia, must be accompanied by proper certification stating that said Corporation is authorized to do business in the State of Georgia.

No Bidder may withdraw his Bid within sixty (60) days after the actual date of the opening thereof.

Bidder agrees to complete the Contract awarded within the "allowable calendar days for completion" from the date of the "Notice to Proceed".

Where Gwinnett County provides forms for bid or bond submissions, they must be used **without exception**. A five percent (5%) bid bond must be submitted with the bid. Successful contractor will be required to provide a one hundred percent (100%) payment and one hundred percent (100%) performance bond as well as an insurance certificate fulfilling requirements as stated in the bid documents. Surety and insurance companies must have an AM Best rating of A-5 or greater, be listed in the Federal Registry of Companies holding Certificate of Authority and acceptable sureties on Federal Bonds, be licensed by the Georgia Insurance Department and the Georgia Secretary of State to do business in the State of Georgia.

All bonds must be submitted on forms provided by Gwinnett County and agencies providing bonds and insurance should provide proof that they meet the criteria outlined in the bid and contract documents.

Gwinnett County does not discriminate on the basis of disability in the admission or access to its programs or activities. Any requests for reasonable accommodations required by individuals to fully participate in any open meeting, program or activity of Gwinnett County Government should be directed to the ADA Coordinator, Gwinnett County Justice and Administration Center, 770-822-8165.

Award will be made to the lowest responsive and responsible bid. Gwinnett County reserves the right to reject any or all bids to waive technicalities, and to make an award deemed in its best interest. Bids may be split or awarded in entirety. Gwinnett County reserves the option to negotiate terms, conditions and pricing with the lowest responsive, responsible bidder(s) at its discretion.

**GWINNETT COUNTY BOARD OF COMMISSIONERS**

**END OF SECTION 000100**

NOTICE TO BID  
000100-2

**SECTION I**  
**INSTRUCTIONS TO BIDDERS**

1. Each bidder must examine the Notice to Bid, Instructions to Bidders, Contract, Contract General Conditions, Specifications, Bid Schedule, Affidavits, Drawings, and Addenda. Failure to do so will be at the bidder's risk.
2. Each bidder shall furnish all information required by the bidding requirements. The authorized representative must sign the bid as well as print or type his/her name on the bid schedule. Erasures or other changes must be initialed by the authorized representative signing the bid. Bids can only be signed by a person authorized to commit company resources.
3. Questions regarding bids should be submitted to Alexis Holland , Purchasing Associate II, at fax 770-822-8735, or email alexis.holland@gwinnettcountry.com **no later than 3:00 p.m. local time, Tuesday, April 16, 2024**. Bids are legal and binding upon the bidder when submitted. Receipt of addenda should be acknowledged on the bid schedule. No oral interpretations or information can be considered as binding.
4. Bid envelope should be marked on the outside with Bid Number, name of Bidder, date and time of opening. One unbound marked original and two (2) copies should be submitted. Faxed bids cannot be considered.
5. Bidding Requirements will consist of the following:
  - a) Bid Schedule
  - b) Bid Bond
  - c) Non-Collusion Affidavit
  - d) References and Qualifications
  - e) Contractor Affidavit
  - f) Ethics Affidavit
6. Award will be made to the bidder submitting the lowest responsive and responsible bid. The County reserves the right to make such investigations as it deems necessary to determine the ability of the bidder to perform, and the bidder shall furnish to the County, all such information for this purpose as the County may request. The County reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the County that such bidder is properly qualified to carry out the obligations of the contract.
7. Bids may be withdrawn only the case of mathematical error. The bidder shall give notice in writing of his claim of right to withdraw his bid without penalty due to an error within two (2) business days after the conclusion of the bid opening procedure. Bids may be withdrawn from consideration if the price was substantially lower that the other bids due solely to a mistake therein, provided the bid was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually

due to an unintentional arithmetic error or an unintentional omission of a quantity of work, labor or material made directly in the compilation of the bid, which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents and material used in the preparation of the bid sought to be withdrawn. The bidder's original work papers shall be the sole acceptable evidence of error and mistake if he elects to withdraw his bid. If a bid is withdrawn under the authority of this provision, the lowest remaining responsive bid shall be deemed to be low bid.

No bidder who is permitted to withdraw a bid shall, for compensation, supply any material or labor or perform any subcontract or other work agreement for the person or firm to whom the contract is awarded or otherwise benefit, directly or indirectly, from the performance of the project for which the withdrawn bid was submitted.

Bidder has up to forty-eight (48) hours to notify the Gwinnett County Purchasing Office of an obvious clerical error made in calculation of bid in order to withdraw a bid after bid opening. Withdrawal of bid for this reason must be done in writing within the forty-eight (48) hour period. Suppliers who fail to request withdrawal of bid by the required forty-eight (48) hours shall automatically forfeit bid bond. Bid may not be withdrawn otherwise.

Bid withdrawal is not automatically granted and will be allowed solely at Gwinnett County's discretion.

8. The Gwinnett County Board of Commissioners reserves the right to reject any or all bids, to waive technicalities, and to make an award as deemed in its best interest.
9. Gwinnett County is exempt from federal excise tax and Georgia sales tax with regard to goods purchased directly by Gwinnett County. Nevertheless, contractors are responsible for federal excise tax and Georgia sales taxes, including taxes for materials incorporated in County construction contracts. Bidders should contact the State of Georgia Sales Tax Division for additional information.
10. The successful Bidder shall provide evidence of a Gwinnett County occupational tax certificate if the Bidder maintains an office within the unincorporated area of Gwinnett County. Incorporated, out of County and out of State bidders are required to provide evidence of a certificate to do business in any town, County or municipality in the State of Georgia, or as otherwise required by County ordinance or resolution.
11. The attention of all bidders is directed to the fact that all applicable federal state laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though therein written.

**Senior Services Loading Dock Renovation Project**

12. Information submitted by a bidder in the bidding process shall be subject to disclosure after bid award in accordance with the Georgia Open Records Act of Compulsory Process.
13. Failure to observe any of the Instructions to Bidders or conditions in the Invitation to Bid may constitute grounds for rejection of the bid. Failure to use County Bidding Form and to acknowledge applicable addenda may result in a bid being deemed non-responsive an automatic rejection.
14. CONTRACT TIME:

The Work shall be completed within 180 consecutive calendar days.

**PART II – BONDS AND INSURANCE**

- A) A Certified or Cashier's Check payable to the Gwinnett County Board of Commissioners or a Bid Bond in the amount of five percent (5%) of the total bid must be submitted with the bid. Successful bidder will be required to furnish a payment and performance bond each in the amount of one hundred percent (100%) of the bid amount.
- B) Bonding Company must be listed in the Federal Registry of Companies Holding certificates of authority as acceptable sureties on Federal bonds and must be listed in the AM Best catalog with a listing of A-5 or higher. Bonding company must also be licensed to do business by the Georgia Insurance Department.

The successful bidder, shall obtain, maintain and furnish to the County certificates or insurance for the entire duration of the contract period. Insurance requirements starting on the next page.



## STANDARD INSURANCE REQUIREMENTS

(For projects less than \$1,000,000)

1. Statutory Workers' Compensation Insurance
  - (a) Employers Liability:
    - ✓ Bodily Injury by Accident - \$100,000 each accident
    - ✓ Bodily Injury by Disease - \$500,000 policy limit
    - ✓ Bodily Injury by Disease - \$100,000 each employee
  
2. Commercial General Liability Insurance
  - (a) \$500,000 limit of liability per occurrence for bodily injury and property damage
  - (b) The following additional coverage must apply:
    - ✓ 1986 (or later) ISO Commercial General Liability Form
    - ✓ Dedicated Limits per Project Site or Location (CG 25 03 or CG 25 04)
    - ✓ Additional Insured Endorsement (Form B CG 20 10 with a modification for completed operations or a separate endorsement covering Completed Operations)
    - ✓ Blanket Contractual Liability
    - ✓ Broad Form Property Damage
    - ✓ Severability of Interest
    - ✓ Underground, explosion, and collapse coverage
    - ✓ Personal Injury (deleting both contractual and employee exclusions)
    - ✓ Incidental Medical Malpractice
    - ✓ Hostile Fire Pollution Wording
  
3. Auto Liability Insurance
  - (a) \$500,000 limit of liability per occurrence for bodily injury and property damage
  - (b) Comprehensive form covering all owned, non-owned, leased, hired, and borrowed vehicles
  - (c) Additional Insured Endorsement
  - (d) Contractual Liability
  
4. Umbrella Liability Insurance - \$1,000,000 limit of liability
  - (a) The following additional coverage must apply
    - ✓ Additional Insured Endorsement
    - ✓ Concurrency of Effective Dates with Primary
    - ✓ Blanket Contractual Liability
    - ✓ Drop Down Feature
    - ✓ Care, Custody, and Control - Follow Form Primary
    - ✓ Aggregates: Apply Where Applicable in Primary
    - ✓ Umbrella Policy must be as broad as the primary policy
  
5. Gwinnett County Board of Commissioners (and any applicable Authority) should be shown as an additional insured on General Liability, Auto Liability and Umbrella Liability policies.
  
6. The cancellation should provide 10 days' notice for nonpayment and 30 days' notice of cancellation.
  
7. Certificate Holder should read:

Gwinnett County Board of Commissioners  
75 Langley Drive  
Lawrenceville, GA 30046-6935
  
8. Insurance Company, except Worker' Compensation carrier, must have an A.M. Best Rating of A-5 or higher. Certain Workers' Comp funds may be acceptable by the approval of the Insurance Unit. European markets including those based in London and domestic surplus lines markets that operate on a non-admitted basis are exempt from this requirement provided that the contractor's broker/agent can provide

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### Senior Services Loading Dock Renovation Project

financial data to establish that a market is equal to or exceeds the financial strengths associated with the A.M. Best's rating of A-5 or better.

9. Insurance Company should be licensed to do business by the Georgia Department of Insurance.
10. Certificates of Insurance, and any subsequent renewals, must reference specific bid/contract by project name and project/bid number.
11. The Contractor shall agree to provide complete certified copies of current insurance policy (ies) or a certified letter from the insurance company (ies) if requested by the County to verify the compliance with these insurance requirements.
12. All insurance coverages required to be provided by the Contractor will be primary over any insurance program carried by the County.
13. Contractor shall incorporate a copy of the insurance requirements as herein provided in each and every subcontract with each and every Subcontractor in any tier, and shall require each and every Subcontractor of any tier to comply with all such requirements. Contractor agrees that if for any reason Subcontractor fails to procure and maintain insurance as required, all such required Insurance shall be procured and maintained by Contractor at Contractor's expense.
14. No Contractor or Subcontractor shall commence any work of any kind under this Contract until all insurance requirements contained in this Contract have been complied with and until evidence of such compliance satisfactory to Gwinnett County as to form and content has been filed with Gwinnett County. **The Acord Certificate of Insurance or a preapproved substitute is the required form in all cases where reference is made to a Certificate of Insurance or an approved substitute.**
15. The Contractor shall agree to waive all rights of subrogation against the County, the Board of Commissioners, its officers, officials, employees, and volunteers from losses arising from work performed by the contractor for the County.
16. Special Form Contractors' Equipment and Contents Insurance covering owned, used, and leased equipment, tools, supplies, and contents required to perform the services called for in the Contract. The coverage must be on a replacement cost basis. The County will be included as a Loss Payee in this coverage for County owned equipment, tools, supplies, and contents.
17. The Contractor shall make available to the County, through its records or records of their insurer, information regarding a specific claim related to any County project. Any loss run information available from the contractor or their insurer relating to a County project will be made available to the County upon their request.
18. Compliance by the Contractor and all subcontractors with the foregoing requirements as to carrying insurance shall not relieve the Contractor and all Subcontractors of their liability provisions of the Contract.
19. The Contractor and all Subcontractors are to comply with the Occupational Safety and Health Act of 1970, Public Law 91-956, and any other laws that may apply to this Contract.
20. The Contractor shall at a minimum apply risk management practices accepted by the contractors' industry.

#### Surety Bonds (If Required)

All of the surety requirements will stay the same except the Surety Company must have the same rating as item 8 above.

**PART III – CONTRACT AWARD AND EXECUTION**

- A. Within ten days from receipt of the Notice of Award from the County, the successful bidder is required to:
1. Return to the County's Purchasing Division contract documents executed by the authorized representative and attested by the corporate secretary of the bidder.
  2. Provide and insurance certificates as specified in the bidding documents throughout the contract period; and
  3. Provide a performance bond and a payment bond as specified in the bidding documents.

The County may extend this ten day period at its discretion.

- B. The successful bidder's failure to execute the contract, provide a performance bond and a payment bond and furnish satisfactory proof of coverage of the insurance required within a ten-day period or any extension thereof may be just cause for annulment of the award and forfeiture of the bid guaranty to Gwinnett County, not as a penalty but as liquidation of damages sustained. At the discretion of the County the award then may be made to the next lowest, responsible bidder, or the work may be re-advertised.
- C. Payment bond and performance bond forms are included in Section 00610, Bonds
- D. The contract documents, including the payment bond, performance bond, and insurance certificate, shall be executed and furnished to the County in duplicate.

**END OF SECTION 000200**

**BL053-24**  
**Senior Services Loading Dock Renovation Project**  
**COMPANY NAME** \_\_\_\_\_

Bidder submits the following lump sum/unit prices for the **Senior Services Loading Dock Renovation Project** identified in Bid Form as part of this Bid. Failure to utilize and return this form as a part of the bidding documents may result in rejection of bid.

**BIDDING FORM**

**ITEM**

The undersigned agrees to provide all necessary labor, material, and equipment for the as defined in the Construction Documents for:

A. **BASE BID, Senior Services Loading Dock Renovation Project**  
LUMP SUM BASE BID

\_\_\_\_\_ Dollars and \_\_\_\_\_ Cents  
(\$ \_\_\_\_\_ )

**NOTES**

\*Individuals, firms and businesses seeking an award of a Gwinnett County contract may not initiate or continue any verbal or written communications regarding a solicitation with any County officer, elected official, employee or other County representative without permission of the Purchasing Associate named in the solicitation between the date of the issuance of the solicitation and the date of the final contract award by the Board of Commissioners. Violations will be reviewed by the Purchasing Director. If determined that such communication has compromised the competitive process, the offer submitted by the individual, firm or business may be disqualified from consideration for award.

**BIDDING FORM CONTINUED**

(This Bid Form is part of the Bid Documents)

**BID NUMBER: BL053-24**

**BID DATE: Monday, April 29, 2024**

**SUBMITTAL DATE:** \_\_\_\_\_

**BY:** \_\_\_\_\_  
**(Bidder)**

**PROJECT DESCRIPTION: Senior Services Loading Dock Renovation Project**

THIS BID IS SUBMITTED TO: Gwinnett County, Georgia (hereinafter called Owner)  
acting through its Board of County Commissioners

This bid is submitted to the Gwinnett County Board of Commissioners in accordance with the instructions, requirements, and forms included in the bidding documents, and the bidder agrees to complete all work for the bid price and substantially complete the work within 180 days from the written notice to proceed.

The bidder agrees if the bid is accepted by the Board of Commissioners within sixty (60) days of the date of bid opening, the bidder shall within ten days after receipt of notification of this acceptance execute a contract upon the terms, conditions, and prices set forth herein and in the form and manner required by Gwinnett County. The bidder further accepts the terms and conditions contained in the bidding requirements for disposition of bid security.

In submitting this bid, bidder makes representations required by Instructions to Bidders and further warrants and represents:

- a. Bidder has examined Bid Document Package, including Advertisement for Bids and Instructions to Bidders, and following addenda:

No. _____	Dated _____	No. _____	Dated _____
No. _____	Dated _____	No. _____	Dated _____
No. _____	Dated _____	No. _____	Dated _____
No. _____	Dated _____	No. _____	Dated _____

- b. Bidder has examined site and locality where the work is to be performed and legal requirements (federal, state, and local laws, ordinances, rules, and regulations) and conditions affecting work cost, difficulty, progress, or performance and has made independent investigations as bidder deems necessary.

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- c. Bidder has carefully studied reports and drawings indicating subsurface conditions and drawings depicting physical conditions as identified in General Conditions and accepts determination concerning technical data contained in reports and drawings on which bidder is entitled to rely.
- d. Bidder has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) examinations, investigations, explorations, tests, and studies (in addition to or to supplement those referred to in "c." above) pertaining to subsurface or physical conditions at site or otherwise affecting cost, progress, performance, or furnishing work as bidder considers necessary for performing or furnishing work at contract price, within contract time, and in accordance with terms and conditions contained in bid document package, including specifically provisions stated in General Conditions and no additional examinations, investigations, explorations, tests, reports, or similar information or data are or will be required by bidder.
- e. Bidder has reviewed and checked plans and data shown or indicated on bid document package with respect to existing underground facilities at or contiguous to site and assumes responsibility for accurately locating underground facilities. No additional examinations, investigations, explorations, tests, reports, or similar information or data concerning underground facilities are or will be required by bidder in order to perform and furnish work at contract price, within contract time, and in accordance with terms and conditions contained in bid document package, including specifically provisions stated in General Conditions.
- f. Bidder has correlated results from observations, examinations, investigations, explorations, tests, reports, and studies with terms and conditions contained in bid document package.
- g. Bidder has given Owner written notice concerning conflicts, errors, or discrepancies discovered in bid document package and written resolution by Owner is acceptable to bidder.
- h. This bid is genuine and not made in interest of or for any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules produced by any group, association, organization, or corporation; bidder has not directly or indirectly induced or solicited any other bidder to submit false or sham bid; bidder has not solicited or induced any person, firm, or corporation to refrain from bidding; and bidder has not sought by collusion to obtain for itself any advantage over any other bidder or over Owner.
- i. The County requires that all who enter into a contract for the physical performance of services with the County must satisfy O.C.G.A. §13-10-91, in all manner, and such are conditions of the contract.

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- j. By submitting a bid to the County, contractor agrees that they are in compliance with O.C.G.A. §13-10-91. Such attestation(s) shall be maintained and may be inspected by the County at any time. Any such attestation shall become a part of the contractor/subcontractor agreement.
- k. An affidavit of such compliance with O.C.G.A. §13-10-91 will be initiated by the County, signed by the contractor, and will become part of the contract.
- l. State Law requires that all who enter into a contract for public works as defined by O.C.G.A. §36-91-2(12) for the County must satisfy the Illegal Immigration Reform and Enforcement Act, in all manner, and such are conditions of the contract.
- m. The Purchasing Division Director with the assistance of the Performance Analysis Division shall be authorized to conduct random audits of a contractor's or subcontractors' compliance with the Illegal Immigration Reform and Enforcement Act and the rules and regulations of the Georgia Department of Labor. The contractor and subcontractors shall retain all documents and records of its compliance for a period of three (3) years following completion of the contract. This requirement shall apply to all contracts for the public works as defined by O.C.G.A. §36-91-2(12) where any persons are employed on the County contract.

Whenever it appears that a contractor's or subcontractor's records are not sufficient to verify the work eligibility of any individual in the employ of such contractor or subcontractor, the Purchasing Director shall report same to the Department of Homeland Security.

COMPANY NAME \_\_\_\_\_

**BL053-24**  
**Senior Services Loading Dock Renovation Project**

A contractor's failure to participate in the federal work authorization program as defined by O.C.G.A. §13-10-90(2) may be sanctioned by termination of the contract. If it is determined that a subcontractor is not participating in the federal work authorization program as defined by O.C.G.A. §13-10-90(2), Gwinnett County may direct the contractor to terminate that subcontractor. A contractor's failure to follow Gwinnett County's instruction to terminate a subcontractor that is not participating in the federal work authorization program as defined by O.C.G.A. §13-10-90(2) may be sanctioned by termination of the contract.

- n. Bidder shall comply with the Georgia Local Government Public Works Construction Law. The above requirements shall be in addition to the requirements of state and federal law, and shall be construed to be in conformity with those laws.

In compliance with the attached specifications and O.C.G.A. §36-91-50, the undersigned offers and agrees, if this bid is accepted by the Board of Commissioners within sixty (60) days of the date of bid opening, to furnish any or all of the items upon which prices are quoted, at the price set opposite each item, delivered to the designated point(s) within the time specified in the bid schedule.

**Legal Business Name** \_\_\_\_\_

**Address** \_\_\_\_\_

**Does your company currently have a location within Gwinnett County? Yes**  **No**

**Representative Signature** \_\_\_\_\_

**Print Authorized Representative's Name** \_\_\_\_\_

**Telephone Number** \_\_\_\_\_ **Fax Number** \_\_\_\_\_

**E-Mail Address** \_\_\_\_\_



**BL053-24**  
**Senior Services Loading Dock Renovation Project**

**BIDDER'S ACKNOWLEDGEMENT**

The undersigned bidder acknowledges all requirements outlined in the above "Instructions to Bidders Package" and all documents referred to therein. This signed form must accompany the completed bid form submitted at the time of bid.

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_  
(President, Vice President or Corporate Officer)

PRINTED NAME: \_\_\_\_\_ TITLE: \_\_\_\_\_

ATTESTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
(Secretary of Corporation)

PRINTED NAME: \_\_\_\_\_ TITLE: \_\_\_\_\_

SEAL

(Corporate Seal Required if Bidder is a Corporation)

COMPANY NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

TELEPHONE NO.: \_\_\_\_\_

**END SECTION 000410**

BIDDING FORM  
000410-6

**BL053-24**  
**Senior Services Loading Dock Renovation Project**

Gwinnett County, Georgia

**BID BOND**

KNOW ALL MEN BY THESE PRESENTS: that

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

a \_\_\_\_\_  
(Corporation, Partnership or Individual)

hereinafter called Principal, and

\_\_\_\_\_  
(Name of Surety)

\_\_\_\_\_  
(Address of Surety)

a Corporation of the State of \_\_\_\_\_ and a surety authorized by law to do business in, the State of Georgia, hereinafter called Surety, are held and firmly bound unto

Gwinnett County Board of Commissioners  
(Name of Obligee)

75 Langley Drive, Lawrenceville, Georgia 30046  
(Address of Obligee)

Thereinafter referred to as Obligee: in the penal sum of (\$ \_\_\_\_\_ ) Dollars in lawful money of the United States, for the payment of which sum will and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents

WHEREAS, the Principal is about to submit, or has submitted, to Gwinnett County, Georgia, a proposal for furnishing materials, labor, and equipment for \_\_\_\_\_

**BL053-24**  
**Senior Services Loading Dock Renovation Project**

**BID BOND**  
**Page 2**

WHEREAS, the Principal desires to file this Bond in accordance with law in lieu of a certified Bidder's check otherwise required to accompany this Proposal.

NOW, THEREFORE, the conditions of this obligation are such that if the proposal be accepted, the Principal shall within ten days after receipt of notification of the acceptance, execute a Contract in accordance with the Proposal and upon the terms, conditions, and prices set forth in the form and manner required by Gwinnett County, Georgia, and execute a sufficient and satisfactory Performance Bond and Payment Bond payable to Gwinnett County, Georgia, each in the amount of 100% of the total Contract Price, in form and with security satisfactory to said Gwinnett County, Georgia, and otherwise, to be and remain in full force and virtue in law, and the Surety shall, upon failure of the Principal to comply with any or all of the foregoing requirements within the time specified above, immediately pay to Gwinnett County, Georgia, upon demand, the amount hereof in good and lawful money of the United States of America, not as a penalty, but as liquidated damages.

PROVIDED, FURTHER, that Principal and Surety agree and represent that this bond is executed pursuant to and in accordance with the applicable provisions of the Official Code of Georgia Annotated, as Amended, including, but not limited to, O.C.G.A. §36-91-1 et seq., and is intended to be and shall be constructed as a bond in compliance with the requirements thereof.

[Signatures Next Page]

**BL053-24**  
**Senior Services Loading Dock Renovation Project**

**BID BOND**  
**Page 3**

Signed, sealed and dated this \_\_\_\_\_ Day of \_\_\_\_\_, A.D., 20 \_\_\_\_\_

ATTEST: \_\_\_\_\_

\_\_\_\_\_  
(Principal)

\_\_\_\_\_  
Principal Secretary)

(SEAL)

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

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Witness to Principal)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Surety)

ATTEST:

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

(Attorney-in-Fact)

\_\_\_\_\_  
(Resident or Nonresident Agent)

\_\_\_\_\_  
(Address)

(SEAL)

\_\_\_\_\_  
(Witness as to Surety)

\_\_\_\_\_  
(Address)

**NOTE: If Contractor is Partnership, all partners should execute Bond. Surety Companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the Project is located. Principal Secretary, Principal and Witness as to Principal signature lines must be signed by three different individuals. Additionally, Resident or Nonresident Agent, Witness as to Surety, and Attorney-in-fact must be signed by three different individuals.**

**END SECTION 000430**

BID BOND  
000430-3

**Failure to return each page of this section as part of your bid documents may result in rejection of bid.**

**BL053-24**

**COMPANY NAME:** \_\_\_\_\_

**REFERENCES**

Gwinnett County requests a minimum of three (3) references where work of a similar size and scope has been completed. Note: References should be customized for each project, rather than submitting the same set of references for every project bid. The references listed should be of similar size and scope of the project being bid on. Do not submit a project list in lieu of this form.

1. Company Name \_\_\_\_\_

Brief Description of Project \_\_\_\_\_

Completion Date \_\_\_\_\_

Contract Amount \$ \_\_\_\_\_ Start Dates \_\_\_\_\_

Contact Person \_\_\_\_\_ Telephone \_\_\_\_\_

E-Mail Address \_\_\_\_\_

2. Company Name \_\_\_\_\_

Brief Description of Project \_\_\_\_\_

Completion Date \_\_\_\_\_

Contract Amount \$ \_\_\_\_\_ Start Date \_\_\_\_\_

Contact Person \_\_\_\_\_ Telephone \_\_\_\_\_

E-Mail Address \_\_\_\_\_

3. Company Name \_\_\_\_\_

Brief Description of Project \_\_\_\_\_

Completion Date \_\_\_\_\_

Contract Amount \$ \_\_\_\_\_ Start Date \_\_\_\_\_

Contact Person \_\_\_\_\_ Telephone \_\_\_\_\_

E-Mail Address \_\_\_\_\_





BL053-24

Senior Services Loading Dock Renovation Project

BL053-24

Senior Services Loading Dock Renovation Project

SAMPLE CONTRACT

This **AGREEMENT** made and entered into this \_\_\_\_\_ Day of \_\_\_\_\_, 20\_\_\_\_ by and between Gwinnett County, Georgia (Party of the First Part, hereinafter called the County), and \_\_\_\_\_ (Party of the Second Part, hereinafter called the Contractor).

**WITNESSETH:** That the said Contractor has agreed, and by these presents does agree with the said County, for the consideration herein mentioned and under the provision of the Performance Bond and Payment Bond required by the Specifications to furnish all equipment, tools, materials, skill and labor of every description necessary to carry out and complete in a good, firm and substantial and workmanlike manner, the work specified, in strict conformity with the drawings and specifications, together with the foregoing proposal made by the Contractor, the Advertisement, the Instructions to Bidders, General Conditions, and this Agreement, shall all form essential parts to this Agreement. The work covered by this Agreement includes all work shown on plans and specifications and listed in the conditions and specifications herewith contained:

The scope of this Project includes, but is not limited to, relocation and replacement of the existing overhead coiling doors and dock levelers. This will include modifications to the existing metal stud and CMU veneer exterior wall and associated electrical and plumbing systems.

This Contract shall consist of the Contractor's bid/proposal and all Invitations to Bid/Proposals including all drawings, specifications, price lists, Instructions to Bidders, General Conditions, Special Provisions, Detailed Specifications, addenda, and change orders issued after execution of the Contract (hereinafter collectively referred to as the "Bid"), which are specifically incorporated herein by reference (Exhibit A). In the event of a conflict between the County's contract documents and the Service Provider's bid/proposal, the County's contract documents shall control.

The Contractor awarded work under this contract shall commence work within ten (10) days after the issuance of the Notice to Proceed and shall fully complete all work hereunder within 180 consecutive calendar days from and after said date.

The County shall pay and the Contractor shall receive the prices stipulated in the proposal hereto attached as full compensation for everything furnished and done by the Contractor under this contract, which shall in no event exceed

\_\_\_\_\_ and no/100 dollars (\$ \_\_\_\_\_) based on the proposal which sum shall be paid in the manner and terms specified in the Contract Documents, but before issuance of certificate of payment, if the Contractor shall not have submitted evidence satisfactory to the County that all payrolls, materials bills, and other indebtedness connected with the work have been paid, the County may withhold, in addition to the retained percentages, such amount or amounts as may be necessary to pay just claims for labor and services rendered and materials in and about the work, and such amount or

SAMPLE CONTRACT FORM

000520-1



**BL053-24**

**Senior Services Loading Dock Renovation Project**

amounts withheld or retained may be applied by the County to the payment of such just claims.

When the Contractor has performed in accordance with the provisions of this Agreement, Gwinnett County shall pay to the Contractor, within thirty (30) days or receipt of any payment request based upon work completed or service provided pursuant to the Contract, the sum so requested, less the retainage stated in this Agreement, if any. In the even that Gwinnett County fails to pay the Contractor within sixty (60) days of receipt of a pay request based upon work completed or service provided pursuant to the Contract, the County shall pay the Contractor interest at the rate of 1/2% per month or pro rata fraction thereof, beginning the sixty-first (61st) day following receipt of the pay request. The Contractor's acceptance of progress payments or final payment shall release all claims for interest on said payments.

It is further mutually agreed between the Parties hereto that if, at any time after the execution of the agreement and the Performance Bond for its faithful performance and the Payment Bond, the first party shall deem the surety or sureties upon such bond to be inadequate to cover the performance of the work, the second party shall, at its expense, within five (5) days after the receipt of notice from the first party to do so, furnish an additional bond or bonds in such form and amount, and with such surety or sureties as shall be satisfactory to the first party. In such event, no further payment to the second party shall be deemed to be due under this agreement until such new or additional security for the faithful performance of the work shall be furnished in a manner and form satisfactory to the first party.

The parties agree that each of the provisions included in this agreement is separate, distinct and severable from the other and remaining provisions of this agreement, and that the invalidity of any agreement provision shall not affect the validity of any other provision or provisions of this agreement.

**(SIGNATURES NEXT PAGE)**

**BL053-24**  
**Senior Services Loading Dock Renovation Project**

**IN WITNESS WHEREOF**, the parties hereto, acting through their duly authorized agents, have caused this **AGREEMENT** to be signed, sealed and delivered.

**GWINNETT COUNTY, GEORGIA**

**By:** \_\_\_\_\_  
**Nicole L. Hendrickson, Chairwoman**  
**Gwinnett County Board of Commissioners**

**ATTEST:**

\_\_\_\_\_  
**Tina King, County Clerk**  
**Gwinnett County Board of Commissioners**

**APPROVED AS TO FORM:**

\_\_\_\_\_  
**(Signature)**

\_\_\_\_\_  
**(Print Name)**  
**Gwinnett County Staff Attorney**

\_\_\_\_\_  
**Contractor**  
**By:** \_\_\_\_\_  
**Signature**

\_\_\_\_\_  
**Print Name and Title**

**ATTEST:**

\_\_\_\_\_  
**(Signature)**

\_\_\_\_\_  
**Print Name**  
**Corporate Secretary**  
**(Seal)**

**END SECTION 000520**

**PERFORMANCE BOND**

KNOW ALL MEN BY THESE PRESENTS: that

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

a \_\_\_\_\_  
(Corporation, Partnership or Individual)

hereinafter called Principal, and

\_\_\_\_\_  
(Name of Surety)

\_\_\_\_\_  
(Address of Surety)

a Corporation of the State of \_\_\_\_\_ and a surety authorized by law to do business in, the State of Georgia, hereinafter called Surety, are held and firmly bound unto:

Gwinnett County Board of Commissioners  
(Name of Obligee)

75 Langley Drive, Lawrenceville, Georgia 30046  
(Address of Obligee)

hereinafter referred to as Obligee are held and firmly bound unto said Obligee and all persons doing work or furnishing skill, tools, machinery, supplies, or material under or for the purpose of the Contract referred to, in the penal sum of \_\_\_\_\_ Dollars(\$ \_\_\_\_\_) in lawful money of the United States, for the payment of which sum will and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

The condition of this obligation is such, as whereas the Principal entered into a certain contract, hereto attached, with the Obligee.

NOW, THEREFORE THE CONDITION OF THIS OBLIGATION IS SUCH, that if the Principal shall well, truly, fully and faithfully perform said contract according to its terms,

**BID NUMBER: BL053-24**

**PROJECT NAME: Senior Services Loading Dock Renovation Project  
Performance Bond Page 2**

covenants, conditions, and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the Obligee, with or without notice to the Surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreement of any and all duly authorized modifications of said contract that may hereafter be made, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED FURTHER, that said Surety to this Bond, for value received, hereby stipulates and agrees that no change, extension of time, alterations, or additions to the terms of the Contract or to the Work to be performed thereunder shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alterations, or additions to the terms of the Contract or to the work to be performed thereunder.

PROVIDED, FURTHER, that Principal and Surety agree and represent that this bond is executed pursuant to and in accordance with the applicable provisions of the Official Code of Georgia Annotated, as Amended, including, but not limited to, O.C.G.A. § 36-91-1 et seq., and is intended to be and shall be construed as a bond in compliance with the requirements thereof.

(Signatures Next Page)

**BID NUMBER: BL053-24**  
**PROJECT NAME: Senior Services Loading Dock Renovation Project**  
**Performance Bond Page 3**

ATTEST:

\_\_\_\_\_  
(Principal)

\_\_\_\_\_  
(Principal Secretary)

(SEAL)

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

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Witness to Principal)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Surety)

ATTEST:

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

(Attorney-in-Fact)

\_\_\_\_\_  
(Resident or Nonresident Agent)

\_\_\_\_\_  
(Address)

(SEAL)

\_\_\_\_\_  
(Witness as to Surety)

\_\_\_\_\_  
(Address)

**NOTE: If Contractor is Partnership, all partners should execute Bond. Surety Companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the project is located.**

**Principal Secretary, Principal and Witness as to Principal signature lines must be signed by three different individuals. Additionally, Resident or Nonresident Agent, Witness as to Surety, and Attorney-in-fact must be signed by three different individuals.**

BONDING AGENT CONTACT INFO	
Print Name	_____
Company Name	_____
E-Mail	_____
Phone	_____

**BID NUMBER: BL053-24**

**PROJECT NAME: Senior Services Loading Dock Renovation Project**

**Payment Bond Page 1**

**PAYMENT BOND**

KNOW ALL MEN BY THESE PRESENTS: that

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_

\_\_\_\_\_  
(Address of Contractor)

a \_\_\_\_\_  
(Corporation, Partnership or Individual)

hereinafter called Principal, and

\_\_\_\_\_  
(Name of Surety)

\_\_\_\_\_

\_\_\_\_\_  
(Address of Surety)

a Corporation of the State of \_\_\_\_\_ and a surety authorized by law to do business in, the State of Georgia, hereinafter called Surety, are held and firmly bound unto:

Gwinnett County Board of Commissioners  
(Name of Obligee)

75 Langley Drive, Lawrenceville, Georgia 30046  
(Address of Obligee)

hereinafter called the Obligee for the use and protection of all subcontractors and all persons supplying labor, services, skill, tools, machinery, materials and/or equipment in the prosecution of the work provided for in the contract hereinafter referred to in the full and just sum of \_\_\_\_\_ Dollars(\$ \_\_\_\_\_) in lawful money of the United States, for the payment of which sum, will and truly to be made, the Principal and Surety bind themselves, their, and each of their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

The condition of this obligation is such, as whereas the Principal entered into a certain contract, hereto attached, with the Obligee for the Senior Services Loading Dock Renovation Project.

**BID NUMBER: BL053-24**

**PROJECT NAME: Senior Services Loading Dock Renovation Project**

**Payment Bond Page 2**

NOW, THEREFORE THE CONDITION OF THIS OBLIGATION IS SUCH, that if the Principal shall well, truly, and faithfully perform said Contract according to its terms, covenants, and conditions, and shall promptly pay all persons furnishing labor, materials services, skill, tools, machinery and/or equipment for use in the performance of said Contract, then this obligation shall be void; otherwise it shall remain in full force and effect.

ALL persons who have furnished labor, materials, services, skill, tools, machinery and/or equipment for use in the performance of said Contract shall have a direct right of action on this Bond, provided payment has not been made in full within ninety (90) days after the last day on which labor was performed, materials, services, skill, tools, machinery, and equipment furnished or the subcontract completed.

PROVIDED FURTHER, that said Surety to this Bond, for value received, hereby stipulates and agrees that no change, extension of time, alterations, or additions to the terms of the Contract or to the Work to be performed thereunder shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alterations, or additions to the terms of the Contract or to the work to be performed thereunder.

PROVIDED, HOWEVER, that no suit or action shall be commenced hereunder by any person furnishing labor, materials, services, skill, tools, machinery, and/or equipment having a direct contractual relationship with a subcontractor, but no contractual relationship express or implied with the Principal:

Unless such person shall have given notice to the Principal within ninety (90) days after such person did, or performed the last of the work or labor, or furnished the last of the materials, services, skill, tools, machinery and/or equipment for which claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials, services, skill, tools, machinery and/or equipment were furnished, or for whom the work or labor was done or performed. Such a notice shall be served by mailing the same by registered mail, postage prepaid, in an envelope addressed to the Principal, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the State in which the aforesaid project is located, save that such service need not be made by a public officer, and a copy of such notice shall be delivered to the Obligee, to the person and at the address provided for in the Contract, within five (5) days of the mailing of the notice to the Principal.

PROVIDED, FURTHER, that any suit under this bond must be instituted before the expiration of one (1) year after the acceptance of the public works covered by the Contract by the proper authorities.

PROVIDED, FURTHER, that Principal and Surety agree and represent that this bond is executed pursuant to and in accordance with the applicable provisions of the Official Code of Georgia Annotated, as Amended, including, but not limited to, O.C.G.A. §36-91-1 et seq., and is intended to be and shall be construed as a bond in compliance with the requirements thereof.

PAYMENT BOND  
000610B-2

ATTEST:

\_\_\_\_\_  
(Principal)

\_\_\_\_\_  
(Principal Secretary)

(SEAL)

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

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Witness to Principal)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Surety)

ATTEST:

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

(Attorney-in-Fact)

\_\_\_\_\_  
(Resident or Nonresident Agent)

\_\_\_\_\_  
(Address)

(SEAL)

\_\_\_\_\_  
(Witness as to Surety)

\_\_\_\_\_  
(Address)

**NOTE: If Contractor is Partnership, all partners should execute Bond. Surety Companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the project is located.**

**Principal Secretary, Principal and Witness as to Principal signature lines must be signed by three different individuals. Additionally, Resident or Nonresident Agent, Witness as to Surety, and Attorney-in-fact must be signed by three different individuals.**

<u>BONDING AGENT CONTACT INFO</u>	
Print Name	_____
Company Name	_____
E-Mail	_____
Phone	_____





**BL053-24 Senior Services Loading Dock Renovation Project**

**CONTRACTOR AFFIDAVIT AND AGREEMENT  
(THIS FORM SHOULD BE FULLY COMPLETED  
AND RETURNED WITH YOUR SUBMITTAL)**

By executing this affidavit, the undersigned contractor verifies its compliance with The Illegal Reform Enhancements for 2013, stating affirmatively that the individual, firm, or corporation which is contracting with the Gwinnett County Board of Commissioners has registered with and is participating in a federal work authorization program\* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act, in accordance with the applicability provisions and deadlines established therein.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services or the performance of labor pursuant to this contract with the Gwinnett County Board of Commissioners, contractor will secure from such subcontractor(s) similar verification of compliance with the Illegal Immigration Reform and Enforcement Act on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or a substantially similar form. Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the Gwinnett County Board of Commissioners at the time the subcontractor(s) is retained to perform such service.

\_\_\_\_\_  
E-Verify \* User Identification Number

\_\_\_\_\_  
Date Registered

\_\_\_\_\_  
Legal Company Name

\_\_\_\_\_  
Street Address

\_\_\_\_\_  
City/State/Zip Code

BY: \_\_\_\_\_  
Authorized Officer or Agent  
(Contractor Signature)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title of Authorized Officer or Agent of Contractor

\_\_\_\_\_  
Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN  
BEFORE ME ON THIS THE  
\_\_\_\_ DAY OF \_\_\_\_\_, 202\_\_

\_\_\_\_\_  
Notary Public  
My Commission Expires: \_\_\_\_\_

**For Gwinnett County Use Only:**  
Document ID # \_\_\_\_\_  
Issue Date: \_\_\_\_\_  
Initials: \_\_\_\_\_

\* As of the effective date of O.C.G.A. 13-10-91, the applicable federal work authorization program is "E-Verify" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).



## **BL053-24 Senior Services Loading Dock Renovation Project**

### **CODE OF ETHICS AFFIDAVIT**

**PLEASE RETURN THIS FORM COMPLETED WITH YOUR SUBMITTAL. SUBMITTED FORMS ARE REQUIRED PRIOR TO EVALUATION.**

In accordance with Section 54-33 of the Gwinnett County Code of Ordinances the undersigned bidder/proposer makes the following full and complete disclosure under oath, to the best of their knowledge, of the name(s) of all elected officials whom it employs or who have a direct or indirect pecuniary interest in or with the bidder/proposer, its affiliates or its subcontractors:

1. \_\_\_\_\_  
Company Submitting Bid/Proposal

2. Please select one of the following:
- No information to disclose (*complete only section 4 below*)
  - Disclosed information below (*complete section 3 & section 4 below*)

3. If additional space is required, please attach list:

\_\_\_\_\_  
Gwinnett County Elected Official Name

\_\_\_\_\_  
Gwinnett County Elected Official Name

\_\_\_\_\_  
Gwinnett County Elected Official Name

\_\_\_\_\_  
Gwinnett County Elected Official Name

4. BY: \_\_\_\_\_  
Authorized Officer or Agent Signature

Sworn to and subscribed before me this

\_\_\_\_\_  
Printed Name of Authorized Officer or Agent

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
Title of Authorized Officer or Agent of Contractor

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

(seal)

Note: See Gwinnett County Code of Ethics Ordinance EO2011, Sec. 54-33.  
The ordinance will be available to view in its' entirety at  
**GwinnettCounty.com**

STATE OF GEORGIA  
COUNTY OF GWINNETT

**GENERAL CONDITIONS  
FOR GWINNETT COUNTY CONSTRUCTION CONTRACTS**

GC-1 FAMILIARITY WITH SITE

Execution of this agreement by the Contractor is a representation that the Contractor has visited the site, has become familiar with the local conditions under which the work is to be performed, and has correlated personal observations with the requirements of this agreement.

GC-2 CONTRACT DOCUMENTS

This agreement consists of Gwinnett County's request for proposals, instructions to bidders, Contractor's proposal, construction contract, Performance Bond, Payment Bond, general conditions, special provisions, specifications, plans, drawings, addenda, and written change orders.

GC-3 DEFINITIONS

The following terms as used in this agreement are defined as follows:

Change Order - a written order to the Contractor, prepared by the Architect and issued by the County for changes in the work within the general scope of the contract documents, adjustment of the contract price, extension of the contract time, or reservation of determination of a time extension.

County - Gwinnett County, Georgia, a political subdivision of the State of Georgia, acting by and through the Chairman of its Board of Commissioners.

Day - a calendar day of twenty-four hours lasting from midnight of one day to midnight the next day.

Notice to Proceed - written communication issued by the County to the Contractor authorizing it to proceed with the work and establishing the date of commencement and completion of the work.

Substantial Completion - the date certified by the Architect when all or a part of the work, identified in the Architect's certification, is sufficiently completed in accordance with the requirements of the contract documents so that the identified portion of the work can be utilized for the purposes for which it is intended.

Work - all of the services specified, indicated, shown or contemplated by the contract documents, and furnishing by the Contractor of all materials, equipment, labor, methods, processes, construction and manufacturing materials and equipment, tools, plans, supplies, power, water, transportation and other things necessary to complete such services in accordance with the contract documents to ensure a functional and complete facility.

GC-4 CODES

All codes, specifications, and standards referenced in the contract documents shall be the latest additions, amendments and revisions of such referenced standards in effect as of the date of the request for proposals for this contract.

GENERAL CONDITIONS  
000700-1

#### GC-5 REVIEW OF CONTRACT DOCUMENTS

Before making its proposal to the County, and continuously after the execution of the agreement, the Contractor shall carefully study and compare the contract documents and shall at once report to the Architect any error, ambiguity, inconsistency or omission that may be discovered, including any requirement which may be contrary to any law, ordinance, rule, or regulation of any public authority bearing on the performance of the work. By submitting its proposal, the Contractor agrees that the contract documents, along with any supplementary written instructions issued by or through the Architect that have become a part of the contract documents appear accurate, consistent and complete insofar as can be reasonably determined. If the Contractor has reported in writing any error, inconsistency, or omission to the County, has properly stopped the effected work until instructed to proceed, and has otherwise followed the instructions of the Architect, the Contractor shall not be liable to the County for any damage resulting from any such error, inconsistency, or omission in the contract documents. The Contractor shall not perform any portion of the work without the contract documents, approved plans, specifications, products and data, or samples for such portion of the work.

#### GC-6 STRICT COMPLIANCE

No observation, inspection, test or approval of the County or Architect shall relieve the Contractor from its obligation to perform the work in strict conformity with the contract documents.

#### GC-7 APPLICABLE LAW

All applicable State laws, County ordinances, and rules and regulations of all authorities having jurisdiction over the construction of the project shall apply to this agreement. All work performed within the right of way of the Georgia Department of Transportation shall be in accordance with DOT regulations, policies and procedures. The Contractor shall comply with all laws, ordinances, rules and regulations bearing on the conduct of the work as specified and the Contractor agrees to indemnify and hold harmless the County, its officers, agents and employees, as well as the Architect, against any claim or liability arising from or based on the violation of any law, ordinance, regulation, order or decree affecting the conduct of the work, whether occasioned by the Contractor, his agents or employees.

#### GC-8 PERMITS & LICENSES

All permits and licenses necessary for the work shall be secured and paid for by the Contractor. If any permit, license or certificate expires or is revoked, terminated, or suspended as a result of any action on the part of the Contractor, the Contractor shall not be entitled to additional compensation or time.

#### GC-9 TAXES

The Contractor shall pay all sales, retail, occupational, service, excise, old age benefit and unemployment compensation taxes, consumer, use and other similar taxes, as well as any other taxes or duties on the materials, equipment, and labor for the work provided by the Contractor which are legally enacted by any municipal, county, state or federal authority, department or agency at the time bids are received, whether or not yet effective. The Contractor shall maintain records pertaining to such taxes and levies as well as payment thereof and shall make the same available to the County at all reasonable times for inspection and copying.

#### GC-10 DELINQUENT CONTRACTORS

The County shall not pay any claim, debt, demand or account whatsoever to any person firm or corporation who is in arrears to the County for taxes. The County shall be entitled to a counterclaim and offset for any such debt in the amount of taxes in arrears, and no assignment or transfer of such debt after the taxes become due shall affect the right of the County to offset any taxes owed against said debt.

#### GC-11 LIEN WAIVERS

The Contractor shall furnish the County with evidence that all persons who have performed work or furnished materials pursuant to this agreement have been paid in full prior to submitting its demand for final payment pursuant to this agreement. In the event that such evidence is not furnished, the County may retain sufficient sums necessary to meet all lawful claims of such laborers and materialmen. The County assumes no obligation nor in any way undertakes to pay such lawful claims from any funds due or that may become due to the Contractor.

#### GC-12 MEASUREMENT

All items of work to be paid for per unit of measurement shall be measured and certified by the Architect.

#### GC-13 ASSIGNMENT

The Contractor shall not assign any portion of this agreement or moneys due therefrom without the prior written consent of the County. The Contractor shall retain personal control and shall provide personal attention to the fulfillment of its obligations pursuant to this agreement.

#### GC-14 FOREIGN CONTRACTORS

In the event that the Contractor is a foreign corporation, partnership, or sole proprietorship, the Contractor hereby irrevocably appoints the Secretary of State of Georgia as its agent for service of all legal process for the purpose of this contract only.

#### GC-15 INDEMNIFICATION

Contractor shall indemnify, hold harmless, insure, and defend the COUNTY for damages, losses, or expenses to the extent caused by or resulting from the negligence, recklessness, or intentionally wrongful conduct of the Contractor or other persons employed or utilized by the Contractor in the performance of the contract.

#### GC-16 SUPERVISION OF WORK

The Contractor shall supervise and direct the work using the Contractor's best skill and attention. The Contractor shall be solely responsible for all construction methods and procedures and shall coordinate all portions of the work pursuant to the contract subject to the overall coordination of the Architect. All work pursuant to this agreement shall be performed in a skillful and workmanlike manner.

#### GC-17 RESPONSIBILITY FOR WORK

The Contractor shall not be relieved from the Contractor's obligations to perform the work in accordance with the contract documents by the activities or duties of the Architect, including inspections, tests or approvals required or performed pursuant to this agreement.

#### GC-18 RESPONSIBILITY FOR ACTS OF EMPLOYEES

The Contractor shall be responsible to the County for the acts and omissions of its employees, subcontractors, and agents as well as any other persons performing work pursuant to this agreement. All areas within the limits of the Project which are determined by the Architect to be unnecessarily damaged, due either directly or indirectly to the process of construction, shall be responsibility of the

Contractor to correct and repair. This is not a payment item and shall be done without additional compensation.

#### GC-19 PAYMENT FOR LABOR AND MATERIALS

Unless otherwise provided in this agreement, the Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the execution and completion of the work.

#### GC-20 DISCIPLINE ON WORK SITE

The Contractor shall enforce strict discipline and good order among its employees and subcontractors at all times during the performance of the work. The Contractor shall not employ any subcontractor who is not skilled in the task assigned to it. The Architect may, by written notice, require the Contractor to remove from the work any subcontractor or employee deemed by the Architect to be incompetent.

#### GC-21 HOURS OF OPERATION

All work at the construction site shall be performed during regular business hours, except upon the Architect's prior written consent to other work hours.

#### GC-22 FAMILIARITY WITH WORK CONDITIONS

The Contractor shall take all steps necessary to ascertain the nature and location of the work and the general and local conditions, which may affect the work or the cost thereof. The Contractor's failure to fully acquaint itself with the conditions which may affect the work, including, but not limited to conditions relating to transportation, handling, storage of materials, availability of labor, water, roads, weather, topographic and subsurface conditions, other separate contracts to be entered into by the County relating to the project which may affect the work of the Contractor, applicable provisions of law, and the character and availability of equipment and facilities necessary prior to and during the performance of the work shall not relieve the Contractor of its responsibilities pursuant to this agreement and shall not constitute a basis for an equitable adjustment of the contract terms. The County assumes no responsibility for any understandings or representations concerning conditions of the work made by any of its officers, agents, or employees prior to the execution of this agreement.

#### GC-23 RIGHT OF ENTRY

The County reserves the right to enter the site of the work by such agent as it may elect for the purpose of inspecting the work or installing such collateral work as the County may desire.

#### GC-24 NOTICES

Any notice, order, instruction, claim or other written communication required pursuant to this agreement shall be deemed to have been delivered or received as follows:

- (1) Upon personal delivery to the Contractor, its authorized representative, or the Architect on behalf of the County. Personal delivery may be accomplished by in-person hand delivery or bona fide overnight express service.
- (2) Three days after depositing in the United States mail a certified letter addressed to the Contractor, the County, or the Architect. For purposes of mailed notices, the County's mailing address shall be 75 Langley Drive, Lawrenceville, Georgia 30046. The Contractor's mailing address shall be the address

stated in its proposal, and the Architect's mailing address shall be its address listed in the Notice to Begin Work.

#### GC-25 SAFETY

The Contractor shall take all reasonable precautions for the safety of all persons and property associated with the work, and the Contractor shall erect and maintain, as required by existing conditions and the progress of the work, all reasonable safeguards for the safety and protection of persons in the vicinity of the project.

#### GC-26 BLASTING AND EXCAVATION

The Contractor acknowledges that it is fully aware of the contents and requirements of O.C.G.A. §25-9-1 through §25-9-12 concerning blasting and excavation near underground gas pipes and facilities and shall fully comply therewith.

#### GC-27 HIGH VOLTAGE LINES

The Contractor acknowledges that it is fully aware of the contents and requirements O.C.G.A. §46-3-30 through § 46-3-39 concerning safeguards against contact with high voltage lines, and the Contractor shall fully comply with said provisions.

#### GC-28 SCAFFOLDING AND STAGING

The Contractor acknowledges that it is the person responsible for employing and directing others to perform labor within the meaning of O.C.G.A. §34-1-1 and agrees to comply with said provisions.

#### GC-29 CLEAN-UP

The Contractor shall clean up all refuse, rubbish, scrap materials, and debris caused by its operations to the end that the site of the work shall present a neat, orderly and workmanlike appearance at all times.

#### GC-30 PROTECTION OF WORK

The Contractor shall be responsible for maintenance and protection of the work until final completion of this agreement and acceptance of the work as defined herein. Any portion of the work suffering injury, damage or loss shall be considered defective and shall be corrected or replaced by the Contractor without additional cost to the County.

#### GC-31 REJECTED WORK

The Contractor shall promptly remove from the project all work rejected by the Architect for failure to comply with the contract documents and the Contractor shall promptly replace and re-execute the work in accordance with the contract documents and without expense to the County. The Contractor shall also bear the expense of making good all work of other Contractors destroyed or damaged by such removal or replacement.

#### GC-32 DEFECTIVE WORK

If the Contractor defaults or neglects to carry out any portion of the work in accordance with the contract documents, and fails within three days after receipt of written notice from the County or the Architect to commence and continue correction of such default or neglect with diligence and promptness, the County or the Architect may, after three days following receipt by the Contractor of an additional written notice and without prejudice to any other remedy the County may have, make good such deficiencies and complete all or any portion of any work through such means as the County may select, including the use of a new Contractor. In such case, an appropriate change order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies. In the event the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the County on demand.

### GC-33 NEW MATERIALS

The Contractor warrants to the County that all materials and equipment furnished under this contract will be new unless otherwise specified, and the Contractor further warrants that all work will be of good quality, free from faults and defects, and in conformance with the contract documents. The warranty set forth in this paragraph shall survive final acceptance of the work.

### GC-34 CONTRACTOR'S WARRANTY

If within one year after the date of substantial completion and final acceptance of the work by the County, or within such longer period of time as may be prescribed by law or by the term of any applicable special warranty required by the contract documents, any of the work is found to be defective or not in accordance with the contract documents, the Contractor shall correct such work promptly after receipt of written notice from the County to do so. This obligation shall survive both final payment for the work and termination of the contract.

### GC-35 ASSIGNMENT OF MANUFACTURERS' WARRANTIES

Without limiting the responsibility or liability of the Contractor pursuant to this agreement, all warranties given by manufacturers on materials or equipment incorporated in the work are hereby assigned by the Contractor to the County. If requested, the Contractor shall execute formal assignments of said manufacturer's warranties to the County. All such warranties shall be directly enforceable by the County.

### GC-36 WARRANTIES IMPLIED BY LAW

The warranties contained in this agreement, as well as those warranties implied by law, shall be deemed cumulative and shall not be deemed alternative or exclusive. No one or more of the warranties contained herein shall be deemed to alter or limit any other.

### GC-37 STOP WORK ORDERS

In the event that the Contractor fails to correct defective work as required by the contract documents or fails to carry out the work in accordance with contract documents, the County, or the Architect, in writing, may order the Contractor to stop work until the cause for such order has been eliminated. This right of the County or Architect to stop work shall not give rise to any duty on the part of the County or the Architect to execute this right for the benefit of the Contractor or for any other person or entity.

### GC-38 TERMINATION FOR CAUSE

If the Contractor is adjudged bankrupt, makes a general assignment for the benefit of creditors, suffers the appointment of a receiver on account of its insolvency, or fails to supply sufficient properly skilled workers, materials, fails to make prompt payment to subcontractors or materialmen, disregards laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction, or is otherwise guilty of a material violation of this agreement and fails within seven days after receipt of written notice to commence and continue correction of such default, neglect, or violation with diligence and promptness, the County may, after ten days following receipt by the Contractor of an additional written notice and without prejudice to any other remedy the County may have, terminate the employment of the Contractor and take possession of the site as well as all materials, equipment, tools, construction equipment and machinery thereon. The County may finish the work by whatever methods the County deems expedient. In such case, the Contractor shall not be entitled to receive any further payment until the work is completed. If the unpaid balance of the contract price exceeds the cost of completing the work, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the County on demand. This obligation for payment shall survive the termination of the contract. Termination of this agreement pursuant to this paragraph may result in disqualification of the



Contractor from bidding on future County contracts.

GC-39 TERMINATION FOR CONVENIENCE

The County may, at any time upon 30 days written notice to the Contractor, terminate the whole or any portion of the work for the convenience of the County. Said termination shall be without prejudice to any right or remedy of the County provided herein. In addition, in the event this agreement has been terminated due to the default of the Contractor, and if it is later determined that the Contractor was not in default pursuant to the provisions of this agreement at the time of termination, then such termination shall be considered a termination for convenience pursuant to this paragraph.

GC-40 TERMINATION FOR CONVENIENCE - PAYMENT

In the event that the County terminates this agreement for the convenience of the County, the County shall only be liable to the Contractor for those costs reimbursable to the Contractor plus a mark-up of ten percent on the actual fully accounted cost recovered pursuant to this paragraph. In the event that it appears that the Contractor would have sustained a loss on the entire contract had it been completed, no profit shall be included or allowed hereunder and an appropriate adjustment shall be made reducing the amount of settlement to reflect the indicated rate of loss. In the event of termination for the convenience of the County, the County shall pay the Contractor the following amounts determined by the Architect:

- A. An amount for supplies, services, or property accepted by the County for which payment has not previously been made. The price to be paid for these items shall be equivalent to the aggregate price for such supplies or services computed in accordance with the price specified in this agreement appropriately adjusted for any saving of freight or other charges; and
- B. The total of:
  - (1) The costs incurred in the performance of the work terminated, including initial costs and preparatory expenses allocable thereto, but exclusive of any costs attributable to supplies or services previously paid;
  - (2) The costs of settling and paying claims arising pursuant to the termination of the work under said contracts or orders which are properly chargeable to the terminated portion of the contract (exclusive of the amounts paid or payable on account of completed items or equipment delivered or services furnished by a subcontractor or vendor prior to the effective date of the notice of termination, which amounts shall be included in the costs payable pursuant to (A)); and
  - (3) The reasonable costs of settlement, including accounting, legal, clerical, and other expenses reasonable and necessary for the preparation of settlement claims and supporting data with respect to the terminated portion of the contract and for the termination and settlement of subcontracts thereunder, together with reasonable storage, transportation, and other costs incurred in connection with the protection or disposition of property allocable to this agreement.

GC-41 TERMINATION FOR CONVENIENCE - PAYMENT LIMITATIONS

In the event of termination for the convenience of the County, the total sum to be paid to the Contractor shall not exceed the contract price as reduced by the amount of payments otherwise made, by the contract

price for work not terminated, and as otherwise permitted by the contract. Except for normal spoilage, and except to the extent that the County shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to the Contractor the fair value, as determined by the Architect, of property which is destroyed, lost, stolen or damaged so as to become undeliverable to the County or to another buyer.

GC-42 COST TO CURE

If the County terminates the whole or any part of the work pursuant to this agreement, then the County may procure upon such terms and in such manner as the Architect may deem appropriate, supplies or services similar to those so terminated, and the Contractor shall be liable to the County for any excess costs for such similar supplies or services. The Contractor shall continue the performance of this agreement to the extent not terminated hereunder.

GC-43 ATTORNEY'S FEES

Should the Contractor default pursuant to any of the provisions of this agreement, the Contractor and its surety shall pay to the County such reasonable attorney's fees as the County may expend as a result thereof and all costs, expenses, and filing fees incidental thereto.

GC-44 CONTRACTOR'S RESPONSIBILITIES UPON TERMINATION

After receipt of a notice of termination from the County, and except as otherwise directed by the Architect, the Contractor shall:

- (1) Stop work under the contract on the date and to the extent specified in the notice of termination;
- (2) Place no further orders or subcontracts for materials, services or facilities, except as may be necessary for completion of such portion of the work under the agreement as is not terminated;
- (3) Terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the notice of termination;
- (4) Assign to the County in the manner, at the times, and to the extent directed by the Architect, all of the rights, title and interest of the Contractor under the orders and subcontracts so terminated, in which case the County shall have the right, at its discretion, to settle or pay any and all claims arising out of the termination of such orders or subcontracts;
- (5) Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification of the Architect, to the extent the Architect may require, which approval or ratification shall be final for all purposes;
- (6) Transfer title and deliver to the entity or entities designated by the County, in the manner, at the times, and to the extent, if any, directed by the Architect, and to the extent specifically produced or specifically acquired by the Contractor for the performance of such portion of the work as has been terminated:
  - (a) The fabricated or unfabricated parts, work, and progress, partially completed

supplies, and equipment, materials, parts, tools, dyes, jigs, and other fixtures, completed work, supplies, and other material produced as a part of or acquired in connection with the performance of the work terminated by the notice of termination; and

- (b) The completed or partially completed plans, drawings, information, and other property to the work.
- (7) Use its best efforts to sell in the manner, at the times, to the extent, and at the prices directed or authorized by the Architect, any property described in Section 6 of this paragraph, provided, however, that the Contractor shall not be required to extend credit to any buyer and further provided that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by the County to the Contractor pursuant to this agreement.
- (8) Complete performance of such part of the work as shall not have been terminated by the notice of termination; and
- (9) Take such action as may be necessary, or as the Architect may direct, for the protection and preservation of the property related to the agreement which is in the possession of the Contractor and in which the County has or may acquire an interest.

#### GC-45 RECORDS

The Contractor shall preserve and make available to the County all of its records, books, documents and other evidence bearing on the costs and expenses of the Contractor and any subcontractor pursuant to this agreement upon three days advance notice to the Contractor.

#### GC-46 DEDUCTIONS

In arriving at any amount due the Contractor pursuant to the terms of this agreement, there shall be deducted all liquidated damages, advance payments made to the Contractor applicable to the termination portion of the contract, the amount of any claim which the County may have against the Contractor, the amount determined by the Architect to be necessary to protect the County against loss due to outstanding potential liens or claims, and the agreed price of any materials acquired or sold by the Contractor and not otherwise recovered by or credited to the County.

#### GC-47 REIMBURSEMENT OF THE COUNTY

In the event of termination, the Contractor shall refund to the County any amount paid by the County to the Contractor in excess of the costs reimbursable to the Contractor.

#### GC-48 TERMINATION FOR CONVENIENCE - DELAY

The Contractor shall be entitled to only those damages and that relief from termination by the County as specifically set forth in this agreement. The County or the Architect may issue a written order requiring the Contractor to suspend, delay or interrupt all or any part of the work for such period of time as the County may determine to be appropriate for the convenience of the County. If the performance of the work is interrupted for an unreasonable period of time by an act of the County or Architect in the administration of this agreement, an equitable adjustment shall be made for any increase in the Contractor's costs of performance and any increase in the time required for performance of the work necessarily caused by the unreasonable suspension, delay, or interruption. Any equitable adjustment shall

be reduced to writing and shall constitute a modification to this agreement. In no event, however, shall an equitable adjustment be made to the extent that performance of this agreement would have been suspended, delayed or interrupted by any other cause, including the fault or negligence of the Contractor. No claim for an equitable adjustment pursuant to this paragraph shall be permitted before the Contractor shall have notified the Architect in writing of the act or failure to act involved, and no claim shall be allowed unless asserted in writing to the Architect within ten days after the termination of such suspension, delay or interruption.

GC-49 COMMENCEMENT AND DURATION OF WORK

The Contractor shall commence work pursuant to this agreement within ten days of mailing or delivery of written notice to proceed by the County. The Contractor shall diligently prosecute the work to completion within the time specified therefore. The capacity of the Contractor's construction and manufacturing equipment and plan, sequence and method of operation and forces employed, including management and supervisory personnel, shall be such as to ensure completion of the work within the specified time. The Contractor and County hereby agree that the contract time for completion of the work is reasonable taking into consideration the average climatic conditions prevailing in the locality of the work.

GC-50 TIME OF THE ESSENCE

All time limits stated in this agreement are of the essence of this contract.

GC-51 IMPACT DAMAGES

Except as specifically provided pursuant to a stop work order or change order, the Contractor shall not be entitled to payment or compensation of any kind from the County for direct or indirect or impact damages including, but not limited to, costs of acceleration arising because of delay, disruption, interference or hindrance from any cause whatsoever whether such delay, disruption, interference or hindrance is reasonable or unreasonable, foreseeable or unforeseeable, or avoidable, provided, however, that this provision shall not preclude the recovery of damages by the Contractor for hindrances or delays due solely to fraud or bad faith on the part of the County its agents or employees. The Contractor shall be entitled only to extensions in the time required for performance of the work as specifically provided in the contract.

GC-52 DELAY

The Contractor may be entitled to an extension of the contract time, but not an increase in the contract price, for delays arising from unforeseeable causes beyond the control and without the fault or negligence of the Contractor or its subcontractors for labor strikes, acts of God, acts of the public enemy, acts of the state, federal or local government in its sovereign capacity, by acts of another separate contractor, or by an act of neglect of the County with the Architect.

GC-53 INCLEMENT WEATHER

The Contractor shall not be entitled to an extension of the contract time due to normal inclement weather. Unless the Contractor can substantiate to the satisfaction of the Architect that there was greater than normal inclement weather considering the full term of the contract using a ten-year average of accumulated mean values for climatological data compiled by the U.S. Department of Commerce for Atlanta, Georgia and that such greater than normal inclement weather actually delayed the work, the Contractor shall not be entitled to an extension of time therefore.

GC-54 NOTICE OF DELAY

The Contractor shall not receive an extension of time unless a notice of a claim is filed with the County and the Architect within ten days of the first instance of such delay, disruption, interference or hindrance

and a written statement of the claim is filed with the Architect and the County within 20 days of the first such instance. In the event that the Contractor fails to comply with this provision, it waives any claim, which it may have for an extension of time pursuant to this agreement.

#### GC-55 NOTICE OF DELAY - CONTENTS

The notice of delay referenced in the preceding paragraph shall include specific information concerning the nature of the delay, the date of commencement of the delay, the construction activities affected by the delay, the person or organization responsible for the delay, the anticipated extent of the delay, and any recommended action to avoid or minimize the delay.

#### GC-56 PROGRESS OF WORK

To the extent that the Contractor is entitled to additional compensation for delay, an absolute condition precedent to such entitlement shall be strict compliance with all requirements and procedures for entitlement to an extension of time herein. If the work actually in place falls behind the currently updated and approved project network schedule, and it becomes apparent from the current schedule that work will not be completed within the contract time, the Contractor agrees that it will, as necessary, or as directed by the Architect, take action at no additional cost to the County to improve the progress of the work, including increasing manpower, increasing the number of working hours per shift or shifts per working day, increasing the amount of equipment at the site, and any other measure reasonably required to complete the work in a timely fashion.

#### GC-57 DILIGENCE

The Contractor's failure to substantially comply with the requirements of the preceding paragraph may be grounds for determination by the County or Architect that the Contractor is failing to prosecute the work with such diligence as will ensure its completion within the time specified. In such event, the County shall have the right to furnish such additional labor and materials as may be required to comply with the schedule after 48 hours written notice to the Contractor, and the Contractor shall be liable for such costs incurred by the County.

#### GC-58 SET-OFFS

Any monies due to the County pursuant to the acceleration provisions of this agreement may be deducted by the County against monies due from the County to the Contractor.

#### GC-59 ACCELERATION - REMEDIES

The remedies of the County concerning acceleration are in addition to and without prejudice to all of the rights and remedies of the County at law, in equity, or contained in this agreement.

#### GC-60 TITLE TO MATERIALS

No materials or supplies shall be purchased by the Contractor or by any Subcontractor subject to any chattel mortgage or under a conditional sales contract or other agreement by which any interest is retained by the seller. The Contractor hereby warrants that it has good and marketable title to all materials and supplies used by it in the work, and the Contractor further warrants that all materials and supplies shall be free from all liens, claims, or encumbrances at the time of incorporation in the work.

#### GC-61 INSPECTION OF MATERIALS

All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with accepted standards and in accordance with the requirements of the contract documents. Additional tests performed after the rejection of materials or equipment shall be at

the Contractor's expense.

GC-62 ARCHITECT'S PRESENCE DURING TESTING

All tests performed by the Contractor shall be witnessed by the Architect/Engineer unless the requirement therefore is waived in writing. The Architect/Engineer may perform additional tests on materials previously tested by the Contractor, and the Contractor shall furnish samples for this purpose as requested.

GC-63 MATERIALS INCORPORATED IN WORK

The Contractor shall furnish all materials and equipment to be incorporated in the work. All such materials or equipment shall be new and of the highest quality available. Manufactured materials and equipment shall be obtained from sources, which are currently manufacturing such materials, except as otherwise specifically approved by the Architect.

GC-64 STORAGE OF MATERIALS

Materials and equipment to be incorporated in the work shall be stored in such a manner as to preserve their quality and fitness for the work and to facilitate inspection.

GC-65 PAYROLL REPORTS

The Contractor shall be required to furnish weekly payroll reports to the Architect certifying conformance with the wage rates listed in the specifications.

GC-66 CONTRACTORS' REPRESENTATIVE

Before beginning work, the Contractor shall notify the Architect in writing of one person within its organization who shall have complete authority to supervise the work, receive orders from the Architect, and represent the Contractor in all matters arising pursuant to this agreement. The Contractor shall not remove its representative without first designating in writing a new representative. The Contractor's representative shall normally be present at or about the site of work while the work is in progress. When neither the Contractor nor its representative is present at the work site, the superintendent, foreman, or other employee in charge of the work shall be an authorized representative of the Contractor.

GC-67 SPECIALTY SUB-CONTRACTORS

The Contractor may utilize the services of specialty subcontractors on those parts of the project which, under normal contracting practices, are performed by specialty subcontractors. Neither the Contractor nor any subcontractor shall award work to any subcontractor without the prior written consent of the County. The Contractor shall not award more than seventy-five percent of the work to subcontractors.

GC-68 INSPECTION BY ARCHITECT

All work pursuant to this agreement shall be subject to inspection by the Architect for conformity with contract drawings and specifications. The Contractor shall give the Architect reasonable advance notice of operations requiring special inspection of a portion of the work.

GC-69 WORK COVERED PRIOR TO ARCHITECT'S INSPECTION

In the event that work is covered or completed without the approval of the Architect, and such approval is required by the specifications or required in advance by the Architect, the Contractor shall bear all costs involved in inspection notwithstanding conformance of such portion of the work to the contract drawings and specifications.

#### GC-70 ARCHITECT'S AUTHORITY

The Architect shall have the authority to decide all questions concerning interpretation and fulfillment of contract requirements, including, without limitation, all questions concerning the prosecution, progress, quality and acceptability of the work. Any oral decision or instruction of the Architect shall be confirmed in writing. All communications between the County and the Contractor shall be made through the Architect. The Contractor shall submit to the Architect a complete schedule of values of various portions of the work, including quantities and unit prices, aggregating the contract price. The schedule shall subdivide the work into component parts in sufficient detail to serve as the basis for progress payments during construction. Each item in the schedule of values shall include its proper share of overhead and profit. The schedule of values, when approved by the Architect, shall be used only as a basis for the Contractor's monthly request for payment and shall not be used for additions to or deductions from the contract amount.

#### GC-71 PROGRESS ESTIMATES

The Contractor shall also prepare a written report for the Architect's approval, on County forms, of the total amount of value of work performed to the date of submission. No progress estimate or payment shall be considered an approval or acceptance of any work performed, and all estimates and payments shall be subject to correction in subsequent estimates. Progress payments shall be made for all completed activities and for suitably stored materials.

#### GC-72 PROGRESS PAYMENTS

Upon completion of each monthly estimate of work performed and materials furnished, the Architect shall recommend payment to the Contractor for the estimated value of such work, materials, and equipment, less the amount of all prior payments and all liquidated damages. The Contractor will be paid 100 percent, less retainage, of the cost of materials received and properly stored but not incorporated into the work. Payments for materials or equipment stored on the site shall be conditioned upon submission by the Contractor of bills of sale to establish the County's title to such materials or equipment. No progress estimate or payment need be made when, in the Architect's judgment, the increment in the estimated value of work performed and materials furnished since the preceding estimate is less than \$10,000.

#### GC-73 TIME OF PAYMENT

When the contractor has performed in accordance with the provisions of this Agreement, Gwinnett County shall pay to the contractor, within 30 days of receipt by the County of any payment request based upon work completed or service provided pursuant to the contract, the sum so requested, less the retainage stated in this Agreement, if any. In the event that Gwinnett County fails to pay the contractor within 60 days of the County's receipt of a pay request based upon work completed or service provided pursuant to the contract, the County shall pay the contractor interest at the rate of 1/2 percent per month or pro rata fraction thereof beginning the 61st day following the County's receipt of the pay request. The contractor's acceptance of progress payments or final payment shall release all claims for interest on said payments. The provisions of this agreement are intended to supersede all provisions of the Georgia Prompt Pay Act as provided by law.

#### GC-74 RETAINAGE

Until the payment for Substantial Completion, the County shall withhold retainage in the amount of five percent (5%) from each progress payment. When Substantial Completion is achieved, retainage shall be paid to Contractor with the final payment in accordance with the terms of Section GC-82.

## GC-75 PAYMENT OF SUBCONTRACTORS

### GC-75.1 GENERAL

The Contractor shall promptly pay each subcontractor upon the receipt of payment from the County. Such payment shall be made from the amount paid to the Contractor pursuant to the subcontractor's work. The Contractor shall also maintain the records of the percentage retained from payments to the Contractor pursuant to such subcontractor's work. The Contractor shall procure agreements from each subcontractor requiring each subcontractor to pay their subcontractors, agents and employees in a similar manner.

### GC-75.2 SUBCONTRACTOR RETAINAGE RELEASE

Upon request by Contractor, the County may, in its sole discretion, permit an amount equal to the retainage associated with a subcontractor's work to be released from the retainage held by the County upon completion of the subcontractor's work. To request subcontractor retainage release, Contractor shall submit a written request to the County that (a) certifies the subcontractor's work is complete and specifies the amount of retainage withheld by Contractor, (b) contains a release of all claims by the subcontractor, and (c) is executed by the Contractor, subcontractor, and, if required by the County, the engineer.

### GC-76 COUNTY'S RESPONSIBILITIES TO SUBCONTRACTORS

Neither the County nor the Architect shall have any obligation to pay any subcontractor except as otherwise required by law.

### GC-77 PROGRESS PAYMENTS - ACCEPTANCE OF WORK

Certification of progress payments, as well as the actual payment thereof, shall not constitute the County's acceptance of work performed pursuant to this agreement.

### GC-78 PAYMENTS IN TRUST

All sums paid to the Contractor pursuant to this agreement are hereby declared to constitute trust funds in the hands of the contractor to be applied first to the payment of claims of subcontractors, laborers, and suppliers arising out of the work, to claims for utilities furnished and taxes imposed, and to the payment of premiums on surety and other bonds and on insurance for any other application.

### GC-79 JOINT PAYMENTS

The County reserves the right to issue any progress payment or final payment by check jointly to the Contractor and any subcontractor or supplier.

### GC-80 RIGHT TO WITHHOLD PAYMENT

The Architect may decline to approve payment and may withhold payment in whole or in part to the extent reasonable and necessary to protect the County against loss due to defective work, probable or actual third party claims, the Contractor's failure to pay subcontractors or materialmen, reasonable evidence that the work will not be completed within the contract time or contract price or damage to the County or any other contractor on the project.

### GC-81 CERTIFICATE OF SUBSTANTIAL COMPLETION

Upon the Contractor's submission of a request for a certificate of substantial completion, the Architect shall inspect the work and determine whether the work is substantially complete. If the work is substantially complete, the Architect shall issue a certificate of substantial completion of the work which shall establish the date of substantial completion, shall state the responsibilities of the County and the



Contractor for security, maintenance, heat, utilities, damage to the work and insurance, and shall fix the time within which the Contractor shall complete the items submitted by the Contractor as requiring correction or further work. The certificate of substantial completion of the work shall be submitted to the County and the Contractor for their written acceptance of the responsibilities assigned to them pursuant to such certificate.

#### GC-82 FINAL PAYMENT

##### GC-82.1 GENERAL

Upon Substantial Completion of the work and upon application by the Contractor and approval by the engineer, the County shall make payment reflecting adjustments and retainage for the work as provided in this agreement.

##### GC-82.2 AMOUNT TO BE WITHHELD

Upon receipt of an application for final payment, the engineer shall designate amounts to be withheld from the payment for incomplete work and/or defective work to be remedied. The amounts withheld shall equal 200 percent of the value of each item of incomplete work and defective work to be remedied. Such an amount shall be withheld until completion and remediation of such work.

##### GC-83 COMMENCEMENT OF WARRANTIES

Warranties required by this agreement shall commence on the date of final completion of the project unless otherwise provided in the certificate of substantial completion.

##### GC-84 FINAL PAYMENT - WAIVER OF CLAIMS

The acceptance of the substantial completion payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and identified by the Contractor as unsettled at the time of application for payment at substantial completion and except for the retainage sums due at final acceptance. Following the Architect's issuance of the certificate of substantial completion and the Contractor's completion of the work pursuant to this agreement, the Contractor shall forward to the Architect a written notice that the work is ready for final inspection and acceptance and shall also forward to the Architect a final application for payment. When the Architect finds the work acceptable and determines that the contract has been fully performed, the Architect shall issue a certificate for payment which shall approve final payment to the Contractor.

##### GC-85 DOCUMENTATION OF COMPLETION OF WORK

Neither the final payment nor the remaining retainage shall become due until the Contractor submits the following documents to the Architect:

- A. An affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the work have been paid other otherwise satisfied;
- B. The surety's consent to final payment; and
- B. Any other data reasonably required by the County or Architect establishing payment or satisfaction of all such obligations, including releases, waivers of liens, and documents of satisfaction of debts.

In the event that a subcontractor refuses to furnish a release or waiver as required by the County or Architect, the Contractor may furnish a bond satisfactory to the County to indemnify the County against

such loss. In the event that any lien or indebtedness remains unsatisfied after all payments are made, the contractor shall refund to the County all moneys that the County may become compelled to pay in discharging such lien or other indebtedness, including all costs and reasonable attorney's fees.

#### GC-86 GOVERNING LAW

Each and every provision of this agreement shall be construed in accordance with and governed by Georgia law. The parties acknowledge that this contract is executed in Gwinnett County, Georgia and that the contract is to be performed in Gwinnett County, Georgia. Each party hereby consents to the Gwinnett Superior Court's sole jurisdiction over any dispute which arises as a result of the execution or performance of this agreement, and each party hereby waives any and all objections to venue in the Gwinnett Superior Court.

#### GC-87 CHANGES AND EXTRA WORK

##### GC-87.1 AUTHORITY FOR CHANGES

The County may make changes in the Drawings or Specifications and in the quantities of Work to be done under the Contract.

##### C-87.2 CHANGE ORDERS

Without invalidating the Contract, the County may at any time or from time to time, by written order, order additions, deletions, or revisions in the Work related to the original scope of the Work. Change Orders will authorize these. Upon receipt of the Change Order, Contractor shall promptly proceed with the work involved. If any price or scope of the Work or an extension or shortening of the Contract Time is involved, an equitable adjustment will be made within the Change Order. In the event the Change Order increases the contract price, the penal amount of the Payment and Performance Bonds shall be increased as provided for in Section GC-15. All changes in the Work authorized by Change Order shall be performed under the applicable Conditions of the Contract Documents.

##### GC-87.3 WRITTEN NOTICE

The County may, at the request of the Contractor, issue interpretations, clarifications and other instructions as to the intent of the Contract Documents, in the form of Written Notices. The County may also, at any time, make changes in the details of the Work by issuance of a Written Notice. Upon receipt of such a Written Notice containing interpretations, clarifications and other instructions, Contractor shall proceed with the Work and comply with the Written Notice unless Contractor believes that such Written Notice entitles him to a Change in Contract Price or Time or both.

Should Contractor believe that such Written Notice entitles him to change in Contract Price or Time, or both, he shall give the County notice in writing thereof within seven (7) days after receipt of the Written Notice. Thereafter within thirty (30) days, Contractor shall document the basis for the change in Contract Price or Time. The County shall render a timely, written decision on the Contractor's request for a change in Contract Price or Time. Should the County determine that the Contractor is not entitled to a change in Contract Time or Price, the Contractor shall proceed as directed upon receipt of the County's decision. Failure to proceed shall constitute a breach of Contract and shall be a cause for the termination of the Contract. Request for a Change Order arising out of a Written Notice will not be considered without the attachment thereto of a copy of the referenced Written Notice. No claim by Contractor will be allowed if asserted after Final Payment under this Contract.

#### GC-87.4 EXTRA WORK

Extra work consists of new and unforeseen work determined by the County not to be covered by any of the various items for which there is a bid price or by combination of such items.

#### GC-87.5 VARIATION IN QUANTITIES

Wherever the estimated quantities of work to be done and materials to be furnished under this Contract are shown in any of the documents including the Proposal, they are given for use in comparing bids and the right is especially reserved except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by County to complete the Work contemplated by this Contract, and such increase or diminution shall in no way vitiate this Contract, nor shall any such increase or diminution give cause for claims or liability for damages.

#### GC-88 CHANGE ORDERS

##### GC-88.1 GENERAL

The Contract Price may only be changed by a Written Change Order. Each change will be set forth in a Change Order prepared by the County and approved by County. Change Orders will specify (a) all additional work to be done and work to be omitted, if any, in connection with the change; (b) the basis of compensation to the Contractor for additional or omitted work; and (c) any adjustment of the time of completion of the Work. If the County determines that a change requiring additional work will cause delay in completion of Work, he will grant an equitable time extension for the changed work, or a subsequent Change Order may be issued at such time as the extent of such delay can be determined.

Upon receipt of a Change Order, Contractor shall comply therewith and perform each item of work set forth therein, furnishing all labor, material, and equipment necessary therefore, in the same manner as if such work were originally included in the Contract. In the absence of a Change Order, Contractor shall not be entitled to payment or an extension of the time of completion on account of any changes made.

##### GC-88.2 METHODS OF PAYMENT

The value of any work covered by a Change Order or any claim for an increase or decrease in the Contract Price shall be determined by the following method which is most advantageous to County, as determined by the County:

- A. Where the work involved is covered by unit prices contained in Contract Documents, by application of unit prices to the quantities of the items involved.
- B. By mutual acceptance of a lump sum, based on a detailed breakdown of anticipated costs plus Contractor's fee for overhead, small tools, and profit.
- C. On the basis of the actual cost of the work plus a Contractor's fee for overhead, small tools and profit. This method of payment is herein referred to as force account work. Contractor's fee for force account work performed by his own forces shall be twenty percent (20%) for direct labor and payroll burdens; five percent (5%) for all purchased material; and Contractor's fee for subcontracted work shall be as defined hereinafter.

##### GC-88.3 LUMP SUM CHANGE ORDER WORK

Contractor shall prepare an estimate of all extra and deleted work as described by Written Notice, using established unit prices where they are stated in the Bidding Documents. Estimates for labor, bonds,

insurance, materials, and equipment required shall otherwise be based on the provisions set forth hereinafter.

GC-88.4 CHANGE ORDERS LIMITED

Except as provided herein, no order, statement or conduct of the County or the Construction Program Manager shall be treated as a "Change Order" or entitle the Contractor to any adjustment hereunder of the Contract Price or Contract Time.

GC-88.5 NO WORK STOPPAGE

Nothing in this Article shall excuse the Contractor from proceeding with the Contract as changed.

GC-88.6 CONTRACT AMENDMENT

The amount payable to the Contractor under the Contract, the Contract Time, and the date required for performance of any part of the Work may be changed only by a Change Order to the Contract.

GC-89 FORCE ACCOUNT WORK

Force account work is an Owner-defined emergency, a sudden or unforeseen failure or malfunction of an existing system, which results in the Contractor being obligated to respond to the site of the emergency as Owner-directed. Contractor may perform work on a force account basis and will be paid for properly allocated charges which may include labor, bond premium, supplies and materials, equipment and subcontract billings, incurred in the performance of such force account work as more particularly described below:

- A. Labor: All labor shall be billed at the hourly rates specified in the bid. Regular rates will apply during normal business hours, defined as Monday through Friday, 7 a.m.–5 p.m. Overtime rates will apply during non-normal business hours. If premium rates apply, then overtime rates shall be defined as Monday through Friday, 5 p.m.–8 p.m. Accordingly, premium rates, if applicable, shall be defined as Monday through Saturday, 8 p.m.–7 a.m., all hours on Sundays and all County recognized holidays. A foreman shall not be used where there are fewer than two (2) laborers employed, except with the written consent of the County. Subsistence and travel allowance where required by collective bargaining agreements shall be included.

The charges for labor shall include all classifications through foremen when engaged in the actual and direct performance of the Work. They shall not include charges for such overhead personnel as assistant superintendents, superintendents, office personnel, timekeepers, and maintenance mechanics.

- B. Bonds and Insurance: For bonds and insurance premiums or increases thereto necessitated by the force account work, Contractor shall receive the actual cost to which no percent shall be added. Contractor shall furnish satisfactory evidence of the rate or rates paid for such bond and insurance.
- C. Materials: For materials accepted by the County and used as an integral part of the finished Work, Contractor shall receive the actual cost of such materials delivered on the Work, including transportation charges paid by him, exclusive of machinery rentals as hereinafter set forth.

If materials are procured by Contractor by a method which is not a direct purchase from and a direct billing by the actual supplier, the cost of such materials shall be deemed to be the lowest current wholesale price at which such materials are available in the quantities concerned and delivered to the site of the Work.

For other materials used in the construction which are not an integral part of the finished Work, such as, but not limited to, sheeting, false work and form lumber, Contractor shall be reimbursed in the amount agreed upon by the County before such work is begun. The salvage value of such material will be taken into consideration in determining the amount of reimbursement.

D. Equipment: Contractor will be paid for the use of Contractor owned or rented equipment at seventy percent (70%) of the suggested monthly rental rates listed for such equipment in the Blue Book Rental Rates for Construction Equipment (published by Equipment Guide-Book Company of Palo Alto), except as modified below, which edition shall be the latest edition in effect at the time of commencement of the force account work. Hourly rental rates shall be calculated by dividing the listed monthly rates as modified above by 176 hours. The rental rate for equipment used in excess of eight (8) hours per day shall be at the rate of fifty percent (50%) of the hourly rates as calculated above. The rental rates for standby equipment, when authorized by the County, shall be at the rate of fifty percent (50%) of the hourly rate for equipment in use eight (8) hours per day. No payment of rentals for standby equipment will be made for more than eight (8) hours per working day and no payment will be made for weekend days or holidays. If it is deemed necessary by Contractor to use equipment not listed in the applicable edition of the Blue Book Rental Rates, Contractor shall furnish the necessary cost data and paid invoices to the County for its use in establishment of such rental rate(s). Equipment must be in good operating condition. The rental rates paid as above provided shall include the cost of fuel, oil, lubricants, supplies, small tools, necessary attachments, repairs and maintenance of all kinds, depreciation, storage and insurance. Equipment operators will be paid for as stipulated herein.

The rental time to be paid for equipment on the Work site shall be the time the equipment is required for the force account work being performed. The time shall include the time required to move the equipment to the location of the force account work and return it to the original location or to another location requiring no more time than that required to return it to its original location. Moving time will not be paid if the equipment is used at the site of the force account work on other than such force account work. Loading and transporting costs will be allowed, in lieu of moving time, when the equipment is moved by means other than its own power. No payment for loading and transporting will be made if the equipment is used at the site of the force account work on other than such force account work. Compensation will not be allowed while equipment is inoperative due to breakdown.

For the use of equipment moved in on the work and used exclusively for work paid for on a force account basis, providing the County has agreed to said move, Contractor will be paid the equipment use rates provided for in this clause, for the cost of transporting the equipment to the location of the work and its return to its original location, and for the cost of loading and unloading the equipment, all in accordance with the following provisions:

- (1) The cost of transporting equipment shall not exceed the applicable minimum established rates by the State of Georgia Public Service commission.
- (2) The equipment use period shall begin at the time the equipment is unloaded at the site of the force account work, shall include each day that the equipment is at the site of the force account work, excluding Saturdays and Sundays and other legal holidays unless the force account work is performed on such days, and shall terminate at the end of the day on which the County instructs Contractor to discontinue the use of such equipment. The maximum time to be paid per day will not exceed eight (8) hours unless the equipment is in operation for a longer time.

- E. Subcontract Work: Where the Change Order applies to work being performed under a subcontract, reimbursement, including the fee for small tools, overhead and profit for the subcontractor's work performed on a force account basis shall be computed in precisely the same manner as if performed by Contractor as indicated herein. One additional allowance of five percent (5%) of the subcontractor's total costs will be granted to Contractor for overhead and profit regardless of the tier of the subcontractor. If the subcontractor elects to contract out change order work to a third (or lower) level contractor or supplier of purchased equipment, he shall not be entitled to fees, overhead or profit for such third (or lower) level work or materials. The County reserves to right to direct the Contractor to contract directly with third (or lower) level subcontractors and suppliers of purchased equipment in order to avoid paying multiple fees, overhead and profit for such third (and lower level) subcontractors and suppliers of purchased equipment. If similar work is not being performed at the Work site, and if required by County, Contractor shall obtain three (3) competitive bids for the requirements of the Change Order and the Contract Documents from Subcontractors acceptable to the County. Selection of the Subcontractor shall be subject to the approval of the County.
- F. Compensation: The compensation as set forth above shall be received by Contractor as payment in full for work done on a force account basis. At the end of each day, Contractor's Representative and Inspector shall compare records of the Work performed including classification of all laborers, ordered on a force account basis.
- G. Statements: No payment will be made for work performed on a force account basis until Contractor furnishes the County itemized statements of the cost of such force account work detailed as to the following:
- (1) Labor - name, classification, date, daily hours, total hours, rate, and extension of each laborer and foreman.
  - (2) Equipment - size, type, identification number, dates, daily hours, total hours, rental rate, and extension of each unit of machinery and equipment.
  - (3) Materials - quantities of supplies and materials, prices, including transportation cost and extensions.
  - (4) Bonds and insurance premiums.
  - (5) Subcontract work - force account detail as above, or progress quantities and prices of unit price or lump sum subcontracts.
  - (6) Payments for items under paragraphs (a) to (f) inclusive shall be conditioned upon Contractor's presentation of original receipted invoices for materials used and transportation charges. If, however, the materials used in the force account work are not specially purchased for such work but are taken from Contractor's stock, then in lieu of the original invoices, the statements shall contain or be accompanied by an affidavit of Contractor which shall certify that such materials were taken from his stock, that the price and transportation of the material as claimed represent actual cost.
- H. If, in the County's opinion, Contractor or any of his subcontractors, in performing force account

work, are not making efficient use of labor, material, or equipment and/or are proceeding in a manner which is expensive to the County, the County may request the Contractor to make more efficient use of labor, material and equipment. Contractor shall in good faith comply with such requests as are reasonable. If the Contractor fails to comply with such requests, the County may independently determine the reasonable cost of the work and the Contractor will be entitled only to the reasonable cost so estimated by the County.

#### GC-90 DISAGREEMENT WITH ORDERS FOR CHANGE

Contractor's written acceptance of a Change Order or other order for changes shall constitute his final and binding agreement to the provisions thereof and a waiver of all claims in connection therewith, whether direct or consequential in nature. Should Contractor disagree with any order for changes, he may submit a notice of potential claim to the County, at such time as the order is set forth in the form of a Change Order. Disagreement with the provisions of an order for changes shall not relieve Contractor of his obligation under Clause GC-88, Change Orders.

#### GC-91 CHANGED CONDITIONS

Contractor shall notify the County in writing of the following conditions, hereinafter called "changed conditions," promptly upon their discovery and before they are disturbed:

- A. Subsurface or latent physical conditions at the site of Work differing materially from those represented in this Contract; or
- B. Unknown physical conditions at the Site of the Work of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract.

The County will promptly investigate conditions of which it is so notified or conditions discovered by it which appear to be changed conditions, and will, as soon as practicable, issue appropriate orders or instructions. If the County determines that the conditions materially differ and that they will materially increase or decrease the costs of any portion of Work, it will issue a Change Order adjusting the compensation for such portion of Work.

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## SECTION 01 01 00

## SUMMARY OF WORK

## PART 1 – GENERAL

## 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and other Division 1 Specifications Sections apply to this Section.

## 1.02 SUMMARY

- A. Section Includes:
1. Project description
  2. Summary by reference
  3. Other contracts

## 1.03 PROJECT DESCRIPTION

- A. Briefly and without force and effect on other requirements of the Contract Documents, the Project of the Contract can be described in summary as follows:

**The scope of this Project includes, but is not limited to, relocation and replacement of the existing overhead coiling doors and dock levelers. This will include modifications to the existing metal stud and CMU veneer exterior wall and associated electrical and plumbing systems. Refer to Drawings.**

- B. Work Included: The intent and meaning of the Contract Documents is that the Contractor, under the General Conditions and other terms of the Contract, shall take all actions necessary and required to provide all labor, plant, materials, supplies, equipment, transportation, facilities, and appurtenances which are indicated or implied by each drawing within the Drawings and each section of the Specifications, all of which are collectively necessary and required for the demolition of the described Project.

## 1.04 SUMMARY BY REFERENCE

- A. The Work can be summarized by reference to the requirements of all of the various elements of the Contract Documents, which in turn make references to the requirements of other applicable provisions which control or influence the Work; and these references can be summarized by but are not necessarily limited to the following:
1. Executed Owner & Contractor Agreement
  2. General Conditions
  3. Drawings as listed on the Index of Drawings located on the first sheet of Drawings prepared by Lindsay Pope Brayfield & Associates, Inc. (LPB)
  4. Specifications in Project Manual
  5. All Addenda to the Contract Documents issued prior to bid.
  6. All Modifications to the Contract Documents made in accordance with the General Conditions and Specifications.
  7. Statutory requirements and governing regulations which have a bearing on the performance of the Work.
  8. Contractor submittals required by the Contract Documents.

1.05 OTHER CONTRACTS

- A. *Separate prime contracts are not anticipated on this Project, but may be awarded for other work on the Project or the Owner may undertake such work directly. The Contractor should be prepared to coordinate with the Owner if such work does occur. Work expected to run concurrently with the Owner & Contractor Agreement for general demolition.*

*PART 2 – PRODUCTS (Not Used)*

*PART 3 – EXECUTION (Not Used)*

*END OF SECTION 01 01 00*

## SECTION 01 01 10

## PROJECT PHASING

## PART 1 - GENERAL

## 1.01 RELATED DOCUMENTS

- A. *Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.*

## 1.02 SUMMARY

- A. *This Section includes the following:*
1. *Work phases.*
  2. *Use of premises.*
  3. *Owner's occupancy requirements.*
  4. *Work restrictions.*
  5. *Maintaining Active Permits*
  6. *Utilities*
  7. *Cost of Phased Scope*
- B. *Related Sections include the following:*
1. *Division 1 Section "Summary of Work"*
  2. *Division 1 Section "Temporary Facilities, Controls and Services"*
  3. *Division 2 Section "Selective Demolition"*

## 1.03 WORK PHASES

- A. *The Work shall be carried out on a existing building that will be occupied and operational during construction.*
- B. *The Work shall be conducted in multiple phases to provide the least possible interference to Owner's operations and activities, provide access to work areas, protect building interior during construction and to permit an orderly progression and completion of the Work. Each phase shall be complete to Owner's satisfaction prior to beginning the next phase.*
1. *Scope of phasing:*
    - a. *One Dock Leveler and Overhead Door must remain operational throughout the duration of construction, during the hours of operation which are 6 a.m. to 2 p.m.*
    - b. *No construction activities can take place on the following dates; 3/28/24, 6/6/24, 9/12/24 or 12/5/24.*
  2. *Install scaffolding with temporary weather enclosures for access to phase area and weather protection of building during construction.*
  3. *Phasing locations will be coordinated with Owner's operations at building.*
  4. *Temporary fencing shall be used as required for protection of the public during construction.*
- C. *Before commencing Work of each phase, submit a detailed schedule showing the sequence, commencement and completion dates for Owner review and approval. Contractor shall not begin work for a particular Phase until they have fully coordinated the schedule with Owner's operation and received approval for such schedule.*

- D. Contractor shall fully coordinate all Phases with Owner during construction.

#### 1.04 USE OF PREMISES

- A. General: Contractor shall have limited use of the site for construction operations as indicated on Drawings to allow Owner's occupancy.
- B. Use of Site: Limit use of premises to a particular Phase indicated. Do not disturb portions of Project site beyond indicated Phase area.
1. Allow for Owner occupancy of Project site and use by the public.
  2. Maintain safe circulation adjacent to construction site. Provide safety barriers, flagging and signage as required.
  3. Drives and Entrances: Keep drives and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
    - a. Schedule deliveries to minimize use of drives and entrances.
    - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
  4. Take all necessary precautions to prevent dust and debris from collecting on and/or penetrating air intakes during all phases of work.
- C. Use of Existing Building: Maintain existing building in a weather tight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.

#### 1.05 OWNER'S OCCUPANCY REQUIREMENTS

- A. Owner Occupancy: Owner will occupy the premises during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits, unless otherwise indicated.
1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
  2. Provide not less than seven (7) calendar days' notice to Owner of activities that will affect Owner's operations.

#### 1.06 MAINTAINING ACTIVE PERMITS

- A. **General Contractor shall maintain active permits on all structures throughout the duration of the entire Project. Any permits that expire will be the responsibility of the Contractor to reactivate and any costs associate with re-activation requiring Architect or Engineer participation shall be compensated by the Contractor through the Contract with the Owner by Change Order.**

#### 1.07 UTILITIES

- A. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
1. Notify Architect and Owner not less than seven (7) calendar days in advance of proposed utility interruptions.

2. Do not proceed with utility interruptions without Owner's written permission.

1.08 COSTS OF PHASED SCOPE

- A. The Contractor shall be aware of the costs associated with multi-phased construction. The costs of delayed phases of construction shall be included in the Contractor bid. No costs will be considered with regard to Contractor's speculation or projection of costs. Necessary precautions shall be taken to perform the work in the prescribed phases in the Contract Documents.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 01 10

## SECTION 01 12 00

## CONTRACT RESPONSIBILITIES

## PART 1 – GENERAL

## 1.01 RELATED DOCUMENTS

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

## 1.02 RESPONSIBLE PARTIES

- A. The term "Owner" or "County" used in these documents means the Project Manager or Owner Representative.
- B. The term "Architect" used in these documents means Architect, Engineer or other consultants under contract with the Architect.
- C. The term "Contractor" used in these documents means the General Contractor, their employees or those under contract to do work on their behalf. (Note: Contractor may also mean Construction Manager)
- D. At the time of Advertisement, the Project Manager and Owner Representative is:

Travis Tallant  
75 Langley Drive  
Lawrenceville, GA 30046  
[travis.tallant@gwinnettcounty.com](mailto:travis.tallant@gwinnettcounty.com)  
[www.gwinnettcounty.com](http://www.gwinnettcounty.com)

## 1.03 SUMMARY

- A. Owner reserves the right to furnish equipment, perform work and award other contracts in addition to general construction contract. This Section itemizes known coordination items. Project Coordination Section indicates Contractor's responsibilities under these conditions. The Owner will have items prepared for pick-up or delivered to the site per the Construction Schedule.
- B. Exclude from Contract Sum items specifically identified in the following schedule as purchased/provided by Owner or purchased/provided and installed by Owner. Where Contractor has responsibility for installation of an Owner purchased/provided item, include in Contract Sum all costs associated with complete installation of the item and necessary coordination with the Owner.
- C. Items provided to Contractor by the Owner are in good repair and working order.
1. Inspect items at time of delivery; immediately notify Owner of any damage.
  2. Items not identified as "damaged" at the time of delivery or pickup are the complete responsibility of the Contractor and shall be maintained without damage through Substantial Completion.
  3. Repair or replace immediately items not identified as "damaged" at time of delivery and damaged prior to Date of Substantial Completion.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 SCHEDULES

<i>Item</i>	<i>Contractor Responsibilities</i>	<i>Owner Responsibilities</i>
<i>B. Permits and Fees</i>	<i>Pay all fees not paid by Owner.</i>	<i>N/A</i>
<i>C. Utilities</i>	<i>N/A</i>	<i>N/A</i>

END OF SECTION 01 12 00

## SECTION 01 25 00

## PROCEDURES FOR CONTRACT MODIFICATIONS

## PART 1 – GENERAL

## 1.01 RELATED DOCUMENTS

- A. *Drawings and general provisions of the Contract, including General Conditions and other Division 1 Specification Sections, apply to this Section.*

## 1.02 SUMMARY

- A. *Change Proposal Request*
- B. *Change Proposal*
- C. *Change Order/Supplemental Agreement*
- D. *Time and Materials Work*
- E. *Architect's Field Directives*

## 1.03 DEFINITIONS

- A. *Change Proposal Request: Any written request from the Owner or Architect to the Contractor for a quotation, price or cost breakdown on a change that is proposed but not yet ordered.*
- B. *Change Proposal: Any written proposal from the Contractor to the Owner or Architect setting forth a change in the Scope of Work and the effect of such change on Contract Time and/or Contract Sum.*
- C. *Change Order: A written order to the Contractor, prepared by the Architect and issued by the Owner, for directing changes in the Scope of Work of the Contract, adjustments in the Contract Sum, and/or extensions of Contract Time. When executed by all parties, this item, also referred to herein as a Supplemental Agreement to the Contract, is an amendment to the Contract.*
- D. *Modifications: Include Change Orders (Supplemental Agreements to the Contract) prepared by the Architect and signed by the Owner and Contractor; written field directives issued by the Architect to the Contractor, which change the Scope of Work and may affect Contract Sum, but are necessary because of situations described elsewhere in this section; and written orders issued by the Architect for minor changes in the Work with no cost or schedule implications.*
- E. *Time and Material Work: Work which will be paid for on the basis of the actual costs including materials, labor, equipment and other expenses defined elsewhere herein and documented by detailed records. Also referred to as force account. Refer to GC-89.*



## PART 2 – PRODUCTS (Not Used)

## PART 3 – EXECUTION

## 3.01 CHANGE PROPOSAL REQUEST

- A. *The Change Proposal Request is the method by which Owner directed changes in the Scope of work are initiated. These requested changes may originate with the Owner or Architect, may be responses to unexpected site conditions, or may be responses to issues raised by the Contractor through its requests for information or document clarifications.*
- B. *Change Proposal Requests are not directions to change the Work.*
- C. *Unless specified differently on the Change Proposal Request, the Contractor will be expected to respond to all requests within five (5) calendar days of receipt.*

## 3.02 CHANGE PROPOSAL

- A. *The Contractor will submit Change Proposals in response to Change Proposal Requests, in response to Architect's field directives as applicable, in accompaniment of substitution requests, and as follow up to previously filed claims for extra cost or time.*
- B. *Every Change Proposal shall include the following information as applicable:*
  - 1. *The amount of change in the Contract Sum, if any.*
  - 2. *The amount of change in the Contract Time, if any. The change in Contract Time shall be explained relative to the approved Construction Schedule and shall be justified in terms of the critical path of the Work and the requirements of the Contract. A Fragnet schedule is required to be submitted to verify any extension of Contract Time.*
  - 3. *Cost breakdowns detailing the applicable work items and inclusive of quantities and unit prices for labor, materials cost with invoices or proposals to substantiate costs, products, equipment usage with invoices or proposals to substantiate costs, expenses for bonds, insurance and taxes; and overhead and profit. **Contractor's subcontractor and second tier subcontractor expenses shall be presented at the same level of detail.***
  - 4. *The period of time within which the proposed changes in Contract Sum or Time will be valid, but no less than 30 calendar days from the time an acceptable Change Order has been submitted.*
  - 5. *A statement describing the effect the change may have on the work of other prime contractors or the Owner.*
- C. *Fees for administration, overhead and profit shall be limited to **15%** for the Contractor or Contractor's subcontractor performing the work. On work performed by Contractor's subcontractor, the Contractor may markup said work for purposes of administration, overhead and profit by no more than **5%**. On work performed by a second tier subcontractor, the Contractor's subcontractor may markup said work for purposes of administration, overhead and profit by no more than **5%**; the Contractor shall not mark up the work of second tier subcontractors by more than **5%**.*

*The maximum total allowable cost to Owner shall be the cost of the Work plus a maximum collective aggregate fee for the Contractor and all tiered subcontractors of **25%**.*

- D. *The Contractor shall not place a reservation on a Change Proposal that holds open the Contractor's right to claim additional costs for indirect or impact damages related to the change such as alleged costs for disruption, interference, delay, acceleration or remobilization.*
- E. *If the Change Proposal is related to a claim for additional cost or time, Contractor shall indicate the origin and date of the initial claim notice and detail the basis of the claim and the associated costs.*
- F. *General Conditions may not be charged for change order work, unit prices or delays unless authorized by the Owner prior to the work.*

### 3.03 CHANGE ORDER/SUPPLEMENTAL AGREEMENT

- A. *A Change Order or Supplemental Agreement is the only instrument by which the Contract can be modified to increase or decrease the Contract Sum or Contract Time. For a Change Order to be effective, it must be executed by the Owner and Contractor. The cost basis of a Change Order may be a lump sum, unit prices, or time and materials, also referred to as force account. Lump sum changes must be supported by the cost breakdowns required by the Change Proposal.*

### 3.04 TIME AND MATERIALS WORK

- A. ***When no agreement is reached for extra work to be done at lump sum or unit prices, such work may be authorized by the Owner to be done on a Time and Material basis. A Time and Materials estimate that identifies all anticipated costs shall be prepared by the Contractor on forms provided by the Architect. Work shall not begin until the Time and Materials account is approved by the Architect. Payment for Time and Materials work will be in accordance with the following:***
  1. *Labor: For all labor, equipment operators and supervisors, excluding superintendents, in direct charge of the specific operations, the Contractor shall receive the rate of wage agreed to for all hours the designated labor, equipment operators and supervisors are actually engaged in the work. The Contractor shall receive the actual costs paid to the workers inclusive of wages, allowances, health and welfare benefits and pension fund benefits.*
  2. *Bond, Insurance and Tax: For property damage, liability, and worker's compensation insurance premiums, unemployment, insurance contributions, and social security taxes on the Time and Materials work, the Contractor shall receive the actual cost.*
  3. *Materials: For materials and products incorporated in the Work and accepted by the Architect, including Contractor paid freight or shipping expenses, the Contractor shall receive the actual cost.*
  4. *Equipment: For any machinery or special equipment (other than small tools), the use of which is essential to the work and approved by the Architect, the Contractor shall receive fair market rental rates for the actual time that such equipment is in operation on the Work or required to stand by.*
  5. *Overhead and Profit: On the total of all costs described above, the Contractor will be allowed to add, as compensation for administration, overhead and profit at the rate stipulated in the General Conditions Section GC-88.2 Paragraph C.*
  6. *Miscellaneous: No additional allowance will be made for general requirements costs, superintendence, use of small tools or other costs for which no specific allowance is herein provided.*

7. *Subcontract Time and Material Work: For work performed by Contractor's subcontractor or second tier subcontractor, all provisions of this section that apply to the Contractor in respect to labor, materials and equipment shall govern. The Contractor shall coordinate the work of its subcontractors and will be allowed an amount to cover administrative costs and profit equal to 5% of the subcontractor's amount earned. Mark-up for second tier subcontractor work will be limited to 5% of the amount earned.*
8. *Compensation: The Contractor shall maintain records on the cost of all work performed each day as ordered on a Time and Material basis and shall provide such records to the Architect.*
9. *Statements: No payment will be made on work performed on a Time and Material basis until the Contractor has furnished the Architect with itemized statements of the cost of such Time and Materials work detailed as follows:*
  - a. *Name, classification, date, daily hours, rate and extension for each laborer, equipment operator and supervisor.*
  - b. *Cost of property damage, liability and worker's compensation insurance premiums, unemployment insurance contributions and social security tax.*
  - c. *Quantity of materials, prices and extensions.*
  - d. *Designation, dates, daily hours, total hours, rental rate and extension for each unit of machinery and equipment.*

*Statements shall be accompanied and supported by invoices for all materials used, including evidence of transportation charges and taxes. However, if materials used on Time and Materials work are not specifically purchased for such work but are taken from the Contractor's stock, then in lieu of the invoices, the Contractor shall furnish an affidavit certifying that such materials were taken from stock, that quantity claimed was actually used, and price claimed represents actual cost to the Contractor.*

### 3.05 ARCHITECT'S FIELD DIRECTIVES

- A. *The Architect may issue written field directives to the Contractor, which may change the Scope of Work and may affect Contract Sum, but are necessary because of any of the following reasons:*
  1. *Situations that threaten life and safety*
  2. *The need to address unknown conditions at the site of the Work*
  3. *The need to maintain the timely and orderly sequencing of the Work.*
- B. *The Contractor shall proceed with the work requested in such field directives. If there is a cost associated with such work, Contractor shall submit a Change Proposal as described herein. These costs, when mutually acceptable to the Owner and Contractor, shall be incorporated into the Contract by Change Order.*

END OF SECTION 01 25 00

## SECTION 01 29 00

## PROCEDURES FOR PAYMENT APPLICATIONS

## PART 1 – GENERAL

## 1.01 RELATED DOCUMENTS

- A. *Drawings and general provisions of the Contract, including General Conditions and other Division 1 Specifications Sections, apply to this Section.*

## 1.02 SUMMARY

- A. *Section specifies administrative and procedural requirements governing Contractor's Applications for Payment and includes:*
  - 1. *Schedule of Values showing separate site improvement items*
  - 2. *Applications for payment*
  - 3. *Procedures for first payment*
  - 4. *Procedures for payment application at Substantial Completion*
  - 5. *Procedures for payment application at Final Completion*

## 1.03 DEFINITIONS

- A. *Schedule of Values: A detailed breakdown of the Contract Sum into individual cost items that will serve as the basis for evaluation of applications for progress payments made during construction.*

## PART 2 – PRODUCTS (Not Used)

## PART 3 – EXECUTION

## 3.01 SCHEDULE OF VALUES

- A. *Use only the Schedule of Values as the basis for the Contractor's Application for Payment.*
- B. *Correlate the Schedule of Values with other administrative schedules and submittals including:*
  - 1. *Contractor schedule*
  - 2. *List of subcontractors*
  - 3. *Schedule of alternates*
  - 4. *List of principal suppliers and fabricators*
  - 5. *Schedule of submittals*
- C. *Prepare a Schedule of Values on AIA Document G-703 "Continuation Sheet" and submit it to the Architect for review no later than ten (10) calendar days prior to the submission of the first Contractor's Application for Payment. Submit via e-Builder® and identify with the names of the Project, Architect, Owner, and Contractor and the date of submittal.*

- D. *In preparing the Schedule of Values, break down costs into line items for which the Contractor wishes to receive payment in the application for payment. Schedule of Values shall include sufficient detail to allow the Architect to estimate the percentage (%) complete. Coordinate the line items in the schedule of values with the units or subdivisions of work identified in the Specifications and reference those section numbers from the Specifications. Further divide major work subdivisions and subcontractors into individual cost items. Include in each line item its proportional share of overhead and profit.*
- E. *Costs for General Requirements shall be identified separately and shall be itemized so that costs are identified for the following general items at a minimum:*
1. *Performance and Payment Bonds*
  2. *Engineering and Layout*
  3. *Temporary Facilities and Services*
  4. *Final Cleaning*
  5. *Use of e-Builder® project management software and site for all correspondence and project document and communications including all project submittals, RFI's, ASI's, Payment Applications, and other project correspondence. This site will be used for the duration of the project and will serve as the primary means of distribution of project submittals. There will be exceptions such as samples and shop drawings, and these will be considered as a case by case basis and will be handled as mutually agreed upon with the Owner, Architect, and Contractor. There are no fees associated with this software, and further clarification will be provided during the preconstruction meeting with the successful bidder.*
- F. *Where applications for payment are likely to include products purchased or fabricated but not yet installed, provide individual line items for material cost, installation cost, and other applicable phases of completion. Place cost of production materials delivered and unloaded at Project site with taxes paid under Column F, G-703. List total installed cost, with overhead and profit, under Column C, G-703.*
- G. *For each line item indicate the dollar value to the nearest **whole dollar**. Indicate the proportion of the Contract Sum represented by this item to the nearest one-hundredth percent.*
- H. *Unit Price Values: Submit a sub-schedule of unit prices and quantities for items of Work identified in the Bidding Form (specification Section 000410) under Unit Prices. The form of submittal shall parallel that of the Schedule of Values, and the installed unit value multiplied by the quantity listed shall equal the cost of that item in the Schedule of Values. The standards and procedures for payment of Unit Price Items are described in Specification Section 01 27 00.*
- I. *The Architect will review the Schedule of Values and determine its acceptability. Contractor shall revise and resubmit an acceptable schedule based on review comments from Architect and Owner.*
- J. *Submit a revised Schedule of Values when modifications change the Contract Sum or individual line items. Make each modification a new line item and show all information for that line item required for the original submittal.*

### 3.02 APPLICATIONS FOR PAYMENT

- A. Detailed requirements for processing Applications for Payment are outlined below and will be discussed in further detail at the preconstruction conference
- B. Prepare and submit Applications for Payment in **e-Builder®** and on Application and Certification for Payment, AIA Document G-702. Include the Schedule of Values modified in format to enable indications of the value of work completed in the application period and for the Contract period. Base the initial application on the accepted Schedule of Values and make all other applications consistent with previous applications as certified and paid.
1. Submit one (1) initial draft of the pay application to the Owner and Architect, though **e-Builder®** with in five (5) calendar days of the date of the Application of Payment to coincide with the monthly project meeting for initial review. **All pay applications must be submitted to the County Disbursements department at [disbursements@gwinnettcounty.com](mailto:disbursements@gwinnettcounty.com) in conjunction with submission to e-Builder®.**
  2. Include amounts of Contract modifications fully executed before end of application period. Do not bill for claims or proposals that have not been officially accepted by the Owner.
  3. If billing for materials stored on site, attach legible copies of relevant receipts and documentation. Billing for materials stored off-site, shall not be allowed unless approved by the Owner.
  4. Provide the Purchase Order number issued for the contract on the AIA Document G-702.
  5. The Contractor shall prepared and maintain a Fixed Assets Log as part of the Contract Documents. The Contractor is required to complete all columns of the Fixed Asset Log sample, included at the end of Section 01 77 00 Contract Close-Out, for any piece of equipment with a value of \$5,000.00 or greater. The Contractor is to provide the updated Fixed Assets Log once a month along with the Payment Application. This completed log should be submitted through **e-Builder®** in Microsoft Excel (xls) format at the end of the project.
  6. The Contractor shall prepare and submit an Interim Release of Lien with each Application for Payment.
  7. **Gwinnett County does not provide pre-payment or down payment for services or materials not already performed or provided.**
- C. Provide the following information with every application for payment which involves work completed on a time and material basis:
1. Detailed records of work done, including:
    - a. Dates and times work was performed, and by whom.
    - b. Time records and wage rates paid.
    - c. Invoices and receipts for products.
    - d. Provide similar detailed records for subcontracts.
    - e. No later than five (5) calendar days prior to the date of the application for Payment, submit a draft of the application for the review by the Architect. Coordinate this submission and subsequent review with Architect's monthly inspection of the Work in place to determine the acceptability of the proposed application. Make any changes of requested by Architect in his review and resubmit the Application for Payment, to the Architect signed, notarize and with a transmittal form itemizing attached documentation.

3.03 PROCEDURES FOR FIRST APPLICATION FOR PAYMENT

- A. **The first Application for Payment will not be reviewed until the following submittals from the Contractor have been received and accepted by the Architect or Owner as applicable:**
1. **Schedule of values.**
  2. **Contractor's construction schedule per Specification Section 01 32 00.**
  3. **Submittal schedule.**
  4. **List of subcontractors and principal suppliers and fabricators.**

3.04 PROCEDURES FOR PAYMENT APPLICATION AT SUBSTANTIAL COMPLETION

- A. *Administrative actions and submittals that shall precede or coincide with the Application for Payment include:*
1. *Approval of work performed at Stormwater Management Pond.*
  2. *Issuance and execution of Certificate of Substantial Completion inclusive of list of incomplete Work recognized as exceptions to the Certificates.*
  3. *All submittals and deliverables specified in the Contract Documents to be completed before Substantial Completion.*

3.05 PROCEDURES FOR PAYMENT APPLICATION AT FINAL COMPLETION

- A. *Administrative actions and submittals that shall precede or coincide with this Application for Payment include:*
1. *Completion of Closeout Procedures in Section 01 77 00, Part 1.05.*

END OF SECTION 01 29 00

## SECTION 01 31 00

## PROJECT COORDINATION

## PART 1 – GENERAL

## 1.01 RELATED DOCUMENTS

- A. *Drawings and other general provisions of the Contract, including General Conditions and other Division 1 Specification Sections, apply to this Section.*

## 1.02 SUMMARY

- A. *This section specifies administrative and supervisory requirements necessary for coordination of the Work for the duration of construction, but not necessarily limited to:*
1. *Coordination*
  2. *Administrative and supervisory personnel*
  3. *General installation provisions*
  4. *Cleaning and protection*

## 1.03 COORDINATION

- A. *Coordination Among Trades: Contractor shall coordinate construction activities included under the Drawings and various sections of these Specifications to insure efficient and orderly construction operations included under different sections of the Specifications that are dependent upon each other for proper installation, connection, and operation.*
1. *If necessary, inform each party involved, in writing, of procedures required for coordination; including requirements for giving notice, submitting reports, and attending meetings.*
  2. *Where installation of one part of the Work is dependent on installation of other components, either before or after its own installation, schedule construction activities in the sequence required to obtain the best results.*
  3. *Where availability of space is limited, coordinate installation of different components to insure maximum accessibility for later installations and for required maintenance, service and repair.*
    - a. *Where limited available space may cause conflicts in the locations of installed products, and where required to coordinate installation of products and materials, prepare coordination Drawings. Said coordination Drawings shall show plan and cross-section dimensions of the available space and include obstructions caused by structural and systems elements.*
    - b. *Coordinate shop Drawings and other submittals prepared by Contractor's subcontractors, suppliers and other entities to facilitate installation of products and systems and avoid field conflicts in the Work.*
    - c. *Prepare plans or schedules describing installation sequences and provide said Documents to affected parties.*
  4. *Make adequate provisions to accommodate items scheduled for later installation.*
  5. *Inform the Owner when coordination of Owner's work under separate contracts is required. Inform the Owner when Owner's work under separate contracts is incomplete, in non-compliance or prohibits efficient and orderly completion of work under this Contract.*



6. *Coordinate dissemination of information between Contractor's subcontractors or suppliers when information from one is needed by or is of assistance to the other. Distribute interrelated shop Drawings between Contractor's subcontractors or suppliers prior to shop Drawing submittal to Architect.*
- B. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:*
1. *Preparation of schedules*
  2. *Installation and removal of temporary facilities.*
  3. *Delivery and processing of submittals.*
  4. *Progress meetings.*
  5. *Project close-out activities.*
- C. Continue coordination procedures by actively controlling Project conditions as follows:*
1. *Verify and insure that products and materials of all trades are stored in an orderly fashion, under conditions complying with manufacturers' instructions and at planned locations.*
  2. *Verify and insure execution of the Work is in compliance with environmental conditions established by manufacturers' instructions and specific requirements of relevant Sections of these Specifications.*
  3. *Verify and insure adherence to tolerances required by these Specifications as the Work progresses.*
  4. *Inspect job conditions before one trade follows another in compliance with these requirements:*
    - a. *Plan and conduct joint inspections involving the affected trades.*
    - b. *Notify Architect at least one week in advance of such inspections and provide opportunity for Architect's participation in the inspection.*
    - c. *While the Architect may confine their observations and inspections to only limited areas, the Contractor shall be responsible for similar inspections in all involved areas.*
    - d. *Review of job conditions, in whole or in part, by Architect in no way relieves Contractor of their obligation to provide various stages of the Work as well as finished Work complying with Contract Documents.*
    - e. *Allow no work to proceed over unsatisfactory conditions that would prevent execution of new work as specified.*

#### 1.04 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

- A. Contractor shall designate a construction Project Manager for the Project who shall be the primary point of contact and communication for the Owner and Architect. The construction Project Manager shall be assigned full time to the Project until completion of **Final** Contract Close-Out. All written communications to the Architect shall be by or through the construction Project Manager. Architect shall address all their written communications to the construction Project Manager, unless authorized by construction Project Manager to communicate directly to others.*
- B. Contractor shall provide adequate supervision at the Project site at all times. At a minimum, the Contractor shall designate and assign at least one (1) Superintendent that shall direct and oversee the Work under the Contract. Superintendent shall be assigned full time to the Project until **Final** Completion of Contract Closeout.*

PART 2 - PRODUCTS (Not Used)

PART 3 – EXECUTION

3.01 GENERAL INSTALLATION PROCEDURES

- A. *Inspection of Conditions: Require the Contractor's installer of each component to inspect both the substrate and conditions under which work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.*
- B. *Manufacturers' Instructions: Comply with manufacturers' installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.*
- C. *Connection: Provide attachment and connection devices and methods necessary for securing work. Secure work true to line and level.*
- D. *Temporary Enclosures: Provide and coordinate placement of temporary enclosures.*
- E. *Costs for Adherence to all specified installation procedures are included in the Contract Sum.*

END OF SECTION 01 31 00

## SECTION 01 31 20

## PROJECT MEETINGS

## PART 1 – GENERAL

## 1.01 RELATED DOCUMENTS

- A. *Drawings and other general provisions of the Contract, including General Conditions and other Division 1 Specification Sections, apply to this Section.*

## 1.02 SUMMARY

- A. *Section Includes:*
1. *Contractor's duties*
  2. *Preconstruction conference*
  3. *Progress and coordination meetings*
  4. *Pre-installation conferences*

## 1.03 CONTRACTOR'S DUTIES

- A. *Scheduling and Notification: Contractor will notify Owner, Architect and other invited parties of meeting time and place at least five (5) calendar days prior to the date of every progress and coordination meeting or special called meeting. The progress and coordination meetings shall be conducted once every two weeks or as agreed to in the Preconstruction meeting.*
- B. *Administration: The Contractor will prepare a meeting agenda for the progress and coordination meetings, record and promptly distribute copies of minutes of significant proceedings and decisions of the meetings to each participant no later than five (5) calendar days after each meeting. The Contractor shall update construction schedule after each progress meeting to show current progress and documentation of any revisions that have been made or recognized; issue revised schedule, two week look-ahead with a list of the planned activities, submittal list and RFI list concurrently with report of each meeting.*

## 1.04 PRE-CONSTRUCTION CONFERENCE

- A. *A pre-construction meeting will be held prior to the start of construction at a time and place designated by the Owner for the purpose of identifying responsibilities of the Contractor, Owner and Architect and explaining administrative procedures.*
- B. *Attendance:*
1. *County representatives*
  2. *Owner*
  3. *Architect and key subconsultants*
  4. *Contractor represented by Construction Project Manager and Superintendent*
  5. *Major subcontractors if requested by Owner, Architect or Contractor*
- C. *Minimum Agenda:*
1. *Identification and designation of responsible personnel from all parties.*
  2. *Tentative construction progress schedule (to be distributed by Contractor), with discussion of critical work sequencing, staging, and work hours.*

3. *Procedures for correspondence and other communications, field decisions, requests for information, design bulletins, requests for changes in the work and claims.*
4. *Procedures for pay applications, retainage, and executed change orders.*
5. *Procedures for substitution requests, submittals, including shop Drawings, samples and product data.*
6. *Procedures for preparing and maintaining required Record Documents and Operations & Maintenance Manuals.*
7. *List of major subcontractors and material suppliers.*
8. *Use of Project Site, including project staging, storage areas, parking, site use limitations or restrictions, utility usage, and erosion control.*
9. *Material and equipment deliveries, storage, protection and priorities, and material testing and inspections.*
10. *Safety procedures and responsibilities.*
11. *Security procedures and methods.*
12. *Housekeeping procedures and methods.*
13. *Special project requirements or conditions.*
14. *Schedule for Owner, Architect, Contractor (OAC) meetings.*
15. *Public relations and new media.*

#### 1.05 PROGRESS AND COORDINATION MEETINGS

- A. *Scheduling: Unless otherwise requested by Owner or Architect, a progress and coordination meeting shall be held at the Project Site.*
- B. *Attendance:*
  1. *Owner*
  2. *Owner's Project Manager*
  3. *Architect and consultants if determined necessary by progress of the Work.*
  4. *Contractor as represented by Project Manager and Superintendent.*
  5. *Sub-contractors and material suppliers as requested by Owner or Architect or as applicable to progress of the Work.*
- C. *Minimum Agenda (topics to be covered as applicable):*
  1. *Review minutes of previous meeting.*
  2. *Status of submittals and impending submittals.*
  3. *Off-site fabrication and delivery schedules; subcontractor schedules.*
  4. *Actual progress of activities in relation to the schedule. Submit schedule updates as required.*
  5. *Actual and anticipated delays, their impact on the schedule, and corrective actions taken or proposed.*
  6. *Field observations, actual and potential problems affecting construction or job progress, status of RFI's (Requests for Interpretation).*
  7. *Site Utilization, housekeeping, temporary facilities/services.*
  8. *Safety, hazards or risks.*
  9. *Status of corrective work ordered by the Architect, quality and work standards.*
  10. *Change Orders and change order proposals.*
  11. *Documentation of information for payment application (as applicable).*

#### 1.06 PROGRESS AND COORDINATION SITE VISITS

- A. *Scheduling: Unless otherwise requested by Owner or Architect, a progress and coordination site visit shall be at the Project Site.*

- B. *Attendance:*
1. *Owner's Project Manager*
  2. *Architect and consultants if determined necessary by progress of the Work.*
  3. *Contractor as represented by Project Manager and Superintendent.*

1.07 *PREINSTALLATION CONFERENCES*

- A. *Scheduling: Conduct a pre-installation conference at the Project site before each construction activity that requires coordination with other construction or existing conditions. Comply with particular requirements elsewhere in the Specifications that describe specific pre-installation or pre-demolition meetings and associated notifications to the Architect and Owner.*
- B. *Attendance: The Contractor's installer and representatives of manufacturers and fabricators involved in or affected by the installation, and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Notify the Architect and Owner of the scheduled meeting dates as required elsewhere in the Specifications.*

*PART 2 – PRODUCTS (Not Used)*

*PART 3 – EXECUTION (Not Used)*

*END OF SECTION 01 31 20*

## SECTION 01 32 00

## CONSTRUCTION SCHEDULES

## PART 1 – GENERAL

## 1.01 RELATED DOCUMENTS

- A. *Drawings and other general provisions of the Contract, including General Conditions and other Division 1 Specification Sections, apply to this Section.*

## 1.02 SUMMARY

- A. *Section Includes:*
1. *General description*
  2. *Form and content of schedules*
  3. *Updating of schedules*

## 1.03 GENERAL DESCRIPTION

- A. *The Construction Schedule is a required submittal, which is subject to the approval of the Architect and Owner which shall be revised periodically as specified herein. The Construction Schedule shall be in a bar-chart or network type form that shall provide complete sequence of construction by activity, and allow for up-dating and revisions. Schedule shall be based on critical path method (CPM), and shall be prepared with input and cooperation of all Contractor's subcontractors.*

## PART 2 – PRODUCTS (Not Used)

## PART 3 – EXECUTION

## 3.01 FORM AND CONTENT OF SCHEDULES

- A. *Submit Construction Schedule as described above within 10 calendar days after Notice to Proceed.*
- B. *Provide Construction Schedule with the following format and content:*
1. *Provide schedule in the form of a bar chart with individual horizontal lines representing the duration of each major activity. Use vertical lines to scale the schedule at one-week intervals.*
  2. *Use the same items of work as shown on schedule of values or in accordance with Section numbers of Specifications.*
  3. *Where related activities must be performed in sequence, show relationship graphically.*
  4. *Incorporate the submittal schedule specified elsewhere.*
  5. *In developing the schedule, take into account administrative reviews.*
  6. *Show dates for the following:*
    - a. *Each major activity that influences the construction time (critical path items).*
    - b. *Specified pre-installation meetings and progress review meetings.*
    - c. *Procurements and delivery dates for products requiring long lead time.*

- d. *Start and completion dates of all major work elements.*
- e. *Time frame for Substantial and Final Completion procedures, including inspections, reviews and punch list activities.*
- 7. *Use the same terminology as that used in Contract Documents and provide legend of symbols or abbreviations used.*
- 8. *The Construction Schedule will be submitted through e-Builder® and an updated copy will be provided with every pay application per Section 01 29 00 Procedures for Payment Applications.*
- C. *Architect will advise Contractor if originally submitted Construction Schedule is not satisfactory. If so, Contractor shall revise and resubmit within five (5) calendar days.*
- D. *Prepare and distribute copies of approved Schedule to Architect, Owner, Contractor's subcontractors and other entities whose work will be influenced by schedule dates. Maintain a copy of approved Construction Schedule at Project site office.*

### 3.02 UPDATING OF CONSTRUCTION SCHEDULES

- A. *Update the Construction Schedule whenever changes occur or are made, or when new information is received, but not less often than at the same intervals at which progress meetings are conducted.*
- B. *In revising the Schedule show all changes **by saving the original schedule as a base line.** Indicate the actual progress or delay of each activity and show revised completion dates. Highlight the activities modified since previous submittal and indicate major changes in scope or revised projections due to changes in the Work (if applicable).*

### 3.03 SCHEDULE AND CONTRACTOR'S REQUESTS FOR CHANGES TO CONTRACT SUM OR TIME

- A. *The Contractor shall indicate in his Change Proposals for all Contract modifications, if the durations of activities are affected, or if activities are added or activities deleted. The effect shall be indicated for each activity in cost and time as applicable. The Change Proposal shall indicate all additional costs and time impacts of whatever nature; reservations for future determination of impacts will not be allowed or considered. The Contractor shall submit a diagram of that portion of the Construction Schedule affected by the change showing the activities and their costs, man loading, durations and Contractor's subcontractor or trade responsibility. While changes of a minor nature may require little or no documentation of schedule impact, the Contractor shall be aware that in cases where time is involved, failure to submit such a diagram with the Change Proposal shall constitute a waiver of any claims for time extensions associated with the subject of that Change Proposal. When modifications in the Work are necessitated by Field Directives or other Architect's authorizations prior to Change Proposal submissions to avoid delay, the Contractor shall furnish the Architect within 10 calendar days of receipt of the authorizations which changed the Work the same information required for Change Proposals. Failure to do so shall constitute a waiver of any claims for time extensions associated with the subject of the work authorization or directive.*
- B. *As applicable, the Contractor shall adjust the Schedule as needed, but not less than monthly, to reflect any adjustments in time related to negotiated or approved Contract modifications. The updated Schedule shall provide revised completion dates by incorporation of approved change order work and excusable delays, and re computation of all dates, durations and float in accordance with the newly incorporated dates. Such revised completion dates shall be the*

*sole basis for time extensions and adjustments to the Contract completion date. Modified activity times to be used to determine the revised Project completion dates shall be agreed to by the Contractor, Architect and Owner.*

*END OF SECTION 01 32 00*



SECTION 01 32 20  
CONTRACT REPORTING

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. General: This Section specifies administrative and procedural requirements for reports required for proper performance of the Work.
- B. Reports required include:
1. Daily construction reports.
  2. Field correction reports.
  3. Special reports.

1.03 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report, recording the following information concerning events at the site; and submit duplicate copies to the Architect and Owner at weekly intervals via **e-Builder®**:
1. List of subcontractors at the site.
  2. List of separate contractors at the site.
  3. Approximate count of personnel by trade at the site.
  4. High and low temperatures, precipitation, and general weather conditions.
  5. Accidents (refer to Special Reports).
  6. Meetings and significant decisions.
  7. Unusual events (refer to Special Reports).
  8. Stoppages, delays, shortages, losses.
  9. Emergency procedures.
  10. Orders and requests of governing authorities.
  11. Field Directives, or Change Proposal Requests received; Change Proposals implemented.
  12. Services connected, disconnected.
  13. Equipment or system tests and start-ups.
- B. Field Correction Report: When the need to take corrective action that requires a departure from the Contract Documents arises, prepare a detailed report including a statement describing the problem and recommended changes. Indicate reasons the Contract Documents cannot be followed. Submit a copy to the Architect and Owner immediately.
- C. Special Reports: When an event of an unusual and significant nature occurs at the Project site, prepare and submit a special report. List the chain of events, persons participating, response by the Contractor's personnel, an evaluation of the results or effects and similar pertinent information. Advise the Owner in advance when such events are known or predictable.

*PART 2 – PRODUCTS (NOT USED)*

*PART 3 – EXECUTION (NOT USED)*

*END OF SECTION 01 32 20*

## SECTION 01 33 00

## SUBMITTALS

## PART 1 – GENERAL

## 1.01 RELATED DOCUMENTS

- A. *Drawings and general provisions of the Contract, including General Conditions and other Division 1 Specification Sections, apply to this Section.*

## 1.02 SUMMARY

- A. *Section Includes:*
  - 1. *Definitions*
  - 2. *General requirements*
  - 3. *Submittal schedule*
  - 4. *Submittal coordination*
  - 5. *Submittal format and preparation:*
    - a. *Shop Drawings*
    - b. *Samples*
    - c. *Product Data*
  - 6. *Contractor review and responsibilities*
  - 7. *Architect's review*
  - 8. *Return, resubmission and distribution*
- B. *Refer to individual Specification Sections for identified equipment and material for which submittals are required.*
- C. *Submittal will be required for each specification section separately.*
- D. *Do not submit on equipment or materials not requested in the Specifications.*

## 1.03 DEFINITIONS

- A. *Submittals: General term including samples, shop Drawings and product data, as applicable.*
- B. *Samples: Physical examples prepared to illustrate materials, equipment or workmanship to be installed in the Project and to establish standards by which work will be judged as complying with Contract requirements.*
- C. *Shop Drawings: Drawings, diagrams, illustrations, schedules and performance charts, prepared by the entity that is to do the work to illustrate that portion of the Work in detail.*
- D. *Product Data: Dated, printed literature of a product manufacturer which describes product and installation procedures. Product data may include test and performance data, illustrations, standard brochures and special details.*
- E. *Informational Submittals: Submittals indicated in the Contract Documents as to be submitted for information only.*

#### 1.04 GENERAL REQUIREMENTS

- A. *Submittals shall be in orderly sequence and timed to cause no delay in the Work.*
- B. *Contractor shall commence no portion of the Work requiring submittals until submittal has been reviewed and accepted by Architect.*
- C. *Do not utilize submittal review process as a means of requesting substitutions or changes in the scope of the Work.*
- D. *Job delays occasioned by requirement of re-submission of samples, shop Drawings and product data not in accordance with Contract Documents are Contractor's responsibility, and will not be considered valid justification for extension of Contract time.*
- E. *The Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's review of shop Drawings, product data, samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and the Architect has given written approval to the specific deviation. The Contractor shall not be relieved of responsibility for errors or omissions in shop Drawings, product data, samples or similar submittals by the Architect's review thereof.*
- F. *The Contractor shall direct specific attention, in writing or on resubmitted shop Drawings, product data, samples or similar submittals to revisions other than those requested by the Architect on previous submittals.*
- G. *Resubmitted shop Drawings, product data, samples or similar submittals shall be complete and shall cloud or highlight the changes.*

#### 1.05 SUBMITTAL SCHEDULE

- A. *Submit to the Architect and Owner a list of all required submittals organized and referenced by the sections of these Specifications with all information as required by the Owner. On the list, indicate the timing for submission of the required submittals and relationship to the construction sequence using the Submittal Template provided in this section. Submit the schedule to the Architect within the date required for establishment and submission of Contractor's Construction Schedule.*
- B. *Following approval by the Architect of the submittal schedule, Contractor shall distribute copies to the Contractor's subcontractors, suppliers and others required to comply with the submittal dates indicated. Maintain a copy in the field. When revisions are made, distribute to same parties that received initial document.*
- C. *Maintain updated submittal schedule during course of the Work that shows status of all submittals. Provide copies for Architect at progress meetings and when requested.*

#### 1.06 SUBMITTAL COORDINATION

- A. *Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal to the Submittal Coordinator well in advance of performance of related construction activities to avoid delay.*

- B. *Coordinate each submittal with other submittals and related activities—purchasing, fabrication, testing, delivery, etc.—that require sequential activity. Coordinate transmittal of different types of submittals for related elements of the Work so submittals can be reviewed concurrently. The Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.*
- C. *Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for re-submittals. If submittal must be reviewed within a certain time in order to maintain the progress of the Work, state so clearly on the submittal. Nevertheless, allow a minimum of fourteen (14) calendar days for the first processing of each submittal and allow even more time if the submittal must be coordinated with later submittals. Allow a minimum of seven (7) calendar days for processing of resubmittals. 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.*

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.01 SUBMITTAL FORMAT

- A. **e-Builder®** Process:
1. *All submittals shall be uploaded via the **e-Builder®** software by the Contractor to the attention of the assigned Submittal Coordinator.*
  2. *The **e-Builder®** submittal template should be filled out completely by the Contractor and include all required documentation listed in the applicable division specification section as described below.*
  3. *Samples shall be photographed and uploaded by the Contractor prior to physical samples being delivered to the Architect.*
  4. *All other documents required by the Contract Documents shall be submitted through **e-Builder®** in the format stated.*
- B. Transmittals:
1. *Submittals will be accepted only through transmittal from the Contractor to the assigned Submittal Coordinator. Submittals received from other entities will be returned without review or action.*
  2. *Submittals must be accompanied by a transmittal form containing the following information:*
    - a. *Project name.*
    - b. *Submittal date.*
    - c. *Transmittal number.*
    - d. *Applicable Specifications Section number.*
    - e. *To: Architect's name and address.*
    - f. *From: Contractor's name and address.*
    - g. *Name of applicable subcontractor(s), supplier(s) or manufacturer(s).*
    - h. *Submittal type (shop drawing, sample, product data, informational submittal).*
    - i. *Description of submittal.*
    - j. *Record of distribution.*
    - k. *Action marking.*
    - l. *List of any deviations from Contract Document requirements.*
    - m. *Comments.*

- C. *Form, Size and Quantity:*
1. *Label each submittal with the following information:*
    - a. *Project name.*
    - b. *Date of submittal.*
    - c. *Contractor's name and address.*
    - d. *Architect's name and address.*
    - e. *Subcontractor's name and address.*
    - f. *Supplier's name and address.*
    - g. *Manufacturer's name.*
    - h. *Specification section where the submittal is specified.*
    - i. *Numbers of applicable drawings and details.*
    - j. *Other necessary identifying information.*
  2. *Provide a space on each submittal for approval stamp and notations.*
  3. *For Shop Drawing or Product Data submittals larger than 8½" x 14" PDF format by email. If PDF file exceeds 10 megs the Architect will provide the Contractor with directions to access the Architect's Dropbox Folder for submission of file.*
  4. *For Shop Drawing or Product Data submittals on smaller sheets (minimum size acceptable: 8½" x 11"; maximum size acceptable 8½" x 14") PDF format by email. If PDF file exceeds 10 megs the Architect will provide the Contractor with directions to access the Architect's Dropbox folder for submission of file.*
  5. *For Samples submit three (3) sets with transmittal to office of the Submittal Coordinator.*
  6. *Contractor shall stamp and sign in red ink on all copies.*

### 3.02 SUBMITTAL PREPARATION

- A. *Shop Drawing Preparation and Format:*
1. *Shop Drawings shall conform to the following content requirements:*
    - a. *Number Drawings consecutively*
    - b. *Indicate working and erection dimensions and relationship to adjacent work at accurate scale.*
    - c. *Show arrangements and sectional views, where applicable.*
    - d. *Show compliance with specific referenced standards, such as materials, gauges, thickness, finishes, and characteristics.*
    - e. *Name specific products or materials used.*
    - f. *Indicate anchoring and fastening details, including information for making connections to adjacent work.*
    - g. *Contractor shall make any and all modifications in red ink and shall sign in red ink.*
  2. *Reference applicable details, sections and similar information from Drawings from which shop drawing data was developed; include applicable Specification Section numbers and names.*
  3. *Do not reproduce Contract Documents or copy standard information as basis of shop Drawings. Standard information prepared without specific reference to the Project is not considered shop Drawings.*
- B. *Sample Preparation:*
1. *Three (3) sets of required samples shall be submitted for the Architect's selection and review so as to maintain construction progress. Acceptance and color selections will not be made unilaterally where selections regarding adjacent materials must be made for purpose of aesthetics. Submit samples for adjacent and inter-related materials concurrently.*

2. Prepare samples in sizes, shapes and finishes in accordance with provisions of individual Specification sections; attach documentation showing compliance. Where samples are for selection of color, pattern, texture or similar characteristics from a range of standard choices, submit a full set of choices for the material or product. Submittals will be reviewed and returned with Architect's selection indicated and other action as appropriate.
3. Samples furnished under this section are not to be confused with full-size, on-site "mock-ups," which may be specified in certain sections of the Specifications.
4. Keep one (1) set of final approved samples or sample sets at Project site for use during progress of the Work.

C. Product Data Preparation and Format:

1. Content:
  - a. Submit manufacturer's standard printed data sheets.
  - b. Identify the particular product being submitted; **submit only pertinent pages.**
  - c. Show compliance with properties specified.
  - d. Identify which options and accessories are applicable.
  - e. Include recommendations for application and use.
  - f. Show compliance with the specific standards referenced.
  - g. Show compliance with specified testing agency listings; show the limitations of their labels or seals, if any.
  - h. Identify dimensions which have been verified by field measurement.
  - i. Show special coordination requirements for the product.

### 3.03 CONTRACTOR'S REVIEW AND RESPONSIBILITIES

- A. Review submittals and stamp with approval prior to submission to the assigned **e-Builder®** Submittal Coordinator. Contractor's stamp shall bear the Contractor's name and word "Approved," date of the approval, and shall be initialed by the individual responsible for reviewing submittals. Enter stamp on a blank, unmarked area on the submittal.
- B. By approving submittals, Contractor represents that they have determined and verified all materials, field measurements, and field construction criteria related thereto, or will do so, and that he has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.
- C. Where work is indicated "By others," Contractor shall indicate responsibility for providing and coordinating such work; whether by subcontractor or under separate contracts.
- D. Contractor agrees that submittals processed by Architect are not substitutions or changes in scope of the Work; that purpose of submittals by Contractor is to demonstrate that Contractor understands design concept; that he demonstrates his understanding by indicating which equipment and material he intends to furnish and install and by detailing fabrication and installation methods he intends to use.
- E. Contractor represents by submitting samples, shop drawing and product data that he has complied with provisions specified above. Submissions made without Contractor's approval indicated thereon will be returned without being reviewed for compliance with these requirements.

- F. *No portion of the Work requiring submission of a shop drawing, product data or sample shall be commenced until the submittal has been reviewed and accepted by the Architect, and Owner as required, as specified herein. All such portions of the Work shall be executed in accordance with accepted submittals bearing the Architect's stamp.*

#### 3.04 ARCHITECT'S REVIEW AND ACCEPTANCE

- A. *Architect's review and acceptance is only for conformance with design concept of Project and with information in Contract Documents. Architect's acceptance of a specific item shall not indicate acceptance of an assembly in which item is a component. The Architect's review is not conducted for the purpose of determining the accuracy and completeness of details such as dimensions and quantities, or for substantiating instructions for installation of equipment or systems, which remain the responsibility of the Contractor. When professional certification of performance characteristics of materials, systems, or equipment is required by the Construction documents, the Architect shall be entitled to rely upon such certifications to establish the materials, systems or equipment will meet performance criteria required by the Construction documents.*
- B. *Architect will review each submittal, mark it with appropriate action, and return it to Contractor with reasonable promptness, except where it must be held for coordination, and the Contractor is so advised. Submittals will be marked by Architect as follows:*
1. *"Reviewed" indicates the submittal has been reviewed for conformance with design and no exceptions are taken. Proceed with the work.*
  2. *"Make Corrections as Noted" indicates Contractor may proceed with the work as noted.*
  3. *"Amend and Resubmit" indicates submittal has to be revised and resubmitted for review prior to proceeding with the work.*
  4. *"Rejected, See Remarks" indicates that the submittal does not comply with Contract Documents.*
- C. *Submittals required to be submitted "for Architect's information only" are required to demonstrate that the Work complies with performance requirements of the Contract Documents. Such submittals, if acceptable to Architect, will not be returned to Contractor.*

#### 3.05 SUBMITTAL RETURN, RESUBMISSION AND DISTRIBUTION

- A. *Architect will return the following reviewed and accepted submittals for printing and distribution by Contractor:*
1. *Samples: One (1) set, unless additional sets were submitted because of needs of Contractor's subcontractors or suppliers.*
- B. *Resubmissions: In making resubmissions, follow the same procedures and formats required for original submissions. Make corrections and changes indicated by Architect on unacceptable submissions. In resubmission transmittals, identify clearly and direct specific attention to any revisions other than corrections requested by Architect on previous submissions. Two or more resubmissions of the same submittal will incur Consultant review fees which will be charged back to the Contractor in the form of a deductive changer order.*



C. *Distribution:*

1. *Contractor is responsible for obtaining and distributing copies of submittals to his subcontractors and material suppliers after final acceptance. Prints of reviewed shop Drawings shall be made from reproducibles that carry the Architect's appropriate stamp.*
2. *Contractor shall maintain a file of accepted submittals bearing the Architect's stamp for duration of Project, which shall be delivered to Owner as a part of the Project's Record Documents.*
3. *The Contractor's superintendent also shall maintain an orderly file of all accepted submittals at the Project site. In the event that the Architect or Owner should question the installation of any aspect of the Work requiring accepted submittal data, the inability of the superintendent to produce the required accepted submittal data upon demand shall constitute cause for a "stop work" order to be issued on that particular questioned aspect of the Work and all relevant appurtenant work. The cause shall be equal to the Contractor's not having received required acceptance of the submittal data. If so issued, such "stop orders" shall not be considered valid justification for extensions of Contract time or claims for additional monetary compensation.*

END OF SECTION 01 33 00

## SECTION 01 41 00

## REGULATORY REQUIREMENTS

## PART 1 – GENERAL

## 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and other Division 1 Specification Sections, apply to this Section.

## 1.02 SUMMARY

- A. Section Includes:  
1. Regulatory Requirements

## 1.03 REGULATORY REQUIREMENTS

- A. The following regulations are applicable to the Work:
1. The Gwinnett County Construction Code (GCCC) 2018 Edition:
    - a. International Building Code – 2018 Edition with 2020, 2022 and 2024 Georgia State Amendments
    - b. International Mechanical Code – 2018 Edition with 2020 and 2024 Georgia State Amendments
    - c. International Plumbing Code – 2018 Edition with 2020, 2022, 2023 and 2024 Georgia State Amendments, and "IPC Appendix F"
    - d. International Fuel Gas Code – 2018 Edition with 2020 and 2022 Georgia State Amendments
    - e. NFPA National Electrical Code – 2020 Edition with 2021 Georgia State Amendments
    - f. International Energy Conservation Code – 2015 Edition with 2020, 2022 and 2023 Georgia State Supplements and Amendments
    - g. International Existing Building Code – 2018 Edition with 2021 Georgia Amendments
    - h. Gwinnett County Ordinance for Fire Protection and Life Safety
    - i. NFPA Codes and Standards Current Edition
    - j. NFPA 101 Life Safety Code, 2018 Edition
    - k. International Fire Code – 2018 Edition, as amended by the State Fire Marshal per Chapter 1 20 – 3-3 of Rules and Regulations
    - l. 2010 ADA Standards for Accessible Design, Department of Justice, September 15, 2010
    - m. O.C.G.A. Title 25 (State Fire Law)
    - n. O.C.G.A. Title 30 (Access to and Use of Public Facilities by Persons with Disabilities)
    - o. The Gwinnett County Unified Development Ordinance
- B. The Contractor shall have copies of these above referenced regulations at the Project site and said documents shall be readily available to all parties involved in the Project.
- C. Other statutory requirements and regulations may affect the Work and the performance of the Contractor. Many of these requirements are referenced or described elsewhere in the Contract Documents, but their absence from the Contract Documents does not relieve the Contractor of the responsibility to perform in accordance with said requirements.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION 01 41 00

## SECTION 01 42 00

## DEFINITIONS AND EXPLANATIONS

## PART 1 – GENERAL

## 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and other Division 1 Specification Sections, apply to this Section.

## 1.02 SUMMARY

- A. Section Includes:
1. Definitions
  2. Specifications format and content explanation
  3. Drawing symbols
  4. Industry standards
  5. Apparent conflict between Drawing and Specifications

## 1.03 DEFINITIONS

- A. Certain terms used repetitiously in these Specifications and elsewhere in the Contract Documents are defined generally in this section. The definitions and explanations of this section are not necessarily either complete or inclusive, but are general for the Work to the extent such definitions or explanations are not stated more explicitly in another provision of the Contract Documents.
- B. Approve: The terms “approve,” “review,” “inspect” and their variations, where used in conjunction with the Architect’s actions on the Contractor’s submittals, applications and requests, are limited to the responsibilities and duties of the Architect stated in the General Conditions and elsewhere in these Specifications. Such approvals shall not release the Contractor from their responsibility to fulfill the requirements of the Contract Documents, unless otherwise provided in the Contract Documents.
- C. Directed, Requested, etc.: Where not otherwise explained, terms such as “directed,” “requested,” “authorized,” “selected,” “required,” and “permitted,” mean directed by the Architect, requested by the Architect, and similar phrases. However, no such implied meaning shall be interpreted to extend the Architect’s responsibility into the Contractor’s area of construction supervision.
- D. Indicated: The term “indicated” is a cross reference to details, notes or schedules on the Drawings, other paragraphs or schedules in the Specifications, and similar means of recording requirements in the Contract Documents. Where other terms such as “shown,” “noted,” “scheduled,” and “specified” are used, it is to help locate the reference; no limitation on location is intended except as specifically noted.
- E. Refer: Used to indicate that the subject is defined or specified in further detail at another location in the Contract Documents, or elsewhere as indicated.

- F. *Furnish: The term "furnish" is used to mean supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations, as applicable in each instance.*
- G. *Install: Except as otherwise defined in greater detail, the term "install" is used to describe operations at Project site including the unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations, as applicable to a material, product or system in each instance.*
- H. *Provide: Except as otherwise defined in greater detail, the term "provide" means to furnish and install, complete and ready for the intended use as applicable in each instance.*
- I. *Award: "Award" means a formal written notice by Gwinnett County that a firm(s) has/have been selected to enter into a contract for services. Any award that has not resulted in a written contract offer to the offeror, within [6 months] of written notice, shall not be considered a binding award.*
- J. *Executed: An "executed" contract (or document) means a contract (or document) that has been fully reviewed and signed by all parties.*

#### 1.04 SPECIFICATION FORMAT AND CONTENT EXPLANATION

- A. *General: This section is provided to help the user of the Specifications understand the format, language, implied requirements, and similar conventions. None of the explanations shall be interpreted to modify the substance of the Contract.*
- B. *Specifications Production: Portions of these Specifications have been edited by the Owner and Architect and may contain minor deviations from traditional formats. Such deviations are a normal result of the production technique, and no other meaning will be implied or permitted. References to Specifications or Technical Specification, shall mean the same.*
- C. *Specification Format: Although not all portions may fully comply, the format of these Specifications is principally as described below. No meaning or significance is attached to such compliance or non-compliance.*
  1. *Sections and Divisions: For convenience, the basic unit of the Specifications is a "section," each unit of which is named and numbered. These sections are organized into related families of sections which are categorized as "divisions." These divisions are recognized as present construction industry practice on uniform organization and sequencing of specifications. Section titles are not intended to limit the meaning or content of a section, to be fully descriptive of the requirements therein, or to be an integral part of the text.*
  2. *Section Numbering: Sections are given a numeric sequence to assist in cross referencing information in the Contract Documents. The numbering sequence, however, is not complete.*
  3. *Parts: Each section has been divided into three or fewer "parts" (Part 1 - General, Part 2 - Products, and Part 3 - Execution). These titles do not limit the meaning of and are not an integral part of the text of the Specification requirements.*
- D. *Specifications Content: The Specifications have been produced employing conventions in the use of language and in the intended meaning of certain words, terms and phrase when used in particular situations or circumstances. These conventions are explained as follows:*
  1. *Language used in the Specifications is the abbreviated type. Implied words and meanings will be appropriately interpreted. Singular words will be interpreted as*

- plural and plural words interpreted as singular where applicable and where the full context of the Contract Documents so indicates.*
2. *Specifying Methods: The techniques or methods of specifying requirements vary throughout the Specifications text, and may include "prescriptive," "open generic-descriptive," "compliance with standards," "performance," "proprietary," or a combination of these. The method used for specifying one unit of work has no bearing on requirements for another unit of work. Except for cases of overlapping or conflicting requirements as described in the following paragraph 3, where more than one set of requirements are specified for a particular unit of work, the option is intended to be Contractor's regardless of whether specifically indicated as such.*
  3. *Overlapping and Conflicting Requirements: Where compliance with two (2) or more industry standards or sets of requirements is specified, and overlapping of those different standards or requirements is specified, and overlapping of those different standards or requirements establishes two (2) different or conflicting levels of quality, the most stringent requirement is intended and will be enforced, unless specifically detailed language written into the Contract Documents clearly indicates that the less stringent requirement is to be fulfilled. Refer uncertainties as to which of the two (2) levels of quality is more stringent to the Architect for a decision before proceeding.*
  4. *Imperative Language is generally used throughout the Specifications. Requirements expressed imperatively are to be performed by the Contractor. At certain locations in the text, for clarity, subjective language is used to describe responsibilities that must be fulfilled indirectly by the Contractor, or by others when so noted.*
- E. *Minimum Quality/Quantity: In every instance, the quality level or quantity shown or specified is intended as the minimum for work to be performed or provided. Except as otherwise specifically indicated, the actual work may either comply exactly with that minimum (within specified tolerances), or may exceed that minimum within reasonable limits. In complying with requirements, the indicated numeric values are either minimum or maximums as noted or as appropriate for the context of the requirements. Refer instances of uncertainty to the Architect for decision before proceeding.*
- F. *Assignment of Specialists: The Specifications require (or at least imply) that certain specific construction activities shall be performed by specialist or expert entities who must be engaged for the performance of those units of work. These must be recognized as special requirements over which the Contractor has no choice or option. Nevertheless, the ultimate responsibility for fulfilling Contract requirements remains with the Contractor.*
1. *This requirement shall not be interpreted to conflict with enforcement of building codes and similar regulations governing the Work. It is also not intended to interfere with local trade union jurisdictional settlements and similar conventions.*
  2. *Trade Names: Use of titles such as "carpentry" is not intended to 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 trades persons of the corresponding generic name.*

## 1.05 DRAWING SYMBOLS

- A. *Graphic symbols used on the Drawings are those recognized in the construction industry for purposes indicated. Where not otherwise noted, symbols are defined by "Architectural Graphic Standards", published by John Wiley & Sons, Inc., current edition. Any symbol or graphic hatch pattern shown on the Drawings not specifically labeled as to the material indicated shall be interpreted as follows:*
1. *Written Clarification by the Architect prior to Bid*

2. *Industry Standards*
  3. *Drawing Symbol and Hatch Legends*
- B. *Clarifications shall be requested in writing by the proposer where written direction and clarification will be provided by the Architect in the Addenda issued prior to bid.*
- C. *Under no circumstances will additional compensation be considered for uncertainty and lack of clarification on the part of the Contractor regarding drawing symbols and hatch patterns, not clarified during the bid period.*
- D. *Mechanical/Electrical Drawings: Graphic symbols used on mechanical and electrical Drawings are generally aligned with symbols recommended by ASHRAE. They are supplemental by more specific symbols indicated in legends and, where appropriate, are further supplemental by technical associations including ASME, ASPE, IEEE, and similar organizations. Refer to instances of uncertainty to the Architect for clarification before processing.*

#### 1.06 INDUSTRY STANDARDS

- A. *Applicability of Standards: Except where Contract Documents include explicit and more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents. Such standards are made a part of the Contract Documents by reference. Individual sections indicate which codes and standards apply and which the Contractor must keep available at the Project Site for reference.*
1. *Referenced standards (referenced directly in Contract Documents or by governing regulations) have precedence over non-referenced standards.*
  2. *Non-referenced Standards: Except as otherwise limited by the Contract Documents, standards not referenced but recognized in the construction industry as applicable will be enforced for performance of the Work. The Architect shall decide whether a code or standards is applicable or which of several are applicable.*
- B. *Publication Dates: Where compliance with an industry standard is required, comply with standard in effect as of the date of the Contract Documents.*
- C. *Copies of Standards: Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to that entity's construction activity. Copies of applicable standards are not bound with the Contract Documents.*
1. *Where copies of standards are needed for performance of a required construction activity, the Contractor shall obtain copies directly from the publication source.*
  2. *Although copies of standards needed for enforcement of requirements may be part of required submittals, the Architect reserves the right to require the Contractor to submit additional copies as necessary for enforcement of requirements.*
- D. *Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction, or other entity applicable to the context of the publication provision. Refer to the "Encyclopedia of Associations," published by Gale Research Co., available in most libraries.*

1.07 APPARENT CONFLICTS BETWEEN DRAWINGS AND SPECIFICATIONS

- A. In the event of a conflict between the Contract Drawings and the Contract Specifications, the Contract Specifications take precedent.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION 01 42 00



## SECTION 01 45 00

## QUALITY CONTROL PROCEDURES

## PART 1 – GENERAL

## 1.01 RELATED DOCUMENTS

- A. *Drawings and general provisions of the Contract, including General Conditions and other Division 1 Specification Sections, apply to this Section.*

## 1.02 SUMMARY

- A. *Section Includes:*
1. *Contract conditions.*
  2. *Reference standards.*
  3. *Procedures for submittal of quality control documentation.*
  4. *Quality assurance provisions.*
  5. *Coordination, sequencing and scheduling.*
  6. *General quality control activities and requirements.*
  7. *Procedures for specific quality control activities:*
    - a. *Testing*
    - b. *Inspecting*
    - c. *Pre-installation review and inspection*
    - d. *Manufacturers' field services*
  8. *Repair and Protection.*

## 1.03 CONTRACT CONDITIONS

- A. *Certifications and inspections and testing services are required to verify compliance with requirements specified or indicated. These services whether provided by the Contractor or the Owner do not relieve the Contractor of responsibility for compliance with requirements of the Contract Documents.*
1. *Certifications, inspections, tests and related requirements specified are not intended to limit the Contractor's other quality control procedures that facilitate compliance with Contract Document requirements.*
  2. *Requirements for the Contractor to provide certifications, inspections, testing and related services by the Architect, Owner and other authorities having jurisdiction are not limited by the provisions of this section.*
- B. *Testing and Special Inspection Agencies, whether employed by the Owner or Contractor, shall not approve any portion of the Work and shall not change requirements of the Contract Documents.*
- C. *The Owner is responsible for geotechnical and materials testing and special inspection services required by the Contract Documents and will employ and compensate a Testing Agency for that purpose. Cost of these services shall not be included in the Contract Sum.*

## 1.04 DEFINITIONS

- A. *Certificate: A written statement that a particular product or a portion of the Work as accomplished conforms to the requirements of the Contract Documents.*

- B. *Testing Agency: Any independent testing and inspection agency employed by the Owner or Contractor to perform certain quality control activities.*
- C. *Reference Standard: Any document incorporated into the Specifications by reference rather than inclusion of text; including, but not limited to, voluntary specifications prepared by standards and industry organizations.*
- D. *Reports: Certified written documentation of inspections, tests or similar services.*

#### 1.05 REFERENCE STANDARDS

- A. *General: Comply with edition of standards indicated; if date is not indicated, comply with edition in effect as of date of Contract Documents. Compliance with standards that are revised or reissued after that date will not be required unless incorporated into the Contract Documents by modification. When applicable codes, laws or regulations require editions of different dates, obtain instructions from the governing authorities as to which edition is required.*
- B. *The requirements of reference standards are binding on Contractor, just as if they were copied into the Contract Documents, but no provisions of reference standards shall alter the contractual relationship of the parties to the Contract.*
- C. *Maintain at the Project site each reference standard that is indicated elsewhere as to be kept at the site.*

#### 1.06 REPORTS

- A. *The Owner's Testing Agency shall submit certified written reports of each inspection, test or similar service to the Owner, Architect and Contractor as applicable. If the Contractor is responsible for an inspection, test or similar services and has employed a Testing Agency for such, his reports shall comply with the following:*
  - 1. *Reports shall be submitted for informational purposes through the Contractor under cover to the Architect through e-Builder®.*
  - 2. *Submit other copies of reports to governing or regulatory authorities if so directed.*
  - 3. *Submit the report within three (3) working days after date of inspection or test if practicable.*
  - 4. *Reports of inspections, tests or similar services shall include, but not limited to the following data:*
    - a. *Date of issue.*
    - b. *Project name.*
    - c. *Name, address and telephone number of testing agency.*
    - d. *Dates and locations of samples and tests or inspections.*
    - e. *Names of individuals making inspections or tests.*
    - f. *Name and signature of reviewing registered Engineer and laboratory inspector if applicable.*
    - g. *Related Specifications section(s).*
    - h. *Test method or basis of evaluation.*
    - i. *Ambient conditions at time of sample-taking and testing.*
    - j. *Observations, comments or professional opinions regarding compliance with requirements of Contract Documents.*
    - k. *Recommendations on re-testing if required.*

### 1.07 SUBMITTALS

- A. Refer to section 01 33 00 for additional requirements.
- B. Certificates: Submit for information only unless otherwise directed.
  - 1. Certificates should be signed by the product manufacturer, unless otherwise specified or not applicable.
  - 2. Include the following information:
    - a. Date of certificate.
    - b. Project name.
    - c. Description of the product or system certified.
    - d. Specification section(s) involved.
    - e. When actual materials to be used are to be certified, include lot identification markings, destination or shipment, and quantity in shipment.
    - f. Title, name, and signature of person authorized to make certification.
- C. Qualifications Statements: Submit for information only unless otherwise directed.
- D. Manufacturers' Instructions: Submit for information only unless otherwise directed. Contractor shall identify to Architect any conflicts between manufacturers' instructions and Contract Documents prior to proceeding with affected work.

### 1.08 QUALITY ASSURANCE.

- A. Qualifications of manufacturers and installers shall be as indicated in individual sections of the Specifications.
- B. Manufacturer's field personnel shall be employed directly by the manufacturers and normally perform the activities specified.
- C. Qualifications of a Testing Agency, if utilized by Contractor, shall include the following criteria:
  - 1. Testing Agency shall meet "Recommended Requirements for Independent Laboratory Qualification" latest edition, published by The American Council of Independent Laboratories.
  - 2. Testing Agency shall be acceptable to Architect and shall have been regularly engaged in services specializing in types of inspections and tests to be performed for a minimum of five (5) years. If requested by Engineer, submit evidence of satisfactory completion of services performed on projects of similar type and scope within specified period.
  - 3. Testing Agency shall be authorized to perform services by authorities having jurisdiction in State of Georgia.
  - 4. Testing Agency's on-site personnel shall be qualified and certified in the fields of testing required for the Project.
  - 5. Testing Agency shall have AASHTO Certified in the state of Georgia.
  - 6. Testing Agency shall have GDOT Certification.
- D. Testing Equipment shall be calibrated at reasonable intervals with devices of an accuracy traceable to the National Bureau of Standards (NBS) standards or to accepted values of actual physical constants.

### 1.09 COORDINATION, SEQUENCING AND SCHEDULING

- A. Contractor shall coordinate its sequence of activities with any Testing Agency engaged to perform inspections, tests and similar services to accommodate required work with a minimum delay.

### PART 2 – PRODUCTS (Not Used)

### PART 3 – EXECUTION

#### 3.01 GENERAL

- A. Provide work of the specified quality level; where quality level is not indicated, provide work of quality customary in similar types of work.
  - 1. Where codes, laws, or regulations require work of higher quality or performance, provide work complying with those codes, laws, and regulations.
  - 2. Where two or more quality provisions of the Contract Documents conflict, comply with the most stringent requirement; where requirements are different but apparently equal, and where it is uncertain which requirement is most stringent, obtain clarification from the Architect before proceeding.
  - 3. Actual quality may exceed the specified quality; verify that such differences are acceptable to the County (other criteria may make excessive quality undesirable).
- B. Manage and control products, subcontractors, suppliers, manufacturers, site conditions, installers, and workmanship in such a manner as to produce work of the specified quality. Use installers who are capable of producing work of specified quality.
- C. Perform all quality control activities specified unless indicated to be performed by other entities.

#### 3.02 TESTING

- A. The requirements indicated below in this section are the Contractor's responsibilities relative to testing performed by the Owner and their Testing Agency as well as testing under the direct supervision of the Contractor.
- B. Cooperate with Testing Agency personnel. Provide access to the Work and to material supplier's plant and operations.
- C. Provide representative samples of materials proposed for use in the Work, in quantities sufficient for accurate testing and as specified.
- D. As necessary for performance of the testing, furnish incidental labor and facilities including but not limited to the following:
  - 1. Providing access to the Work to facilitate inspections and tests.
  - 2. Obtaining and handling samples at the Project site under the direction of the Testing Agency or assisting the Testing Agency in taking samples.
  - 3. Provide facilities for storage and caring of test samples on-site and security and protection of samples and test equipment at site.
  - 4. Provide preliminary design mixes for materials mixes that require control by Testing Agency.

- E. *Notify Testing Agency sufficiently in advance of operations to allow for assignment of personnel and scheduling of tests. Notify Owner's Testing Agency three (3) working days prior to the date of inspection or testing.*
- F. *Where the Owner has engaged a Testing Agency or other entity for testing and inspection of a 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 otherwise agreed in writing with the Owner.*
- G. *Contractor shall notify the Architect in writing and receive a written reply prior to proceeding with additional testing beyond that specified in the Contract Documents.*
- H. *Re-testing and Cancellation of Testing:*
  - 1. *Contractor shall be responsible for re-testing where results of required inspections, test or similar services are unsatisfactory and do not comply with requirements of Contract Documents, regardless of whether the original test was the Contractor's responsibility.*
  - 2. *If the Testing Agency is scheduled by the Contractor to perform tests or monitor activities on-site and testing or work to be monitored gets cancelled by the Contractor after the on-site arrival of the Testing Agency, the cost of the Testing Agency from arrival on-site until they are sent back or utilized for another activity including the cost for travel time shall be borne by the Contractor.*
- I. *Materials and work covered without testing and approval, if required, shall be uncovered and subsequently recovered at the Contractor's expense.*
- J. *Contractor shall not perform work directed by the testing agency which conflict with the Contract Documents without direction by the Architect.*

### 3.03 INSPECTING

- A. *Perform inspections specified. When inspections reveal unsatisfactory work, make whatever changes or repairs are necessary and re-inspect. Submit a report of each original inspection and each re-inspection.*

### 3.04 MANUFACTURERS' FIELD SERVICES

- A. *Manufacturers' field services are specified in other sections of the Specifications.*
- B. *If Architect or Owner should be present, provide Architect and Owner with a timely notice of site visit so Architect and Owner may be present. After site visit, submit a report that records: 1) site conditions, installer procedures, and related activities that are not as recommended by the manufacturer; and 2) instructions and recommendations provided by the representative that differ from manufacturer's standard printed instructions.*

### 3.05 REPAIR AND PROTECTION

- A. *Upon completion of inspection, testing, sample-taking and similar services, repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities or exposed finishes. Comply with requirements of any references to cutting and patching in other divisions of the Specifications.*

- B. *Contractor shall be responsible for repair and protection of existing items scheduled to remain.*

*END OF SECTION 01 45 00*

## SECTION 01 50 00

## TEMPORARY FACILITIES, CONTROLS AND SERVICES

## PART 1 – GENERAL

## 1.01 RELATED DOCUMENTS

- A. *Drawings and general provisions of the Contract, including General Conditions and other Division 1 Specifications, apply to this Section.*

## 1.02 SUMMARY

- A. *Section Includes:*
  - 1. *Definitions*
  - 2. *Project conditions and scheduling*
  - 3. *Temporary construction support facilities*
  - 4. *Special protection requirements*
  - 5. *Security – Also refer to Division 0 for detailed requirements*
  - 6. *Vehicular access and parking*
  - 7. *Termination and removal*

## 1.03 DEFINITIONS

- A. *Temporary Construction Support Facilities: Structures, fixtures and other built items required to accomplish the Work but which are not incorporated into the finished Work. Included are temporary enclosures, temporary signs, construction aids and miscellaneous facilities.*
- B. *Temporary Services: Activities and services required during construction that do not directly accomplish the Work. Included are waste disposal services, security and miscellaneous services.*

## 1.04 PROJECT CONDITIONS AND SCHEDULING

- A. *Comply with requirements of regulations, governing authorities and public utilities as to type, quantity, location and use of temporary facilities, utilities and services. Secure and maintain copies of permits, inspection reports or approvals for installation and use of temporary facilities and utilities.*
- B. *Maintain required temporary facilities until not needed or until Substantial Completion. Exceptions to this requirement may be made by Owner as indicated in above paragraph.*

## 1.05 QUALITY ASSURANCE

- A. *Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:*
  - 1. *Building code requirements.*
  - 2. *Health and safety regulations.*
  - 3. *Utility company regulations.*
  - 4. *Police, fire department, and rescue squad rules.*
  - 5. *Environmental protection regulations.*

- B. *Standards: Comply with NFPA 241 "Standard for Safeguarding Construction, Alteration, and Demolition Operations," ANSI A10 Series standards for "Safety Requirements for Construction and Demolition".*

## PART 2 – PRODUCTS

### 2.01 TEMPORARY CONSTRUCTION FACILITIES

- A. *Temporary Toilet Units: Provide self-contained, single-occupant toilet units of the chemical or aerated recirculation. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material. Provide hand washing and/or sanitizing stations.*
- B. *Fire Extinguishers: Provide hand-carried portable UL-rated Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated Class ABC, dry chemical extinguishers or a combination of extinguishers of NFPA recommended classes for the exposures. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.*

## PART 3 – EXECUTION

### 3.01 GENERAL INSTALLATION

- A. *Use qualified personnel or services for installation of temporary facilities. Provide each facility ready to use when needed to avoid delay. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as needed. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.*

### 3.02 CONSTRUCTION SUPPORT FACILITIES

- A. *Provide a dedicated area for the storage of tools and equipment within each phased work area. The Contractor will be required to secure all tools at the conclusion of each work day and maintain a log of equipment and tools located on site. Combustibles and hazardous materials shall not be stored overnight or at any time when construction personnel are not present. The Contractor shall notify the Owner and all such materials shall be approved prior to bringing them on-site.*
- B. *Temporary Enclosures: As required by the progress and sequencing of the Work, provide temporary enclosures for protection of the general public.*
  - 1. *Maintain protective barriers, vehicular barriers, temporary fencing, dust control barriers and sound control devices as needed for all phases of construction until final completion of the Project. Barriers and devices shall be coordinated with the staging and sequencing of the Work. Contractor shall be responsible for replacing established protective barriers and devices damaged or removed during construction and shall install any additional protection devices as required to perform the Work under this Contract.*
  - 2. *Provide temporary signs as required. Install signs where needed to inform personnel, vendors and public seeking entrance to the Project.*
  - 3. *Security, access and working requirements will be discussed at length during the preconstruction meeting and are outlined in Division 0 of these specifications.*



4. *The Contractor is responsible for all temporary construction, phasing, scheduling, material deliveries, and other items that affect the sequence of construction or scheduling of the Project.*
- C. *Sanitary Facilities: Sanitary facilities include temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for the type, number, location, operation, and maintenance of fixtures and facilities. Install where facilities will best serve the Project's needs. Provide applicable paper goods in support of each facility. Provide covered waste containers for used materials.*
1. *Toilets: Provide and maintain temporarily sited and self-contained toilet units until Substantial Completion on all Work.*
  2. *Wash Facilities: Provide and maintain a safety shower/eye wash facility with potable water at a location convenient for personnel.*
  3. *Drinking Water Facilities: Provide drinking water canisters or fixtures at convenient locations on the Project site. Include cup supply.*

### 3.03 TEMPORARY UTILITIES AND SERVICES

- A. *Telecommunications Services: Maintain cell phones for Project Manager and Superintendent.*
- B. *Water Services: Temporary water shall be provided and paid for by the Contractor unless scope of project is a renovation of an existing facility where water services are available.*
- C. *Collection and Disposal of Waste: Collect waste from construction areas and elsewhere on Project site **DAILY. Dedicated dumpsters for construction debris shall be provided.** Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold waste materials more than 7 calendar days during normal weather or 3 calendar days when the temperature is expected to rise above 80 deg F. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material lawfully.*

### 3.04 VEHICULAR ACCESS AND PARKING

- A. *Haul Routes: The Contractor shall be responsible for insuring that trucks providing delivery and/or hauling services to or from the Project site shall properly cover loads. Contractor shall keep the roads to the Project site and the Project site clear, free of mud, dirt, debris, or other materials that are deposited as a result of Contractor's hauling and delivery services. The Contractor is responsible for coordinating and scheduling hauling activities so that the traffic flow on the access road to the Project site is not disrupted at any time.*
- B. *Parking Areas: All parking for Contractor's employees, subcontractors' employees, and for vendors, delivery men, and visitors shall be on the Project site and in designated areas of the phasing Construction Documents.*
- C. *Traffic Control: The Contractor shall provide all traffic control on streets or drives adjacent to or on the Project site that is needed to facilitate the Contractor's Work and protect the public from activities associated with such work. These controls shall include signs, signals, barricades and flagmen, as necessary. The Contractor shall comply with all local, state, federal rules and regulations concerning the placement and use of traffic control devices. Contractor to submit traffic control plans as required by GDOT.*

### 3.05 TEMPORARY PROTECTION AND CONTROL

- A. *Environmental Protection: Provide protection, operate temporary facilities and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result. Maintain protective barriers, tree protection and erosion control devices until Final Completion of the Project. Contractor shall be responsible for replacing established protective barriers, tree protection and erosion control devices damaged or removed during construction and shall install any additional protection devices as required to perform the Work under the Contract. Contractor shall comply with all EPD and NPDES requirements and maintain logs as required. Such Logs shall also be placed on e-Builder® at the same time as updates are required by the regulatory agencies. Contractor shall be responsible for all site activities as required by EPD, NPDES, etc.*

### 3.06 MAINTENANCE, TERMINATION, AND REMOVAL

- A. *Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.*
- B. *Maintenance: Maintain facilities in good operating condition until Project completion.*
- C. *Termination and Removal: Unless the Architect requests that it be maintained longer, remove each temporary facility when the need has ended, when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference from the temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.*
1. *Materials and facilities that constitute temporary facilities are the Contractor's property. The Owner reserves the right to take possession of Project identification signs.*
  2. *Remove all trash and debris and restore areas to conditions required by the Contract.*

END OF SECTION 01 50 00

## SECTION 01 63 00

## PRODUCT SUBSTITUTION PROCEDURES

## PART 1 - GENERAL

## 1.01 RELATED DOCUMENTS

- A. *Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.*

## 1.02 SUMMARY

- A. *Section includes administrative and procedural requirements for substitutions.*
- B. *Related Sections:*
  - 1. *Divisions 2 through 11 Sections for specific requirements and limitations for substitutions.*

## 1.03 DEFINITIONS

- A. *Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.*
  - 1. *Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.*
  - 2. *Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.*

## PART 2 - PRODUCTS (Not Used)

## PART 3 - EXECUTION

## 3.01 PROCEDURES FOR SUBSTITUTION REQUESTS DURING BIDDING

- A. *If Contractor wishes to use products different from those indicated in the Contract Documents, the Contractor shall make a written application as described herein. The burden of proving equality of proposed substitutions shall rest with the Contractor. Substitution requests submitted directly by subcontractors or suppliers will NOT be considered. Substitutions will not be considered for acceptance when acceptance will require substantial revision of Contract Documents.*
- B. *Except as described elsewhere herein, requests for substitution will be considered only during the bidding period. Requests for substitutions must reach the office of Gwinnett County Purchasing by the deadline established in the Instructions to Bidders for the receipt of questions and interpretations. Requests received by the Owner after this date will not be considered. Acceptable substitutions will be added to the Contact Documents by addendum; no verbal approvals will be valid.*

NOTE: SUBSTITUTION REQUESTS, OR APPROVED MANUFACTURER REQUESTS SENT DIRECTLY TO THE ARCHITECT WILL NOT BE CONSIDERED. ALL REQUESTS MUST BE SUBMITTED COMPLETE TO GWINNETT COUNTY PURCHASING IN ACCORDANCE WITH THE INSTRUCTION TO BIDDERS.

- C. Contractor shall submit written request with complete data substantiating compliance of the proposed product with requirements of Contract Documents. Submit request on a standard form, with three (3) copies of each request and supporting data. Only one request for each product will be considered. Include the following data with the request:
1. Project name.
  2. Contractor name.
  3. Date of request.
  4. Identification of product by Specification reference.
  5. Complete data substantiating compliance of proposed substitution with requirements stated in Contract Documents:
    - a. Product identification, including manufacturer's name and address.
    - b. Manufacturer's literature; identify:
      - 1) Product description.
      - 2) Reference standards.
      - 3) Performance and test data.
      - 4) Manufacturer's recommendations for use and installation.
      - 5) Dimensions and space requirements.
    - c. Samples, as applicable.
    - d. Drawings, as applicable.
    - e. Name and address of similar projects on which product has been used, and date of each installation.
    - f. Reports from independent testing laboratories, verified experience records from previous users and other printed or written information valid in the circumstances will be considered.
  6. Provide an itemized comparison between proposed substitution and product specified; list all variations AND a detailed explanation of how the proposed product meets or exceeds the requirements of the specifications. Website addresses are NOT an acceptable means of compliance with this requirement. Neither the Owner nor the Architect will perform ANY research in connection with product substitutions. It is the responsibility of the proposer to demonstrate full compliance with these specifications and basis of design products.
  7. Net amount of change in Contract Sum (if applicable).
  8. Information on any changes caused in construction schedule.
  9. Description of any changes that will be required in other work or products if substitute product is accepted.
  10. Designation of availability of maintenance services and sources of replacement materials.

NOTE: SUBMISSIONS THAT DO NOT INCLUDE ALL INFORMATION WILL BE DEEMED INCOMPLETE AND NOT CONSIDERED.

- D. Architect's determination of acceptability of proposed submissions will be made based only on data submitted. In accepting a substitution, the Architect does not warrant that the product meets all express requirements of the Contract Documents. The approved substitution is subject to the same subsequent review and approval procedures as the products originally specified.

- E. Contractor shall coordinate all required components and accessories required to make any substitution complete and operable as intended by the basis of design product indicated in the contract documents including all work required for installation of accepted substitutions with interfacing work. The contractor shall bear any and all design costs required to make approved changes in the Work to properly incorporate substitutions. The contractor shall waive all claims for time and additional costs related to use of acceptable substitutions which become apparent following acceptance, including electrical, structural, mechanical, and plumbing requirements associated with the proposed substitution.
- F. Substitute products shall not be ordered or installed without written acceptance by the Architect and Owner. Unless substitutions are received and approved as described above, the Contractor shall be responsible for furnishing materials or products in accordance with the Contract Documents.

### 3.02 SUBSTITUTION REQUESTS OUTSIDE OF BIDDING PERIOD

- A. Substitutions will not be considered between the bid date and award of the Contract.
- B. In the event that specified items cannot be delivered to the Project site and incorporated into the Work at such times and in such quantities as to cause no delay, provided timely orders are placed, then Contractor may request a substitution in the manner described in this section. Should the accepted substitution provide a cost savings, the contract sum will be adjusted by Change Order with Owner receiving the benefit of the net savings. No increase in the Contract Sum will be allowed on substitutions made after the receipt of bid except where the Contractor can verify a timely placement of orders appropriate to the materials and conditions involved. Contractor's inability to obtain specified items due to failure to place timely orders will not be considered reason for authorizing substitutions. **Substitutions will not be considered when they are indicated or implied on shop drawings or product data. Substitution requests shall be submitted by the Contractor to the Architect via e-Builder® using the attached template.**
- C. A substitution also may be considered after contract award when the proposed substitution provides a definitive reduction in the Contract Sum. Submittal and consideration of said substitutions shall be at the direction and discretion of the Owner. The process for review of such substitutions will be as described in this section.

### 3.03 PRODUCT EVALUATIONS

- A. In making a formal request for a substitution the Contractor represents that:
1. They have investigated the proposed product and has determined that it is equal to or superior in all respects to that specified.
  2. They shall provide the same warranties for substitutions as for product specified.
  3. They shall be responsible for determining that materials requested for substitution are free of known hazardous substances.
  4. They shall coordinate installation of accepted substitution into the Work, and will make such changes as may be required for the Work to be completed in all respects.

END OF SECTION 01 63 00

**SUBSTITUTION REQUEST**

DATE:

SPECIFIED ITEM:

Section Line Number Paragraph Description:

The undersigned requests consideration of the following:

PROPOSED SUBSTITUTION:

Attached data includes product description, specifications, drawings, photographs, performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents which the proposed substitution will require for its proper installation.

The undersigned certifies that the following paragraphs, unless modified by attachments, are correct:

The proposed substitution does not affect dimensions shown on drawings.

The undersigned will pay for changes to the building design, including engineering design, detailing, and construction cost caused by the request substitution.

The proposed substitution will have no adverse effect on other trades, the construction schedule, or specified warranty requirements.

Maintenance and service parts will be locally available for the proposed substitution.

The undersigned further states that the function, appearance, and quality of the proposed substitution are equivalent or superior to the specified item.

Cost Savings: \_\_\_\_\_

Cost Increase: \_\_\_\_\_

Time Savings (days): \_\_\_\_\_

Time Increase (days): \_\_\_\_\_

Submitted by: \_\_\_\_\_

Signature: \_\_\_\_\_

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

Date: \_\_\_\_\_

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

Attachments: \_\_\_\_\_

NO SUBSTITUTION REQUEST IS APPROVED UNLESS IT IS INCLUDED IN THE CONTRACT DOCUMENTS BY ADDENDUM OR CHANGE ORDER.

All Approved Substitutions will be listed by Addendum or issued as a Change Order.

## SECTION 01 65 00

## MATERIAL AND EQUIPMENT HANDLING AND STORAGE

## PART 1 – GENERAL

## 1.01 RELATED DOCUMENTS

- A. *Drawings and general provisions of the Contract, including General Conditions and other Division 1 Specification Sections, apply to this section.*

## 1.02 SUMMARY

- A. *Section Includes:*
  - 1. *Procedures for transportation and handling.*
  - 2. *Procedures for delivery and receiving.*
  - 3. *Procedures for storage.*

## 1.03 DESCRIPTION

- A. *Requirements of this Section are general in nature. Refer to individual sections of the Specifications for additional, specific requirements.*

## PART 2 – PRODUCTS (Not Used)

## PART 3 – EXECUTION

## 3.01 PROCEDURES FOR TRANSPORTATION AND HANDLING

- A. *Require suppliers to deliver manufactured Products to Project site in manufacturers' original packaging with labels and seals intact. Labels shall indicate manufacturer, product name, application instructions and fire resistive classifications.*
- B. *Require suppliers to package products and materials in a manner that will protect them from damage during shipping, handling and storage. Arrange to transport products and materials by methods that avoid damage.*

## 3.02 PROCEDURES FOR DELIVERY AND RECEIVING

- A. *Provide labor and equipment adequate to handle delivery of products and materials by methods that prevent damage. Provide additional protection as necessary during handling to prevent damage to products and packaging. Lift large and heavy components at designated lift points only.*
- B. *Schedule deliveries to minimize long-term storage at the Project site and prevent overcrowding of construction spaces. Coordinate deliveries with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged or sensitive to deterioration, theft and other losses.*

- C. *Promptly inspect all materials and products upon delivery to ensure proper material, color, type and quantity, and to ensure that materials are undamaged and properly protected. Verify compliance with requirements of Contract Documents and approved submittals.*
- D. *Clearly mark partial deliveries to identify contents, permit easy accumulation of entire delivery and facilitate assembly.*

### 3.03 PROCEDURES FOR STORAGE

- A. *Store materials and equipment in a safe and protected manner. Observe manufacturer's recommendations for positioning, separation and ventilation, as applicable.*
- B. *Store materials at the Project site in a manner that will facilitate inspection, measurement, or counting of units. Store unpacked or loose products on shelves, in bins, or in neat groupings of like items.*
- C. *Flammable or Hazardous Materials:*
  - 1. *Store minimum quantities in protected areas.*
  - 2. *Provide appropriate type fire extinguisher near said storage areas.*
  - 3. *Observe manufacturer's precautions and applicable ordinances and regulations.*
  - 4. *Flammable and Hazardous Materials shall not be stored inside nearby building.*

END OF SECTION 01 65 00



## SECTION 01 73 00

## CONSTRUCTION EXECUTION

## PART 1 – GENERAL

## 1.01 RELATED DOCUMENTS

- A. *Drawings and general provisions of the contract, including General Conditions and other Division 1 Specification Sections, apply to this Section.*

## 1.02 SUMMARY

- A. *Section Includes:*
  - 1. *General examination requirements*
  - 2. *General installation procedures and requirements*
  - 3. *Installation requirements for components*
  - 4. *Safety precautions and requirements*
  - 5. *Phasing Requirements*

## 1.03 DEFINITIONS

- A. *Damage: Any sort of deterioration whether due to weather, normal wear and tear, accident, or abuse; resulting in soiling, marring, breakage, corrosion, rotting or impairment of function.*
- B. *Debris: Rubbish, waste materials, litter, volatile wastes, and similar materials.*

## PART 2 – PRODUCTS (Not Used)

## PART 3 – EXECUTION

## 3.01 GENERAL EXAMINATION REQUIREMENTS

- A. *Prior to performing work, examine the applicable conditions under which the work is to be performed. If unsafe or otherwise unsatisfactory conditions are encountered, take corrective action before proceeding.*
- B. *Conditions that could have been discovered by examination of Project site and Drawings will not be allowed as cause for claims for extra work. In particular these conditions include:*
  - 1. *Underground utilities.*
  - 2. *Existing facilities, structures and appurtenances, on the site of the Project with which the Contractor must coordinate during construction and that can be reasonably discerned.*
  - 3. *Space requirements of items shown diagrammatically on Drawings.*
  - 4. *Limitations on transport and storage of materials and equipment.*
  - 5. *Locations of points of connections to utilities.*

### 3.02 GENERAL PREPARATION REQUIREMENTS

- A. *Take field measurements as required to fit work properly and recheck measurements prior to installing each product. Notify Architect promptly of any discrepancy in dimensions between Drawings and field measurements that will affect a current or anticipated installation.*

### 3.03 WORKING TIMES

- A. *The basic hours of work for the Contractor shall be 7:00 a.m. through 5:00 p.m., Monday through Friday within Gwinnett County but Contractor shall follow work and noise ordinances based on Authority Having Jurisdiction (AHJ). No work will be allowed outside of these hours unless scheduled in advance. The Contractor shall notify the Owner **72 hours in advance** for scheduling off-hours work.*

### 3.04 GENERAL CONSTRUCTION PROCEDURES

- A. *All construction shall be in accordance with all applicable federal, state, and local codes and regulations.*
- B. *Accurately locate the work and components of the work.*
- C. *The Contractor is responsible for all temporary construction, phasing, scheduling, material deliveries, and other items that affect the sequence of construction or scheduling of the Project and shall coordinate with the Owner's facility operations.*
- D. *The Contractor shall verify location of existing utilities before commencing work, and care shall be taken to protect all utilities which are to remain.*

### 3.05 CLEANING AND PROTECTION

- A. *Keep the work site free of waste materials and debris; remove such waste periodically. Maintain level of cleanliness necessary for proper execution of the work.*
- B. *Remove debris from concealed spaces and pipes.*
- C. *Keep installed work clean, and clean again when soiled by other operations. Protect installed work from damage.*
  - 1. *Provide protective coverings for work that may be damaged by subsequent operations.*
  - 2. *Maintain protective coverings until date of Substantial Completion.*

### 3.06 SAFETY PRECAUTIONS AND REQUIREMENTS

- A. *Take precautions to prevent fires and to facilitate fire-fighting operations.*
  - 1. *Store flammable materials in non-combustible containers, store away from potential fire sources; remove flammable waste regularly; provide adequate ventilation when using flammable or explosive substances.*
  - 2. *Carefully supervise the operation of potential fire sources including on-site welding and cutting.*
  - 3. *Keep temporary and permanent firefighting facilities readily accessible; keep firefighting routes open.*

- B. *Take precautions to prevent accidents due to physical hazards.*
1. *Provide barricades, signs and warning lights as required to protect personnel and public from hazards and inform them thereof. Barricades and temporary safety railings shall comply with applicable safety regulations.*
  2. *Provide and require use of safety equipment, clothing and accessories as required by the construction activity and applicable safety regulations. This is a hard hat job; protective headgear must be worn at all times in the construction period.*
- C. *Take precautions to prevent pollution of air, water and soil.*
1. *Comply with government regulatory requirements for disposal of waste.*
  2. *Do not dispose of volatile wastes such as petroleum products or other chemicals in storm or sanitary drains or on the grounds surrounding the Project site.*
  3. *Do not handle or dispose of waste materials, debris, cleaning compounds or other chemicals in a manner that will be harmful to plant life at Project site and grounds adjacent to the Project site.*
  4. *Comply with regulations and authorities having jurisdiction over safety and environmental standards affecting the Project.*
- D. *Take precautions not to allow noxious fumes, gases, or excessive amounts of dust to leave the work area. Notify the Owner at least 24 hours in advance of any scheduled activities that might lead to such emissions.*
- E. *Provide temporary supports and construction as required to prevent movement, collapse, or structural failure of site work items or any elements thereof.*
- F. *Locate and mark all overhead utility lines in areas of work and access points.*
- G. *Use of tobacco products; i.e., cigarettes, vaping, snuff, chewing tobacco, etc.; is strictly prohibited on all county property.***
- H. *Use of mobile phones, smartwatches, tablets, etc., is prohibited on the work site except for Contractor Supervision personnel and Subcontractor foremen.***
- I. *Contractor to comply with all County and local government noise ordinances, as well as days and times which construction activities are allowed as per Authorities Having Jurisdiction (AHJ).*

END OF SECTION 01 73 00

SECTION 01 73 50  
CUTTING AND PATCHING

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. *Drawings and other general provisions of the Contract, including General Conditions and other Division 1 Specification Sections, apply to this Section.*

1.02 SUMMARY

- A. *Section Includes:*
1. *Description*
  2. *Submittals*
  3. *Materials*
  4. *Examination prior to implementation*
  5. *Preparation*
  6. *Workmanship*
  7. *Cutting*
  8. *Patching*
  9. *Cleaning*

1.03 DESCRIPTION

- A. *Contractor shall be responsible for cutting, and patching required to complete the Work including the following:*
1. *Removing and replacing defective work or work not conforming to requirements of Contract Documents.*
- B. *Costs incurred defective work shall include costs for services of Owner's consultants.*

1.04 SUBMITTALS

- A. *Prior to cutting and patching of work in place, the Contractor shall submit a written action plan to the Architect. This action plan shall be submitted at least three (3) calendar days in advance of performing any cutting or alterations and shall meet the requirements set forth in this section.*
1. *The written action plan must be submitted in advance of any cutting that affects the following:*
    - a. *Work of Owner or any separate contract.*
    - b. *Aesthetic qualities of visually exposed elements.*
  2. *The Contractor shall include the following information in the action plan:*
    - a. *Identification of Project.*
    - b. *Description of affected work.*
    - c. *Extent of cutting and patching and how it is to be performed; indication of why it cannot be avoided.*
    - d. *Anticipated results in terms of changes to demolition; including changes to other significant visual elements.*
    - e. *Products proposed for use.*

- f. *Firms or entities that will perform the work.*
  - g. *Utilities that will be disturbed or affected, including those that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.*
  - h. *Alternate methods, if applicable.*
  - i. *Dates and times when cutting and patching work is to be performed.*
3. *Should conditions of the work or the schedule indicate a change of products from the original installation, Contractor shall submit a request for substitution as specified in section Product Substitution Procedures.*
- B. *Approval by the Architect to proceed with cutting and patching does not waive the Architect's right to later require complete removal and replacement of a part of the Work found to be unsatisfactory.*

## PART 2 – PRODUCTS

### 2.01 MATERIALS

- A. *Materials for patching and replacement of work removed: Comply with Specification Sections for type of work to be performed. Use materials identical to original installed materials. If identical materials cannot be used where exposed surfaces are involved, use materials that match original adjacent surfaces to the fullest extent possible with regard to visual effect. Use materials whose installed performance will equal or surpass that of original materials installed.*

## PART 3 – EXECUTION

### 3.01 EXAMINATION

- A. *Prior to proceeding with work, examine Project conditions and surfaces to receive work including elements subject to damage or movement during cutting and patching operations. Take corrective action if unsafe or unsatisfactory conditions are encountered or anticipated.*
- B. *After cutting, uncovering or removing, inspect conditions affecting installation of products or performance of further work. If unsatisfactory or questionable conditions are encountered, report such conditions in writing to Architect and do not proceed with work until Architect has provided further instructions.*

### 3.02 PREPARATION

- A. *Temporary Supports: Provide adequate temporary supports for work to be cut and as necessary to insure the structural integrity of the affected portion of the work.*
- B. *Protection:*
- 1. *Protect adjacent construction during cutting and patching work to prevent damage. Provide all materials, devices and methods as required to protect work and adjacent surfaces.*
  - 2. *Take precautions necessary to avoid cutting operable pipes, conduits or ductwork serving the building including those scheduled to be removed or relocated until provisions have been made to bypass them.*

3. *Protect portions of the work that may be exposed to the elements by cutting and patching.*

### 3.03 WORKMANSHIP

- A. *Employ skilled workers to perform cutting and patching work. To the greatest extent possible, retain installers or fabricators to perform cutting and patching work, especially for visually exposed finished surfaces and weather-exposed, waterproofed or moisture resistant elements.*
- B. *Perform demolition and cutting work by methods that will not damage adjacent construction and will provide proper surfaces for patching work.*
- C. *Execute work, by methods which will prevent settlement or damage to other work.*
- D. *Elements of a structural or supporting nature, including those which are concealed and exposed after removal of work for repairs or patching, shall be inspected and the Architect notified should additional work be indicated due to loss of structural integrity, rot, rust, corrosion or other similar conditions.*
- E. *Restore work that has been cut and removed so that completed Work is in accordance with requirements of Contract Documents. Perform all installations, fittings, and adjustments of materials or products to comply with manufacturers' product data, its intended functions, specified tolerances and finishes.*
- F. *Fit restored work airtight around pipes, sleeves, ducts, conduit and other penetrations through surfaces.*
- G. *Refinish surfaces to provide an even, uniform finish to match adjacent finishes. For continuous surfaces, refinish to nearest intersection. For an assembly, refinish entire unit.*

### 3.04 CUTTING

- A. *Perform cutting using methods least likely to damage adjoining construction or elements to be retained. Where possible, review proposed procedures with original installer; comply with original installer's recommendations.*
- B. *Where cutting is required, use tools designed for sawing, cutting and grinding, not hammering or chopping. Cut openings neat to sizes required with minimum disturbances to adjacent surfaces. Cut or drill from exposed or finished side into concealed surfaces to avoid marring finished surfaces.*
- C. *Perform cutting through concrete or masonry using cutting machines designed for this purpose such as carborundum saws or diamond core drills.*

### 3.05 PATCHING

- A. *Patch with methods and materials that are the least obvious. Restore exposed finishes of patched areas and adjacent areas in a manner that will be indistinguishable in the finished Work.*
- B. *Where possible, inspect and test patched areas to demonstrate integrity of installation.*

3.06 CLEANING

- A. *Clean areas and spaces where cutting and patching has been performed or where such work areas were accessed.*

END OF SECTION 01 73 50

## SECTION 01 74 00

## CLEANING

## PART 1 – GENERAL

## 1.01 RELATED DOCUMENTS

- A. *Drawings and general provisions of the Contract, including General Conditions and other Division 1 Specification Sections, apply to this Section.*

## 1.02 SUMMARY

- A. *This Section includes administrative and procedural requirements for cleaning during construction and final cleaning prior to Substantial Completion.*
- B. *Related Sections: The following Sections contain requirements that relate to this Section:*
  - 1. *Division 1 Section "Construction Execution".*
  - 2. *Special cleaning requirements for specific elements are included in appropriate Sections of Divisions 2 through 11.*

## PART 2 – PRODUCTS

## 2.01 MATERIALS (NOT USED)

## PART 3 – EXECUTION

## 3.01 CLEANING DURING CONSTRUCTION

- A. *During construction period, Contractor shall keep the Project site, and adjacent properties free from accumulation of debris and waste materials at all times. The Contractor shall execute all cleaning procedures necessary to maintain these conditions.*
- B. *Provide adequate on-site containers for waste collection. Place all waste materials and debris in said containers in an expeditious manner to prevent accumulation. Remove waste from Project site when containers become full. Legally dispose of all such waste and debris off Project site. Dispose of no materials in adjacent waterways.*
- C. *Control windblown dust and materials subject to blowing. Wet down materials as necessary to prevent such occurrences.*
- D. *Allow no accumulation of food scraps or organic debris that may contribute to spread of rats, roaches, and other vermin.*
- E. *Allow no graffiti or similar distasteful comments or illustrations to be authored on building materials or on any temporary or permanent construction on the Project site. Contractor shall monitor the Project for violations of this item, and shall take action to clean, cover, or replace subject materials as necessary.*



## 3.02 FINAL CLEANING

- A. *Prior to Date of Substantial Completion, clean all finished surfaces. All said cleaning shall be performed prior to Contractor's request that the Project or portion thereof be inspected for Substantial Completion. For the "final cleaning" employ experienced workers or professional cleaners.*
- B. *Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for the entire Project or a portion of the Project.*
1. *Clean the Project Site, yard and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and foreign substances.*
  2. *Sweep paved areas and concrete surfaces broom clean. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.*
  3. *Remove petrochemical spills, stains, and other foreign deposits.*
  4. *Remove tools, construction equipment, machinery, and surplus material from the site which is not required to be turned over to the Owner.*
  5. *Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.*
  6. *Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar places.*
  7. *Broom clean concrete floors in unoccupied spaces.*
  8. *Vacuum clean carpet and similar soft services, removing debris and excess nap. Shampoo if required to remove all stains.*
  9. *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. Polish mirrors and glass, taking care not to scratch surfaces.*
  10. *Remove labels that are not permanent labels.*
  11. *Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or replaced or that already show evidence of repair or restoration.*
    - a. *Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.*
  12. *Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.*
  13. *Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.*
  14. *Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.*
  15. *Clean ducts, blowers, and coils if units were operated without filters during construction.*
  16. *Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs and defective and noisy starters in fluorescent and mercury vapor fixtures.*
  17. *Leave the Project site clean.*
- C. *Removal of Protection: Remove temporary protection and facilities installed during construction to protect previously completed installations during the remainder of the construction period.*

- D. *Compliances: Comply with governing regulations and safety standards for cleaning operations. Remove waste materials from the site and dispose of lawfully. Comply fully with federal, state and local environmental and antipollution regulations.*

### 3.03 GENERAL SITE MAINTENANCE

- A. *Take precautions to prevent pollution of air, water and soil.*
1. *Do not burn or bury waste materials or debris on Project site. Comply with government regulatory and legal requirements for disposal of waste.*
  2. *Do not dispose of volatile wastes such as paint, mineral spirits, oils or paint thinner in storm or sanitary drains, on pavements or in gutters of Project site.*
  3. *Do not handle or dispose of waste materials, debris, cleaning compounds or other chemicals in a manner that will contaminate the soil or be harmful to plant life on the Project site.*
  4. *Comply with laws, rules regulations, ordinances, codes and authorities having jurisdiction over safety and environmental standards affecting the Project.*
- B. *Minimize discharge of rainwater and effluent into sewer and adjacent waterways.*
1. *Provide temporary means of drainage to prevent flooding and ponding on the Project site.*
  2. *Prevent site erosion due to stormwater runoff.*
  3. *Control sediment discharges; filter out soil, debris and contaminants.*
  4. *Comply with all laws, rules, regulations, ordinances, codes and other legal requirements governing erosion control and stormwater runoff both on the Project site and leaving the Project site.*
- C. *Keep adjacent public ways free of debris, hazardous and unsanitary conditions and nuisances. Provide adequate traffic control by means of signs, signals and flagmen, as necessary.*

END OF SECTION 01 74 00

## SECTION 01 77 00

## CONTRACT CLOSE-OUT

## PART 1 – GENERAL

## 1.01 RELATED DOCUMENTS

- A. *Drawings and general provisions of the Contract, including General Conditions and other Division 1 Specification Sections, apply to this Section.*

## 1.02 SUMMARY

- A. *Section Includes:*
  - 1. *Substantial Completion Procedures*
  - 2. *Final Completion Procedures*

## 1.03 DEFINITIONS

- A. *Substantial Completion: The time at which the Work is sufficiently complete in accordance with the Contract Documents so that the County can occupy or use the Work for its intended purpose without disruption.*
- B. *Final Completion: The stage at which all the Work has been satisfactorily completed in accordance with the Contract Documents and all required close-out documents and other required deliverables have been provided, and approved, to the Architect and Owner.*
- C. *List of Incomplete Work: A comprehensive list of items to be completed or corrected, prepared by the Contractor for the purpose of obtaining certification of Substantial Completion. This list is also referred to as a "punch list."*

## 1.04 SUBSTANTIAL COMPLETION PROCEDURES

- A. *The Architect and Owner will perform one (1) inspection for Substantial Completion, upon the written request of the Contractor. One Certificate of Substantial Completion will be issued; this certificate will include all of the Work and not a portion or portions. If the Architect is unable to issue the Certificate of Substantial Completion because the Work is not considered to be substantially complete, the Contractor shall pay all subsequent inspection costs, including compensation for the Architect's services.*
- B. *Prior to requesting Architect's inspection for Certificate of Substantial Completion, complete the following activities and list all known exceptions in the request:*
  - 1. *Obtain any applicable permits from authorities having jurisdiction. Said certificates and permits (if applicable) shall enable County to have full and unrestricted use of the Work, and unrestricted access to services and utilities.*
  - 2. *Remove all temporary facilities from the Project site.*
  - 3. *Complete all other activities specified by the Contract Documents to be completed before Substantial Completion.*
- C. *Prior to requesting Architect's inspections for Substantial Completion, complete the following submittals:*
  - 1. *List of incomplete work and cost associated with incomplete work.*

2. *All submittals specified in the Contract Documents to be completed before Substantial Completion.*
- D. *On receipt of a written request for inspection, the Architect and Owner will either proceed with inspection or advise the Contractor of unfilled requirements. The Architect will prepare the Certificate of Substantial Completion following the inspection or advise the Contractor of Work that must be completed or corrected before the Certificate will be issued. In the latter case, any follow-up inspections that must occur prior to granting Substantial Completion will be considered additional services by the Architect and will be compensated by the Contractor. The Certificate of Substantial Completion will be accompanied as necessary by a list of deficient work items (a Punch list) that must be completed or corrected by the Contractor prior to them requesting an inspection by the Architect and Owner for final acceptance and final completion of the Project.*
- E. *Upon completion of the inspection and determination that the Work is substantially complete; the Architect shall prepare a Certificate of Substantial Completion (on AIA Form No. G704, 2000 edition, or its equivalent) establishing a date when the Project is sufficiently complete and suitable for the use it is intended, and identifying a Punch list. The Architect and County shall execute said Certificate.*
- F. *The Contractor shall coordinate with the Owner the transfer of the building's utilities to the Owner's account.*

#### 1.05 FINAL COMPLETION PROCEDURES

- A. *The Contractor's written request for final inspection and final application for payment may coincide. The Architect will perform only one inspection for Final Completion, upon the request of the Contractor. The Contractor should take care that all requirements for Final Completion as indicated in the paragraphs below have been completed prior to submitting their request. If the Architect is unable to issue the certificate for final payment because the Work is not complete, the Contractor shall pay all subsequent inspection costs, including compensation for the Architect's services.*
- B. *Prior to requesting Architect's final inspection for certificate of Final Completion and Final Payment, complete the following items and list any known exceptions in the request:*
  1. *Submit a copy of the Punch list of itemized work to be completed or corrected, stating that each item has been completed, corrected or otherwise resolved for acceptance.*
  2. *Submit final pay application accounting for all changes in Contract Sum, with final releases and support not previously submitted and accepted, including Consent of Surety to Final Payment.*
  3. *Submit, workmanship bonds, maintenance agreements, final certifications and similar documents required by Contract Documents or related to installed equipment and materials. Submit required closeout submittals listed herein.*
- C. *Closeout Submittals:*
  1. *Warranties: In accordance with Contract Documents, Contractor shall furnish their one-year warranty in writing, on the form bound hereinafter. Warranties for a longer period of time may be required by the Specifications. These warranties of a longer period also shall be assembled and submitted. Unless otherwise specified, all warranties shall commence on the Date of Substantial Completion. The warranties shall state the date on which they expire.*

2. Statutory Affidavit: Before final closeout of the Work, the Contractor and Subcontractors shall furnish a Statutory Affidavit in the form attached to this section.
3. Inspection Reports (as required): Secure and submit to the Owner, through the Architect, a certification from the local government agency or agencies having jurisdiction that the construction has been inspected and that the Project is acceptable.
4. Certificate of Substantial Completion and Fire Marshal Certificate of Occupancy (if applicable) and Certificate of Final Completion:  
On final inspection of the Project, submit a Certificate of Final Completion verifying that Punch list items are complete and that all close out documents and payments are in order (as shown by the accompanying Project Close-Out Check-Off List), and establishing the Date of Final Acceptance.
5. Project Record Documents, Maintenance & Operations Manuals, Materials & Services List, and Closeout Documents (warranties in excess of 1 year, attic stock, O&M data)
6. **All documents must be submitted through the e-Builder system.**

PROJECT CLOSE-OUT CHECK-OFF LIST

<u>DOCUMENTS</u>	<u>NO. OF COPIES</u>	<u>DATE RECEIVED</u>
<i>Contractor's Warranty</i>	_____	_____
<i>Statutory Affidavit (Contractor's)</i>	_____	_____
<i>Statutory Affidavit (Sub-contractors')</i>	_____	_____
<i>Record Drawings (As-builts)</i>	_____	_____
<i>O&amp;M Manuals with Approved Submittals</i>	_____	_____
<i>Training Manuals and Videos</i>	_____	_____
<i>Fixed Assets Log (as shown at the end of this section)</i>	_____	_____
<i>Conducted Owner Trainings (refer to Section 01 81 50)</i>	_____	_____
<i>Torque Record for Electrical Connections</i>	_____	_____



CLOSE-OUT CHECK-OFF LIST  
(Continued)

	<u>NO. OF</u>	<u>DATE</u>
	<u>COPIES RECEIVED</u>	
<u>DOCUMENTS</u>		
Punch List Items Completed	_____	_____
Certificate of Substantial Completion	_____	_____
Certificate of Final Completion	_____	_____
Consent of Surety of Final Payment	_____	_____

I certify that, being familiar with the Contract Documents for this Project, to the best of my knowledge, the items checked off hereinabove constitute all that are applicable to this Project.

Date Submitted to the Architect: \_\_\_\_\_

Date Submitted to the Owner: \_\_\_\_\_

\_\_\_\_\_  
Contractor:

\_\_\_\_\_  
Architect:







STATUTORY AFFIDAVIT

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

FROM: \_\_\_\_\_  
TO: \_\_\_\_\_

RE: Contract entered into the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_, between the above mentioned parties for the construction of \_\_\_\_\_ 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 material, men, subcontractors, mechanics, and laborers have been paid and satisfied in full, and that there are no outstanding claims of any character 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 County.

The undersigned makes this affidavit as provided by law and for the purpose of receiving final payment in full settlement of all claims arising under or by virtue of the contract, and acceptance of such payment is acknowledged as a release of the County from any and all claims under or by virtue of the contract.

IN WITNESS WHEREOF, the undersigned has signed and sealed this instrument this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

Personally appeared before the undersigned, \_\_\_\_\_ who, after being duly sworn, depose(s) and say(s) that the facts stated in the above affidavit are true.

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

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

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

CERTIFICATE OF FINAL COMPLETION

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

ARCHITECT: \_\_\_\_\_ BONDING CO.: \_\_\_\_\_

PROJECT NAME: \_\_\_\_\_

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

(Name, Address) \_\_\_\_\_

\_\_\_\_\_

TO (OWNER):

THIS CERTIFICATE COVERS THE ENTIRE PROJECT

By execution of this document, the Contractor and Architect each certify that the work performed under this Contract has been reviewed at a final inspection on \_\_\_\_\_, and found to be complete as verified by the attached Project Close-Out Check-Off List, and the County accepts the Project as complete on the last date of this Certificate. Final payment to the Contractor is authorized. Execution and acceptance of this Certificate by the County, shall in no way waive or void any conditions of the Contract Documents.

A certificate of Substantial Completion has been issued establishing \_\_\_\_\_, as the date of beneficial use and the commencement of all Warranties and Guarantees required by the Contract Documents.

\_\_\_\_\_  
ARCHITECT BY DATE

\_\_\_\_\_  
CONTRACTOR BY DATE

\_\_\_\_\_  
OWNER BY DATE

END OF SECTION 01 77 00

## SECTION 01 78 20

## OPERATIONS AND MAINTENANCE DATA

## PART 1 – GENERAL

## 1.01 RELATED DOCUMENTS

- A. *Drawings and general provisions of the Contract, including General Conditions and other Division 1 Specification Sections, apply to this Section.*

## 1.02 SUMMARY

- A. *This Section includes administrative and procedural requirements for operation and maintenance manuals, including the following:*
1. *Preparing and submitting operation and maintenance manuals for building operating systems and equipment.*
  2. *Preparing and submitting instruction manuals covering the care, preservation, and maintenance of architectural products and finishes.*
  3. *Instruction of the Owner's operating personnel in the operation and maintenance and recommended preventative maintenance requirements of building systems and equipment.*
- B. *Related Sections: The following sections contain requirements that relate to this section:*
1. *Division 1 Section "Submittals", specifies preparation of Shop Drawings and Product Data.*
  2. *Division 1 Section "Contract Closeout", specifies general closeout requirements.*
  3. *Division 1 Section "Project Record Documents", specifies record document requirements.*
  4. *Appropriate Sections of Divisions 2 through 11 specify special operation and maintenance data requirements for specific pieces of equipment or building operating systems.*

## 1.03 QUALITY ASSURANCE

- A. *Maintenance Manual Preparation: In preparation of maintenance manuals, use personnel thoroughly trained and experienced in operation and maintenance of equipment or system involved.*
1. *Where maintenance manuals require written instructions, use personnel skilled in technical writing where necessary for communication of essential data.*
  2. *Where maintenance manuals require drawings or diagrams, use draftsmen capable of preparing drawings clearly in an understandable format.*
- B. *Instructions for the Owner's Personnel: Use experienced instructors thoroughly trained and experienced in operation and maintenance of equipment or system involved to instruct the Owner's operation and maintenance personnel.*

## 1.04 SUBMITTALS

- A. *Submittal Schedule: Comply with the following schedule for submitting operation and maintenance manuals:*
1. *Before Substantial Completion, when each installation that requires operation and maintenance manuals is nominally complete, submit a draft copy of each manual to the Architect for review. Include a complete index or table of contents of each manual. The Architect will return the draft with comments within 15 calendar days of receipt.*
  2. *Contractor must incorporate all of Architect's revisions and comments and submit final acceptable operations and maintenance manuals to Architect prior to requesting Final Completion on the Project.*
- B. *Form of Submittal: Prepare operation and maintenance manuals in the form of an instructional manual for use by the Owner's operating personnel. Organize into suitable folders of manageable size. Where possible, assemble instructions for similar equipment into a single binder. Submit digital copy to Architect for review via e-Builder®. Once all documents have been reviewed by Architect as complete, submit a digital copy to Architect for distribution to Owner.*
1. *Digital files and folders shall be structured as follows:*

(Main Folder) **Gwinnett County Senior Services Center Loading Dock Project Close Out Documents**

    - (files) **document title.pdf** – Refer to section Contract Closeouts for list of checklists, affidavits and certificates to be saved here as individual PDF files.
    - (file) **Schedule of Contacts.pdf** – List, in table format, contact information for each subcontractor completing Work on project. Headings should read: Scope of Work; Contractor Name; Contractor Address; Contractor email; Contractor Phone.
    - (folder) **Final Waivers**
      - (files) **Company Name – Waiver.pdf** – Provide pdf file of each individually
    - (folder) **Guarantees** (one year guarantee from each subcontractor)
      - (files) **Company Name – Guarantee.pdf** – Provide pdf file of each individually
    - (folder) **Extended Warranties** (refer to section Warranties and Divisions 02-34 specifications for requirements)
      - (files) **Product Name – Warranty.pdf** – Provide pdf file of each individually
    - (folder) **Equipment and Systems O & M**
      - (subfolders) **Manual Title Model #** – Refer to sections Project Record Documents and Operations and Maintenance Data for requirements in addition to those listed below.
        - (subfolders as dividers)

- (folder) **Material and Finishes O & M**
    - (subfolders) **Manual Title Model #** – Refer to section Project Record Documents and Divisions 02-34 specifications for requirements in addition to those listed below.
      - (subfolders as dividers)
  - (folder) **Training and Instructions**
    - (subfolders) **Product Name Model #** – Refer to sections Project Record Documents, Systems Demonstration and Training and Divisions 02-34 specifications for requirements in addition to those listed below.
      - (subfolders as dividers)
  - (folder) **Record Drawings**
    - (files) **Drawing Discipline.pdf** – Refer to section Project Record Documents and Divisions 02-34 specifications for requirements.
  - (folder) **Record Specifications**
    - (files) **## ## ## Spec Name.pdf** – Refer to section Project Record Documents and Divisions 02-34 specifications for requirements.
  - (folder) **Record Product Data**
    - (files) **## ## ## Spec Name.pdf** – Refer to section Project Record Documents and division 02-34 specifications for requirements.
  - (folder) **Miscellaneous Record Submittals**
    - (files) **## ## ## Spec Name.pdf** – Refer to section Project Record Documents and Divisions 02-34 specifications for requirements.
    - **Fixed Assets Log** – Provide an item description, serial number and value for any piece of equipment with a value of greater than \$5,000.00.
2. Cross-reference other files where necessary to provide essential information for proper operation or maintenance of the piece of equipment or system.
  3. Provide a typed description of the product and major parts of equipment included in the section of each manual title folder.
  4. Text Material: Where maintenance manuals require written material, use the manufacturer's standard printed material. If manufacturer's standard printed material is not available, provide specially prepared data, neatly typewritten, on 8-1/2-by-11-inch white bond paper and saved as a pdf file.
  5. Drawings: Where maintenance manuals require drawings or diagrams, provide pdf files in manual title folder.

#### 1.05 MANUAL FOLDER CONTENT

- A. In each manual include information specified in the individual Specification Section and the following information for each major component of building equipment and its controls:
  1. General system or equipment description.
  2. Design factors and assumptions.
  3. Copies of applicable shop Drawings and product data.
  4. System or equipment identification, including:
    - a. Name of manufacturer.
    - b. Model number for each component.
    - c. Serial number of each component.

5. *Operating instructions.*
  6. *Emergency instructions.*
  7. *Wiring diagrams.*
  8. *Inspection and test procedures.*
  9. *Maintenance procedures and schedules.*
  10. *Precautions against improper use and maintenance.*
  11. *Copies of warranties.*
  12. *Repair instructions including spare parts listing.*
  13. *Sources of required maintenance materials and related services.*
- B. *Organize each manual folder into separate subfolders for each piece of related equipment. As a minimum, each manual shall contain a title page; a table of contents; copies of product data, supplemented by drawings and written text; and copies of each warranty, bond, and service contract issued.*
1. *Title Page: Provide a title page in pdf format titled 01 Manual Title Page.pdf. Provide the following information:*
    - a. *Subject matter covered by the manual.*
    - b. *Name and address of the Project.*
    - c. *Date of submittal.*
    - d. *Name, address, and telephone number of the Contractor.*
    - e. *Name and address of the Architect.*
    - f. *Cross-reference to related systems in other operation and maintenance manuals.*
  2. *Table of Contents: On title page, include a typewritten table of contents for each volume, arranged systematically according to the Project Manual format. Include a list of each product included, identified by product name or other appropriate identifying symbol and indexed to the content of the volume.*
    - a. *Where a system requires more than one volume to accommodate data, provide a comprehensive table of contents for all volumes in each volume of the set.*
  3. *General Information: Provide a general information section immediately following table of contents, listing each product included in the manual, identified by product name. Under each product, list the name, address, and telephone number of the subcontractor or installer and the maintenance contractor. Clearly delineate the extent of responsibility of each of these entities. Include a local source for replacement parts and equipment.*
  4. *Product Data: Where the manuals include manufacturer's standard printed data, include only sheets that are pertinent to the part or product installed. Mark each sheet to identify each part or product included in the installation. Where the Project includes more than one item in a tabular format, identify each item, using appropriate references from the Contract Documents. Identify data that is applicable to the installation, and delete references to information that is not applicable. Save as an individual pdf titled product data.pdf.*
  5. *Written Text: Prepare written text to provide necessary information where manufacturer's standard printed data is not available, and the information is necessary for proper operation and maintenance of equipment or systems. Prepare written text where it is necessary to provide additional information or to supplement data included in the manual. Organize text in a consistent format under separate headings for different procedures. Where necessary, provide a logical sequence of instruction for each operation or maintenance procedure. Save as an individual pdf titled product data.pdf.*
  6. *Drawings: Provide specially prepared drawings where necessary to supplement manufacturer's printed data to illustrate the relationship of component parts of*



equipment or systems or to provide control or flow diagrams. Coordinate these drawings with information contained in Project Record Drawings to assure correct illustration of the completed installation. Save as an individual pdf titled drawings.pdf.

a. Do not use original Project Record Documents as part of operation and maintenance manuals.

7. Warranties, Bonds, and Service Contracts: Provide a copy of each warranty, bond, or service contract in the appropriate manual for the information of the Owner's operating personnel. Provide written data outlining procedures to follow in the event of product failure. List circumstances and conditions that would affect validity of warranty or bond. Save as an individual pdf titled warranty.pdf.

#### 1.06 MATERIAL AND FINISHES MAINTENANCE MANUAL

- A. Submit digital copy to Architect for review via **e-Builder®**. Refer to file structure in part 1.04 above. Provide one section for architectural products, including applied materials and finishes. Provide a second section for products designed for moisture protection and products exposed to the weather.
1. Refer to individual Specification Sections for additional requirements on care and maintenance of materials and finishes.
- B. Architectural Products: Provide manufacturer's data and instructions on care and maintenance of architectural products, including applied materials and finishes.
1. Manufacturer's Data: Provide complete information on architectural products, including the following, as applicable:
- Manufacturer's catalog number.
  - Size.
  - Material composition.
  - Color.
  - Texture.
  - Reordering information for specially manufactured products.
2. Care and Maintenance Instructions: Provide information on care and maintenance, including manufacturer's recommendations for types of cleaning agents to be used and methods of cleaning. Provide information on cleaning agents and methods that could prove detrimental to the product. Include manufacturer's recommended schedule for cleaning and maintenance.
- C. Moisture Protection and Products Exposed to the Weather: Provide complete manufacturer's data with instructions on inspection, maintenance, and repair of products exposed to the weather or designed for moisture-protection purposes.
1. Manufacturer's Data: Provide manufacturer's data giving detailed information, including the following, as applicable:
- Applicable standards.
  - Chemical composition.
  - Installation details.
  - Inspection procedures.
  - Maintenance information.
  - Repair procedures.
- D. Schedule: Provide complete information in the materials and finishes manual on products specified in Divisions 2 through 16 specifications as applicable.

## 1.07 EQUIPMENT AND SYSTEMS OPERATIONS AND MAINTENANCE MANUAL

- A. *Submit digital copy to Architect for review via e-Builder®. Refer to file structure in part 1.04 above. Provide separate manuals for each unit of equipment, each operating system, and each electric and electronic system.*
1. *Refer to individual Specification Sections for additional requirements on operation and maintenance of the various pieces of equipment and operating systems.*
- B. *Equipment and Systems: Provide the following information for each piece of equipment, each building operating system, and each electric or electronic system.*
1. *Description: Provide a complete description of each unit and related component parts, including the following:*
    - a. *Equipment or system function.*
    - b. *Operating characteristics.*
    - c. *Limiting conditions.*
    - d. *Performance curves.*
    - e. *Engineering data and tests.*
    - f. *Complete nomenclature and number of replacement parts.*
  2. *Manufacturer's Information: For each manufacturer of a component part or piece of equipment, provide the following:*
    - a. *Printed operation and maintenance instructions.*
    - b. *Assembly drawings and diagrams required for maintenance.*
    - c. *List of items recommended to be stocked as spare parts.*
  3. *Maintenance Procedures: Provide information detailing essential maintenance procedures, including the following:*
    - a. *Routine operations.*
    - b. *Troubleshooting guide.*
    - c. *Disassembly, repair, and reassembly.*
    - d. *Alignment, adjusting, and checking.*
  4. *Operating Procedures: Provide information on equipment and system operating procedures, including the following:*
    - a. *Startup procedures.*
    - b. *Equipment or system break-in.*
    - c. *Routine and normal operating instructions.*
    - d. *Regulation and control procedures.*
    - e. *Instructions on stopping.*
    - f. *Shutdown and emergency instructions.*
    - g. *Summer and winter operating instructions.*
    - h. *Required sequences for electric or electronic systems.*
    - i. *Special operating instructions.*
  5. *Servicing Schedule: Provide a schedule of routine servicing and lubrication requirements, including a list of required lubricants for equipment with moving parts.*
  6. *Controls: Provide a description of the sequence of operation and as-installed control diagrams by the control manufacturer for systems requiring controls.*
  7. *Coordination Drawings: Provide Contractor's coordination Drawings.*
    - a. *Provide as-installed, color-coded, piping diagrams, where required for identification.*
  8. *Valve Tags: Provide charts of valve-tag numbers, with the location and function of each valve.*

9. *Circuit Directories: For electric and electronic systems, provide complete circuit directories of panelboards, including the following:*
  - a. *Electric service.*
  - b. *Controls.*
  - c. *Communication.*
- C. *Schedule: Provide complete information in the equipment and systems manual on products specified in Divisions 2 through 16 specifications as applicable.*

#### 1.08 INSTRUCTIONS FOR THE OWNER'S PERSONNEL

- A. *Refer to Specification Section "System Demonstration and Training" for additional requirements.*
- B. *Prior to the Date of Substantial Completion, instruct personnel designated by the Owner in the operation and maintenance of equipment and systems.*
  1. *Systems shall include but not necessarily be limited to:*
    - a. *HVAC*
    - b. *Electrical power and lighting*
    - c. *Plumbing and fire protection*
    - d. *Fire alarms*
    - e. *Elevator*
    - f. *Security/CCTV/AV and other low voltage items as required*
    - g. *Kitchen Equipment as required*
  2. *For equipment and operable systems, explain all modes of operation. Demonstrate all functions, including startup, operation, control, adjustment, shutdown, servicing, and maintenance.*
  3. *For other building elements and systems describe the installation and indicate manufacturer's directed or otherwise preferred means of cleaning, servicing, maintaining or repairing.*
  4. *Review terms of warranties and procedures for obtaining warranty service.*
  5. *Have operating and maintenance data available for use during instruction. Review contents with Owner's personnel. Prepare and insert additional data when need becomes apparent during instruction.*
- C. *Arrange times and places for instruction with Owner. Provide instruction by qualified personnel of Contractor, their subcontractor, or applicable manufacturer's representative.*

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION (NOT APPLICABLE)

END OF SECTION 01 78 20

## SECTION 01 78 40

## WARRANTIES

## PART 1 – GENERAL

## 1.01 RELATED DOCUMENTS

- A. *Drawings and general provisions of the Contract, including General Conditions and other Division 1 Specification Sections, apply to this Section.*

## 1.02 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.*
- B. *Related Sections: The following Sections contain requirements that relate to this Section:*
  - 1. *Division 1 Section "Contract Closeout", specifies contract closeout procedures.*
  - 2. *Divisions 2 through 11, Specification Sections for specific requirements for warranties on products and installations specified to be warranted.*
  - 3. *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.*

## 1.03 DEFINITIONS

- A. *Contractor's Warranty: Contractor shall provide a warranty on the Project that warrants that all labor and materials furnished and work performed are in accordance with the Contract Documents and will be free from defects due to defective materials and/or workmanship for a period of one year from the Date of Substantial Completion. Warranty shall be provided on the form provided in this Specification Section.*
- B. *Standard product warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.*
- C. *Special warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.*

## 1.04 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 of 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 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.*

#### 1.05 SUBMITTALS

- A. ***A digital version of all final submittals shall be submitted using the Owner's document tracking software, e-Builder®.***
- B. *Submit written warranties to the Architect via **e-Builder®** effective on 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.*
- C. *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. Refer to Specifications Divisions 2 through 16 for specific Contract requirements and particular requirements for submitting special warranties.*
- D. *Organize the warranty documents into an orderly sequence based on section "Operations and Maintenance Data".*

#### PART 2 – PRODUCTS (NOT APPLICABLE)

*PART 3 – EXECUTION*

*3.01 LIST OF WARRANTIES*

- A. Schedule: Provide warranties on products and installations as specified in the following Sections:*

*All utilized Divisions 2 through 16 Specification Sections as indicated.*

*3.02 CONTRACTOR'S WARRANTY*

- A. The format of submission of the Contractor's Warranty is included on the subsequent page in this Specification Section.*

CONTRACTOR WARRANTY FORM

PROJECT:

LOCATION:

OWNER:

We, \_\_\_\_\_, Contractor  
(Contractor's Name)

for the above referenced Project, do hereby warrant that all labor and materials furnished and work performed are in accordance with the Contract Documents and authorized modifications thereto, and will be free from defects due to defective materials and/or workmanship for a period of XXX year from the Date of Substantial Completion. This Warranty commences on:

\_\_\_\_\_  
(Date of Substantial Completion)

and expires on:

\_\_\_\_\_  
(One Year from Commencement Date)

Should any defect develop during the warranty period due to improper materials, workmanship or arrangement; the same, including adjacent work displaced, shall be made good by the undersigned at no expense to the Owner.

The Owner will give the Contractor written notice of defective work. Should Contractor fail to correct defective work within sixty (60) calendar days after receiving notice, the Owner may at its option, correct defects and charge Contractor costs for such correction. Contractor agrees to pay such charges upon demand.

Nothing in the above shall be deemed to apply to work that has been abused or neglected by the Owner or that was installed by another contractor.

For: \_\_\_\_\_  
(Company Name)

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

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

Date: \_\_\_\_\_

END OF SECTION 01 78 40

## SECTION 01 81 00

## PROJECT RECORD DOCUMENTS

## PART 1 – GENERAL

## 1.01 SUMMARY

- A. Section Includes:
1. Maintenance of project record documents
  2. Record drawings or "as-builts"
  3. Record specifications

## 1.02 SUBMITTALS

- A. Project Record Documents consist of two (2) submittals: Record Drawings and Record Specifications. These submittals shall be provided to the Owner through the Architect after the Date of Substantial Completion inspection.
1. For Record Drawings, submit one (1) set to the Architect in form of opaque prints, marked and altered as required in this Section. Submit all Drawings, whether or not they have been modified through **e-Builder®**.
  2. For Record Specifications, submit to Architect one (1) legible set marked or altered as required in this Section through **e-Builder®**.

## PART 2 – PRODUCTS (Not Used)

## PART 3 – EXECUTION

## 3.01 MAINTENANCE OF PRODUCT RECORD DOCUMENTS

- A. Assign a person responsible for preparing and maintaining all record documents. Maintain the record documents in a secure location at the Project site but insure that they are accessible to Contractor and Architect during normal working hours. Do not use the record documents for any type of demolition purposes in the field.
- B. Record information on record documents as soon as possible after it is obtained. Mark Drawings and Specifications with a red pencil; make certain all notations are clearly legible. Incorporate into existing sets all new Drawings or Specifications issued by Architect. Mark shop Drawings if better suited to show the actual work.

## 3.02 RECORD DRAWINGS

- A. Maintain a complete set of prints of the Drawings, including all sheets issued by Architect for addenda, clarifications or modifications. Record all information that indicates how the actual work differs from the Drawings and shows the details of installation that will not be obvious upon completion of demolition, including:
1. Existing conditions in variance with Contract Documents.
  2. Locations and depths of underground utilities.
  3. Changes made by Change Order.
  4. Changes made following the Architect's written order or directives.



5. *Details not on original Contract Drawings.*
  8. *Dimensional or location changes.*
  9. *Changes made by Contract modifications, cross-referenced to applicable modification.*
  10. *New information that may be useful to the Owner, which was not shown in Contract Documents or subsequent product submittals, including details or clarifications issued by Architect as responses to Contractor's requests.*
- B. *Responsibility for Markup: The individual or entity who obtained record data, whether the individual or entity is the installer, subcontractor, or similar entity, shall prepare the markup on Record Drawings. Contractor has responsibility to insure that this record is maintained.*
1. *Accurately record information in an understandable drawing technique.*
  2. *Record data as soon as possible after obtaining it. Record and check the markup prior to enclosing concealed installations.*
  3. *At time of Final Completion, submit Record Drawings to the Architect for the Owner's records through **e-Builder®**.*

### 3.03 RECORD SPECIFICATIONS

- A. *Maintain a complete set of Specifications, including all pages issued by Architect for addenda, clarifications, and modifications. Record all information that indicates how the actual work differs from the Specifications, including:*
1. *Product substitutions.*
  2. *Changes made by Contract modifications, cross-referenced to applicable modifications.*
  3. *New information that may be useful to the Owner, which was not shown in Contract Documents or subsequent product submittals, including details or clarifications issued by Architect as responses to Contractor's requests.*

### 3.04 RECORD PRODUCT DATA

- A. *During the construction period, maintain one (1) copy of each Product Data submittal for Project Record Document purposes.*
1. *Mark Product Data to indicate the actual product installation where the installation varies substantially from that indicated in Product Data submitted. Include significant changes in the product delivered to the site and changes in manufacturer's instructions and recommendations for installation.*
  2. *Note related Change Orders and markup of Record Drawings, where applicable.*
  3. *Upon Final Completion, submit a complete set of Record product Data to the Architect for the Owner's records through **e-Builder®**.*

### 3.05 MISCELLANEOUS RECORD SUBMITTALS

- A. *Refer to other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various demolition activities. Immediately prior to Final Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for use and reference. Submit to the Architect for the Owner's records.*
1. *Categories of requirements in resulting miscellaneous records include, but are not limited to, the following:*
    - a. *Field records on excavations.*
    - b. *Field records on underground construction in similar work.*
    - c. *Inspections and certifications by governing authorities.*

- d. *Survey showing locations and elevations of underground lines.*
- e. *Survey showing invert elevations of drainage piping.*
- f. *Surveys establishing building lines and levels.*
- g. *Ambient and substrate condition tests.*
- h. *Certifications received in lieu of labels on bulk products.*
- i. *Batch mixing and bulk delivery records.*
- j. *Testing and qualifications of tradesmen.*
- k. *Documented qualifications of installation firms.*
- l. *Load and performance testing.*
- m. *Leakage and water-penetration tests.*
- n. *Fire-resistance and flame-spread test results.*
- o. *Final inspection and correction procedures.*

*END OF SECTION 01 81 00*

## SECTION 01 81 50

## SYSTEM DEMONSTRATION AND TRAINING

## PART 1 – GENERAL

1.01 *The work of this section consists of demonstrating systems and equipment to operating personnel. It also includes training of personnel.*

## 1.02 COORDINATION

- A. *Schedule demonstrations and training periods with Owner. Conduct training sessions after the equipment or system has been fully completed and operational, approved by inspections of manufacturer and/or authorities having jurisdiction as required. Schedule and provide training by manufacturer's representatives where required and as requested at no additional cost to the Owner.*
- B. *Training Schedule: This schedule lists the minimum system requirements for training and demonstration.*
  - 1. *Dock Levelers*

## 1.03 CLOSEOUT SUBMITTALS

- A. *As specified in Specification Section 01 77 00.*
- B. ***In addition to physical DVD or flash drive submittal requirements, a digital version shall be submitted using the Owner's document tracking software, e-Builder.***
- C. *For each training session, the Contractor shall submit for approval a proposed outline of the subjects to be covered. The training shall not be conducted until the outline is approved.*
- D. *Recordings of demonstrations and training sessions:*
  - 1. *Provide three (3) copies of each DVD or flash drive.*
  - 2. *Label each DVD or flash drive with the date of demonstration or training, the instructor's name, and provide an index of the contents. The index shall list the start and end time of each subject covered during the training session. The sequence of the training subjects shall follow the sequence listed in the approved training outline or as actually conducted.*
  - 3. *Provide a separate DVD or flash drive for each separate training session.*

## PART 2 – PRODUCTS

## 2.01 MEDIA REQUIREMENTS

- A. *DVD or flash drive format.*
- B. *Video(s) shall be in .AVI file format.*

PART 3 – EXECUTION

3.01 TRAINING

- A. *As specified herein and in individual sections, furnish the services of instructors to train designated personnel in adjustment, operation, including seasonal and emergency operations, if applicable, maintenance, and safety requirements of equipment and systems. Instructors shall be thoroughly trained in operating theory as well as practical operation and maintenance work for each type of equipment or system. The sequence of the training shall follow the approved training outline.*
- B. *Individual sections specify the duration of training required. If no duration is listed, provide training of sufficient duration to adequately cover the subjects. When more than four (4) days of instruction are specified, use approximately one-half of the time for classroom and the other half for hands-on instruction with the equipment or system.*
- C. *Use Operating and Maintenance Data as a training guide.*

3.02 TAPING/RECORDING

- A. *Document all of the above sessions at the recording speed which produces the highest resolution picture. The instructor's voice shall be clearly audible and understandable on the recording. Utilize a supplemental microphone worn by the instructor.*
- B. *DVD's or flash drives with poor video or audio quality will be rejected and the training re-recorded.*

END OF SECTION 01 81 50

## SECTION 02 41 19

## INTERIOR DEMOLITION

I. PART 1 - GENERAL

## 1.1 SCOPE

- A. *Work described in this section includes demolition and removal of existing built construction and all incidental items necessary to provide a condition suitable to construct the full scope of improvements illustrated and/or implied on the Drawings for new construction.*
- B. *The Contractor is solely responsible for the scope of demolition required to build the entirety of new construction illustrated or implied on the Drawings. Ascertain the entire scope of demolition by whatever means necessary and include the cost for same in the Contract Sum. The cost of all said demolition whether illustrated on the Drawings or not shall be included in the Contract Sum.*
- C. *By submittal of his bid, the Contractor acknowledges that he understands the entire scope of demolition and removal necessary to complete new construction.*

## 1.2 PROJECT CONDITIONS

- A. *Traffic: Conduct demolition operations and removal of debris to ensure minimum interference with roads, streets, walks and other adjacent occupied or used facilities. Do not close or obstruct streets, walks or other occupied or used facilities without permission from the governing authorities and Owner. Provide alternate routes around closed or obstructed vehicular or pedestrian traffic ways as required.*
- B. *Use of explosives will not be permitted, except with written permission of Architect and Owner.*
- C. *Promptly repair damages caused to items to remain by demolition operations at no additional cost to Owner.*
- D. *All costs related to the removal, relocation, replacement and/or rerouting of any and all existing utilities or other built, stored, stockpiled items of any kind, surface or subsurface is the responsibility of the contractor and will be included in the Contract Sum.*
- E. *If asbestos is encountered or suspected, Contractor shall notify the Architect before proceeding. Asbestos abatement shall be the responsibility of the Owner.*
- F. *All costs related to temporary relocation and protection of existing furniture shall be included in the Contract Sum. The temporary storing location will be on school property and shall be coordinated with the Owner. Contractor is responsible for moving all furniture back to its original place.*

## II. PART 2 - PRODUCTS

### 2.1 MATERIALS TO BE REUSED

- A. *Materials to be disassembled and reused shall be handled and stored in a manner and placed so as to prevent damage. Damaged materials shall be repaired or replaced at no cost to Owner. Fasteners, fittings and brackets related to materials to be reused shall, if not salvageable in first-class condition, be replaced at no cost to Owner.*

### 2.2 MATERIALS TO BE REMOVED

- A. *Materials to be disassembled and not reused shall be treated as "waste" and disposed of by Contractor. In addition:*
  - 1. *Burning of waste on site shall not be permitted.*
  - 2. *Waste materials shall become the property of the Contractor and shall be promptly removed from site. Storage or sale of salvageable items on site shall not be permitted.*
  - 3. *Do not store waste in planted areas or any area that can be damaged by storage operations.*

### 2.3 MATERIALS TO BE SALVAGED

- A. *Owner to provide list.*
- B. *All existing furniture and equipment to remain must be covered and protected during demolition and renovation work.*

## III. PART 3 - EXECUTION

### 3.1 DEMOLITION

- A. *Remove completely materials as indicated on drawings. Edges of demolished areas shall be suitable to accept neat installation of new construction or finishes. General demolition shall include removing ductwork, air devices, lights, electrical conduit, wiring, plumbing fixtures and associated piping, concrete slabs, masonry walls, doors, windows, frames, flooring, ceilings.*
- B. *Coordinate interruption of utility service with Owner, building inhabitants and utility companies. Obtain required approvals; comply with utility company regulations and building codes requirements.*
- C. *Contractor shall be responsible for patching all holes, sanding or grinding smooth and painting all floors/walls/ceilings damaged in the course of demolition and generally repair disturbed areas to original condition.*
- D. *Ceiling tiles and/or grid to remain necessary to be removed to access above ceiling work shall be removed and reinstalled, or replaced if damaged, after completion of work.*

### 3.2 PROTECTION

- A. *Protect and prevent damage to existing construction to remain.*
- B. *Protect all temporary relocated existing furniture.*
- C. *Protect all electrical and low voltage devices.*

3.3 OTHER

- A. See *Electrical Drawings and Specifications* for additional demolition requirements.

END OF SECTION

## SECTION 02 83 10

## CHAIN LINK FENCES AND GATES

I. PART 1 - GENERAL

## 1.1 SUMMARY

## A. Section Includes:

1. Chain link fences, gates and accessories.

## 1.2 REFERENCE SPECIFICATIONS AND DOCUMENTS

## A. American Society for Testing Materials (ASTM)

1. ASTM C1107 - Cement grout.
2. ASTM F567 - Installation of chain link fence.
3. ASTM F626 - Fence fittings.
4. ASTM F900 - Commercial swing gates.
5. ASTM F1043 - Protective coatings on steel fence framework.
6. ASTM F1083 - Galvanizing for fence structures

## 1.3 SUBMITTALS

- A. Manufacturer's literature and data: Cut sheets or specifications indicating material compliance and specified options for chain link fencing, gates and all accessories.
- B. Shop drawings: Site plan showing layout of fence location with dimensions, location of gates and opening size, cleared area, elevation of fence and gates, details of attachments and footings.

## 1.4 QUALITY ASSURANCE

- A. Manufacturer: Company having manufacturing facility/facilities specializing in manufacturing chain link fence products with at least 5 years' experience.
- B. Fencing Contractor: Demonstrated successful experience installing similar projects and products in accordance with ASTM F567 and have at least 5 years' experience.

## 1.5 SITE CONDITIONS

- A. Field Measurements: Verify layout information for chain-link fences and gates shown on Drawings in relation to property survey and existing structures. Stake Fencing and have Owner's approval prior to installation.

## II. PART 2 - PRODUCTS

## 2.1 CHAIN LINK FABRIC

- A. Fabric height: Fabric height shall be 6'-0" High.
- B. Fabric shall be galvanized steel wire fabric provided in one-piece heights complying to ASTM F 668, Class 2a, except where noted to match existing galvanized chain link fencing.



- C. Mesh size:
  - 1. Fencing mesh size (except tennis): 2 inches.
- D. Core wire diameter: 0.148 inches (9 gauge).
- E. Selvages: Knuckled top selvage and knuckled bottom selvage.

## 2.2 FENCE FRAMING

- A. Posts and rails: Comply with ASTM F 1043 for framing, ASTM F 1083 for Group IC round pipe, and the following:
  - 1. Group: IA, round steel pipe, Schedule 40.
  - 2. Fence height shall be 72" High.
  - 3. Strength requirement: Light industrial according to ASTM F 1043.
  - 4. Post diameter, thickness and weight:
    - a. Fence heights 4 to 6 feet
      - (1) Line post: 2.375 inches (2-3/8" nominal o.d.), 0.154 inches, 3.65 lb/ft.
      - (2) End, corner and pull post: 2.875 inches (2-7/8" nominal o.d.), 0.203 inches, 5.79 lb/ft.
    - b. Swing gate post: According to ASTM F 900
  - 5. Top rails, rails and braces diameter and thickness:
    - a. Top Rails: 1.90 inches (1-7/8" nominal o.d.), 0.145 inches, 2.72 lb/ft.
    - b. Rails and braces: 1.66 inches (1-5/8" nominal o.d.), 0.140 inches, 2.27 lbs/ft.

## 2.3 TENSION WIRE

- A. 0.177 inch diameter (7 gauge) metallic coated steel core wire complying with ASTM F 1664 Class 2a.

## 2.4 SWING GATES

- A. General: Comply with ASTM F 900 for swing gate types.
  - 1. Metal pipe and tubing: Galvanized steel gate framing complying with ASTM F 1043 and ASTM F 1083.
- B. Frames and bracing: Fabricate members from round, tubing with outside dimension and weight according to ASTM F 900 and the following:
  - 1. Gate Fabric Height: 2 inches less than adjacent fence height.
  - 2. Leaf Width: As indicated.
  - 3. Frame Members Diameter: 1.90 inches.
- C. Frame corner construction: Welded or assembled with corner fittings.
- D. Hardware: Latches permitting operation from both sides of gate, hinges, and keepers for each gate leaf more than 5 feet wide. Fabricate latches with integral eye openings for padlocking; padlock accessible from both sides of gate.
- E. Provide fence blade slats to match existing.

## 2.5 FITTINGS

- A. General:
  - 1. Comply with ASTM F 626.

- B. *Tension and brace bands: 12 gauge galvanized pressed steel a minimum width of ¾ inch.*
- C. *Top rail sleeves: pressed-steel or round-steel tubing not less than 6 inches long.*
- D. *Tie wires and hog rings: nine 9 gauge galvanized steel or aluminum core wire for attachment of fabric to framing and tension wire.*
- E. *Terminal post caps, line post loop tops, rail and brace ends, and boulevard clamps: galvanized pressed steel.*

2.6 **GROUT AND ANCHORING CEMENT:**

- A. *Grout for post footings in concrete, masonry, or bedrock: Non-shrink grout complying with ASTM C 1107.*
- B. *Concrete for post footings in soil: 28 day compressive strength of 3,000 psi (minimum).*

III. **PART 3 - EXECUTION**

3.1 **EXAMINATION**

- A. *Examine areas and conditions for compliance with requirements for site paving, and other conditions affecting performance of the work.*

3.2 **INSTALLATION**

- A. **General:**
  - 1. *Install chain-link fencing to comply with ASTM F 567 and more stringent requirements specified.*
- B. **Excavation:**
  - 1. *Saw cut existing concrete paving and remove existing gate posts.*
  - 2. *Drill holes for post footings in firm undisturbed or compacted soil.*
- C. **Setting Posts:**
  - 1. *Set posts in concrete footing.*
    - a. *Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.*
    - b. *Footing depths.*
      - (1) *Fence heights of 4 to 6 feet, footing depth shall be 36".*
    - c. *Footing diameters based on diameter of fence post.*
      - (1) *3 inch fence post- footing diameter is 12 inches.*
      - (2) *4 inch fence post- footing diameter is 16 inches.*
      - (3) *Other fence heights footing diameter is a minimum of 4 times greater than O.D. of post, unless otherwise noted.*
    - d. *Set post 3 inches above bottom of footing excavation.*
    - e. *Thoroughly consolidate concrete into the hole to remove voids.*
    - f. *Finish top of concrete sloping away from post for positive drainage.*
  - 2. **Gate Posts:**
    - a. *Gate posts require larger footings than listed above.*
    - b. *Gate post footing dimensions to comply with ASTM F 567.*

- D. *Post Bracing and Intermediate Rails:*
  - 1. *Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Install braces at end and gate posts and at both sides of corner and pull posts.*
  - 2. *Locate horizontal braces at mid height of fabric 6 feet or higher, on fences with top rail and at 2/3 fabric height on fences without top rail. Install so posts are plumb when diagonal rod is under proper tension.*
- E. *Chain-Link Fabric:*
  - 1. *Apply fabric to outside of the framework.*
  - 2. *Leave approximately 1 inch, without exceeding 2 inches, between finish grade or surface and bottom selvage, unless otherwise noted.*
  - 3. *Pull fabric taut and anchor to framework so fabric remains under tension after pulling force is released.*
  - 4. *Secure fabric to the line post with tie wires spaced no greater than 12 inches on center.*
  - 5. *Secure fabric to rail with tie wires spaced no greater than 18 inches on center.*
- F. *Tension or Stretcher Bars:*
  - 1. *Thread through fabric and secure to end, corner, pull, and gate.*
- G. *Tie Wires:*
  - 1. *Use wire of proper length to firmly secure fabric to line posts and rails.*
  - 2. *Attach wire at 1 end to chain-link fabric, wrap wire around post a minimum of 180 degrees, and attach other end to chain-link fabric per ASTM F 626.*
  - 3. *Bend ends of wire to minimize hazard to individuals and clothing.*
- H. *Fasteners:*
  - 1. *Install nuts for tension bands and carriage bolts on the side of the fence opposite the fabric side.*
  - 2. *Peen ends of bolts or score threads to prevent removal of nuts.*
- I. *Swing Gates:*
  - 1. *Install swing gates and gateposts per ASTM F567.*
  - 2. *Direction of swing shall be as indicated on the drawing.*
  - 3. *Install gates shall be plumb in the closed position having a bottom clearance of 3 inches grade permitting.*
  - 4. *Hinge and latch offset opening space from the gate frame to the post shall be no greater than 3 inches in the closed position.*
  - 5. *Double gate drop bar receivers shall be set in a concrete footing minimum 6 inches diameter and 24 inches deep.*
  - 6. *Gate leaf holdbacks shall be installed for all double gates.*

### 3.3 CLEAN UP

- A. *Clean up the area of the fence line shall be left neat and free of any debris caused by the installation of the fence. All concrete splatter shall be cleaned from fence.*

END OF SECTION 02 83 10

## SECTION 04 05 13

I. PART 1 - GENERAL

## 1.1 SUBMITTALS

- A. *Submit manufacturer's product specifications and mixing/installation instructions for each specified product.*

## 1.2 DELIVERY, STORAGE AND HANDLING

- A. *Deliver materials, except aggregate, in original unopened containers displaying product name, type grade and mixing instructions.*
- B. *Store materials to prevent intrusion of foreign materials. Store cement, lime and admixtures above ground level and covered for protection from moisture and contamination.*
- C. *Broken packages showing water marks or damage shall be rejected.*

II. PART 2 - PRODUCTS

## 2.1 MATERIALS

- A. *Acceptable manufacturers shall include:*
  - 1. *Giant Masonry Cement*
  - 2. *Holcim Mortamix*
  - 3. *Coosa Masonry Cement by National Cement Co.*
  - 4. *Argos*
  - 5. *Cemex*
- B. *Portland cement shall comply with ASTM C150. Portland cement for unexposed masonry shall be a natural color of domestic manufacture. Only one brand per color may be used throughout project.*
- C. *Masonry cement shall comply with ASTM C91. Cement shall be non-staining and have a 22% maximum air content by volume. Only one brand may be used throughout project, except when pre-mixed colored masonry cement is specified.*
- D. *Mortar for exposed split face CMU shall be Type N.*
  - 1. *Basis of design shall be Holcim "Sahara".*
- E. *Hydrated lime shall comply with ASTM C207. Lime shall be Type S or M.*
- F. *Aggregate*
  - 1. *Aggregate for mortar shall be clean, hard, natural washed sand complying with ASTM C144.*
  - 2. *Aggregate for cement grout shall be same quality as above but with sizes less than 1/8 inch in diameter.*
- G. *Water reducing and plasticizing admixture shall be one of the following products:*
  - 1. *Lambert Corporation: "Hydrocel"*
  - 2. *Master Builders Company: "Omicron Mortarproofing"*
  - 3. *Sonneborn-Contech, Inc.: "Hydrocide"*
- H. *Non-shrink grout shall be one of the following products:*
  - 1. *Castle Chemical Company: "Imperial"*
  - 2. *Gifford-Hill and Company: "Supreme"*

3. *Master Builders Company: "Master Flow 713"*
  4. *Sonneborn-Contech, Inc.: "SonogROUT"*
  5. *Minwax Construction Products: "Halco"*
  6. *W. R. Meadows: "Sealtight 588"*
- I. *Water for mixing shall be clean, potable and free from deleterious amounts of alkalis, acids and organic materials.*
  - J. *Anchoring cement shall be "Por-rok" as manufactured by the Minwax Construction Products. Equal products by Sonneborn Building Products and Master Builders, Inc. are acceptable.*

## 2.2 PROPORTIONS

- A. *Proportion cement grout materials by volume in accordance with ASTM C476. Mix at one part portland cement and 1/10 part lime to aggregate proportioned at not less than 2¼ nor more than three times the sum of volumes of cementitious materials used.*
- B. *Mix prepared non-shrink grout product with water as directed by manufacturer's printed literature to achieve a minimum compressive strength of 5000 psi at seven (7) days.*
- C. *Pre-mixed and packaged mortar mix may be used in lieu of job mixed mortar provided the proportions are as stipulated above. The mix shall conform to ASTM C270.*

## III. PART 3 - EXECUTION

### 3.1 MIXING

- A. *Mix mortar and cement grout in power-driven, drum type mixers. Operate mixer a minimum of five minutes after addition of all materials.*
- B. *Add water reducing and plasticizing admixture to all mortars in accordance with admixture manufacturer's printed instructions. Addition of other admixtures, including anti-freeze ingredients, shall not be permitted without prior review of Architect and Structural Engineer. Admixtures shall not be incorporated until contractor has received written indication from structural engineer that admixture is acceptable for use.*
- C. *Measure materials in a one-cubic foot container. Do not measure by shovels.*

### 3.2 PLACING MORTAR AND GROUT

- A. *Place mortar as directed in 04 22 00 - Concrete Masonry units.*
- B. *Retemper mortar as necessary to maintain plasticity. Use no mortar after setting has begun or after 2½ hours of initial mixing.*
- C. *Do not place mortar when air temperature is below 35 degrees F. Provide wind shields for all masonry work for initial 24 hours after mixing and placing mortar. See Part 3.8 of Section 04 22 00 - Concrete Masonry Units for cold weather masonry construction requirements.*

END OF SECTION 04 05 13

## SECTION 04 05 20

## MASONRY REINFORCEMENT AND ACCESSORIES

I. PART 1 - GENERAL

## 1.1 SUBMITTALS

- A. Submit manufacturer's product data of all accessories and masonry reinforcement products to Architect for review.

## 1.2 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to project site in manufacturer's original packaging.
- B. Store materials off ground and under weatherproof cover. Install no materials which are damaged or corroded.

II. PART 2 - PRODUCTS

## 2.1 MASONRY JOINT REINFORCEMENTS

- A. Acceptable manufacturers of masonry joint reinforcement products shall include the following:
  - 1. AA Wire Products Company
  - 2. Dur-O-Wal, Inc.
  - 3. Heckmann Building Products, Inc.
  - 4. Hohmann and Barnard, Inc.
  - 5. Wire-Bond
  - 6. Ty-wall by Jim Taylor, Inc. (must be used where air space exceeds ½")
  - 7. Sandell Construction Solutions
- B. Masonry joint reinforcement in exterior walls exposed to weather shall be hot dipped, galvanized trussed steel wire. Other reinforcement shall be mill galvanized. All joint reinforcement shall comply with the following requirements:
  - 1. Fabricate reinforcement from cold-drawn wire complying with ASTM A82.
  - 2. Longitudinal rods shall be 9 gauge deformed wires with 9 gauge galvanized cross wires welded to form a triangular pattern.
  - 3. Width of reinforcement shall be 2" less than width of masonry wall.
  - 4. Provide reinforcement in 10'-0" lengths with prefabricated corners and tees.

III. PART 3 - EXECUTION

## 3.1 INSTALLATION

- A. Install reinforcement and accessories in accordance with manufacturer's printed instructions.
- B. Install masonry joint reinforcement in masonry walls at 16" on center vertically. Lap side rods 6" minimum at splices. Stop reinforcement one

*inch back from expansion joints and openings in masonry walls. Install reinforcement in first and second bed joint and over and under openings, with non-continuous reinforcement extending 2'-0" beyond jamb on each side.*

- C. *When masonry is installed, reinforcement and accessories shall be clean and free of anything that will inhibit bond.*
- D. *Install veneer ties at 16" o.c. vertically and 24" o.c. horizontally.*

*END OF SECTION 04 05 20*

## SECTION 04 22 00

## CONCRETE MASONRY UNITS

I. PART 1 - GENERAL

## 1.1 SUBMITTALS

- A. *Submit certificates from the manufacturer in triplicate prior to delivery of concrete masonry units to project site. Each certificate shall be signed by an authorized officer of the manufacturing company and shall contain the name and address of the Contractor, the project location, and the quantities and date(s) of shipment or delivery to which the certificate applies. Units shall be certified for compliance with specified requirements. Information shall contain certified equivalent thickness of all concrete masonry units.*
- B. *Submit reinforcing steel shop drawings which include all details for fabrication and erection of reinforcing steel. See Structural Drawings.*
  - 1. *All bars shall be detailed by fabricator and erector in compliance with the working drawings.*
  - 2. *No modifications to reinforcing steel shall occur in the field or otherwise without prior review by Structural Engineer.*
- C. *The Contractor shall be responsible for all errors of detailing, fabrication and for the correct fitting of the reinforcing bars. The Contractor shall make all measurements in the field as required to verify or supplement dimensions shown on the drawings and he will verify that all dimensions shown on the shop drawings are coordinated with the dimensions and requirements of the architectural and structural working drawings.*
- D. *Manufacturer shall submit certification of providing quality customized masonry block for a minimum period of ten (10) continuous years or more.*

## 1.2 DELIVERY, STORAGE, AND HANDLING

- A. *Deliver concrete masonry units to job site in undamaged condition. Handle units to prevent chipping, breaking and other damage.*
- B. *Store materials on wood pallets above ground and under waterproof cover in a dry place and prevent damage by intrusion of foreign matter.*
- C. *Keep units dry. Allow air circulation around stacked units. Remove wet units from site.*

## 1.3 PROJECT CONDITIONS

- A. *Environmental Requirements*
  - 1. *Lay no concrete masonry units when temperature of surrounding air has dropped below 45 degrees F., unless it is rising; and at no time when it has dropped below 40 degrees F., except with permission from the Structural Engineer.*



2. When concrete masonry unit work is authorized at temperatures below 40 degrees F., but above freezing, see Section 3.8.
3. Protect concrete masonry unit construction for 48 hours following installation from direct exposure to wind and sun when erected in ambient air temperatures of above 95 degrees F. in the shade with relative humidity less than 50%.
4. When concrete masonry work is executed in temperatures above 90 degrees Fahrenheit, follow the criteria listed below:
  - a. Lightly wet the mortar bedding surface areas.
  - b. Keep mortar moist, and do not string out on the wall so far ahead of units being placed that drying will take place prior to placement of units.
  - c. After the units are in place, a very light fog spray should be applied three times during the first 24 hours at eight hour intervals.
- B. Keep CMU walls dry during erection by covering at end of each work period with a waterproof membrane. Similarly protect partially completed walls not being worked on. Covering shall overhang at least 2'-0" on each side of wall and shall be anchored securely.
- C. Install and have mechanical, plumbing and electrical work reviewed prior to enclosing or covering with concrete masonry units. Where runs of piping or conduit are required, cut away web of masonry unit without disturbing face of bond.
- D. Do not apply uniform roof loads for at least 12 hours or concentrated loads for at least 3 days after building masonry walls or columns.

#### 1.4 QUALITY CRITERIA

- A. The masonry contractor selected shall have a minimum of five (5) years experience in quality commercial grade construction and shall have successfully completed comparable work on time and in an acceptable workman-like manner.
- B. Maximum variation from plumb shall not exceed  $\frac{1}{4}$ " in 10'-0" and  $\frac{3}{8}$ " in 20'-0".
- C. Maximum variation from level shall not exceed  $\frac{1}{4}$ " in 20'-0" and  $\frac{1}{2}$ " in 40'-0" or more.
- D. Maximum variation in linear building line from location indicated shall not exceed  $\frac{1}{2}$ " in 20'-0".

#### 1.5 SAMPLE WALL PANEL

- A. A sample wall panel shall be constructed of unit masonry and mortar in location as directed by the Architect. Panel shall be four feet high and "L" shaped with overall length of legs 32" and 72".
- B. Panel construction shall indicate the following:
  1. Running Bond
  2. Mortar color (if required)
  3. Joint tooling
  4. Unit color and texture
  5. Workmanship
  6. Horizontal reinforcing

- C. *Prepare panel at least seven days prior to beginning concrete masonry work. Should panel be rejected, prepare additional panels until accepted by the Architect. Do not proceed with concrete masonry work until sample panel is accepted by architect.*
- D. *Maintain panel throughout work as standard of concrete masonry work. Do not destroy panel until directed by the Architect. Panel may be a portion of the permanent work.*
- E. *Panel shall be part of brick veneer and EIFS sample panels.*

## II. PART 2 - PRODUCTS

### 2.1 CONCRETE MASONRY UNITS

#### A. Exterior Veneer CMU

- 1. *Shapes: Provide 4" veneer units (8" x 16"), special shapes for arches lintels, corners, jambs, sashes, movement joints, headers, bonding and other exposed units.*
- 2. *Integral Water Repellent: Provide units made with liquid polymeric, integral water-repellent admixture that does not reduce flexural bond strength for exposed units.*
  - a. *Available Products:*
    - (a) *ACM Chemistries; RainBloc*
    - (b) *Grace Construction Products; Dry-Block*
    - (c) *Master Builders, Inc.; Reheopel*
- 3. *Concrete Masonry Units: ASTM C 90*
  - a. *Provide units with minimum average net-area compressive strength of 1900psi*
  - b. *Weight Classification: Lightweight*
  - c. *Standard Pattern: Split face finish*
- 4. *Integral Color: Provide units made with integral color. Color is based on GMS BCW-2 Sandstone.*

### 2.2 ARCHITECTURAL MASONRY CLEANING COMPOUND

#### A. Acceptable products:

- 1. *Hallmark Chemical Corp, DC-6*
- 2. *National Chemsearch Corp, Deox*
- 3. *Prosoco, Inc, Sure-Kleen 600*

## III. PART 3 - EXECUTION

### 3.1 PREPARATION

- A. *Inspect surfaces supporting and adjacent to concrete masonry to assure completion to proper lines and grades free of all deleterious material. Do not start work until surfaces not properly prepared have been satisfactorily corrected.*

### 3.2 WORKMANSHIP

- A. *Lay only dry, clean, undamaged concrete masonry units.*
- B. *Lay concrete masonry plumb, level and true to line with accurate coursing as indicated on drawings.*

- C. Lay concrete masonry units in running bond unless otherwise noted on the drawings.
- D. Cutting of exposed concrete masonry shall be done with an abrasive power saw. Layout wall to avoid units shorter than 8".
- E. Stop horizontal runs at end of workday by racking back in each course. Tothing will not be permitted.
- F. All partitions shall be reinforced and grouted per drawings and doweled into the slab.
- G. Adjust units to final position while mortar is soft and plastic. If units are displaced after mortar has stiffened, remove unit, clean joints and units of mortar and re-lay with fresh mortar.
- H. When joining fresh masonry to set or partially set masonry, remove loose unit and mortar and clean exposed surface of set masonry prior to laying fresh masonry.
- I. Where unacceptable qualities of concrete masonry wall surfaces are provided due to either poor workmanship or planning, the walls shall be removed and replaced. In these conditions, where acceptable to the Owner and at no expense to the Owner, the Contractor may provide a surface applied finish, such as gypsum drywall, plaster or stucco.
- J. Particular attention shall be paid to joints in blockwork since the blockwork is the finished wall. CMU with imperfections allowed by ASTM C90 may be used above ceiling.

### 3.3 INCLUSION OF OTHER WORK

- A. Allow for work of other trades indicated to be built in with masonry including anchors, wall plugs, expansion joints and accessories as erection progresses. Avoid cutting and patching. Space and align built-in items and exercise care not to displace other materials from position. Solidly grout spaces around built-in items.
- B. Where electrical receptacle or switch boxes occur in exposed concrete masonry walls, grind and cut units accurately before building into wall. Coordinate construction with electrical contractor. Anticipate thicknesses of furred out material correctly.
- C. Fill hollow metal frames in masonry walls with cement grout as wall is laid. Mortar will not be acceptable as a substitute. Rake back ½" deep, ¼" wide joint between hollow metal frame and adjacent masonry to receive sealant or caulking compound. CMU adjacent to hollow metal jambs shall be reinforced and shall have a minimum of two cells filled with grout.
- D. Lay concrete masonry to receive flashing with smooth joints free from projections which might puncture flashing materials. Provide mortar on both sides of flashing in concrete masonry joints.
- E. Unless indicated otherwise, provide minimum 8" of solid end bearing full height of wall from floor to bearing points for lintels, beams and other load-supporting members by either solid block or filling cores with grout.
- F. Provide lintels and bond beams where indicated using lintel concrete masonry units laid with joints matching adjacent work. #4 horizontal

reinforcement shall be provided, unless noted otherwise on the drawings and CMU shall be filled with grout.

- G. Where indicated on structural drawings, reinforce vertical concrete block cells, and grout solid. Reinforcement shall be as specified in Section 03 20 00 and indicated on the drawings.
- H. Keep chases, recesses, expansion joints, etc., free of mortar and other debris.

### 3.4 MORTAR JOINTS

- A. Bed joints at unreinforced partitions
  - 1. Lay first course in full bed of mortar.
  - 2. On all other bed joints, apply mortar on face shell only of concrete masonry unit already laid.
  - 3. On concrete masonry unit to be laid, apply a beveled buttering to face shell to ensure full bed joints.
- B. Apply mortar to vertical face shells on both the concrete masonry unit already laid and the unit to be laid to ensure full head joint.
- C. Place concrete masonry unit by rolling it to a vertical position and shoving it against adjacent unit, achieving position and alignment with minimum of adjusting.
- D. Check each unit as laid with mason's level for level and for plumbness with wall below.
- E. Keep bed and head joints uniform in width except for minor variations required to maintain bond and locate returns. Standard thickness for both horizontal and vertical mortar joints shall be  $\frac{3}{8}$ ".

### 3.5 JOINT TREATMENT

- A. Strike exposed joints flush, then tool joint concave with 24" long tool after mortar sets to "thumb-print" hardness. Tool minimum of two (2) joints above ceiling.
- B. Strike all other joints flush, including balance of joints above ceiling.

### 3.6 CONTROL JOINTS

- A. Make all control joints  $\frac{3}{8}$ " wide, unless noted otherwise.
- B. Stop  $\frac{1}{2}$  of horizontal joint reinforcement 1" from control joint. Bond beam reinforcement shall remain continuous.
- C. Rake joint  $\frac{3}{4}$ " deep on both sides of the wall.
- D. Provide vertical control joints at the following locations:
  - 1. Changes in wall height.
  - 2. Changes in wall thickness except at pilasters unless noted.
  - 3. Control joints in floors and roofs (all joints to match).
  - 4. In long straight walls at a maximum spacing 3 times the wall height not to exceed 25 feet or as noted on working drawings.
- E. Leave joint open and clean and caulk in accordance with the requirements of Section 07 92 00 - Joint Sealants.

3.7 *CLEANING AND POINTING*

- A. *Keep masonry work free of mortar droppings as work progresses and, at completion of work, rub masonry with stiff bristle brush or carborundum brick to remove excess mortar.*
- B. *Point mortar joints. Remove and replace units with excessive spalls or chips.*

3.8 *MASONRY CORNERS*

- A. *At all unreinforced corners in concrete masonry unit construction, every vertical course shall be reinforced with masonry fabric lapping at least 8" in each direction of wall.*

3.9 *PROTECTION OF MATERIAL FROM DAMPNESS*

- A. *At the time construction materials are received on site, they shall be inspected for dryness, and any material not completely free of dampness shall be rejected and replaced prior to being set into the building areas. If materials are to be stored on site prior to use in construction, they shall be stored on pallets, visibly off the ground and away from any ponding or puddling of ground water. The stored material shall further be completely protected from rain and other moist weather with plastic sheeting, which shall be adequately vented to avoid condensation build-up.*
- B. *Once built into the construction, even though the building may not be dried-in, the materials shall be protected from becoming wet by rain or other moist weather with plastic sheeting to cover voids in block or cavities between block and veneer.*

*END OF SECTION 04 22 00*

## SECTION 06 10 00

## ROUGH CARPENTRY

I. PART 1 - GENERAL

## 1.1 SUBMITTALS

A. *Certifications*

1. *Submit certification by treating plant stating that preservative treatment chemicals and process used, as well as net amount of salts retained conform with applicable standards.*
2. *Submit certification by treating plant that fire retardant treatment materials comply with governing ordinances and that treatment will not bleed through finished surfaces.*

B. *Submit manufacturer's descriptive literature indicating material composition, thickness, dimensions, loading and fabrication details.*

C. *All wood materials used in the construction of this project, including but not limited to, blocking, nailers, sheet products and framing shall be pressure treated with salt preservatives at exterior and fire retardant treated at interior.*

D. *Submit manufacturer's literature indicating installation details. Include locations and details of bearing, blocking, bridging, and cutting and drilling of webs for work by others.*

## 1.2 DELIVERY, STORAGE AND HANDLING

A. *Immediately upon delivery to job site, place materials in areas protected from weather.*

B. *Store materials a minimum of 6" above ground on blocking and cover with protective waterproof covering, providing for adequate air circulation and ventilation under covering and around stacks of materials. Store and handle materials to protect against contact with damp and wet surfaces, exposure to weather, breakage and damage. Individual joists shall be handled in the upright position.*

C. *Do not store seasoned materials in wet or damp portions of building.*

D. *Protect all materials from damage.*

## 1.3 QUALITY CRITERIA

A. *Grading rules of the following associations apply to materials furnished under this section:*

1. *Southern Pine Inspection Bureau (SPIB)*
2. *West Coast Lumber Inspection Bureau (WCLB)*
3. *Western Wood Products Association (WWPA)*
4. *Redwood Inspection Service (RIS)*

B. *Softwood plywood grading rules shall comply with Construction and Industrial Product Standard PS-1.*

- C. *Identify all lumber and plywood by official grade marks.*
  - 1. *Grade stamp for lumber shall contain symbol of grading agency, mill number or name, grade of lumber, species or species grouping or combination designation, rules under which graded, where applicable and condition of seasoning at time of manufacture.*
  - 2. *Provide appropriate grade trademark of the American Plywood Association on softwood plywood indicating the following:*
    - a. *Type, grade, class and identification index*
    - b. *Inspection and testing agency mark*
- D. *Preservative-treated material shall comply with specified standards of the American Wood Preservers Association (AWPA) and American Wood Preservers Institute (AWPI). All preservative-treated materials shall be pressure treated with salt preservatives as required for above-ground exposure.*
- E. *Fire-retardant treated material shall comply with specified standards of the American Wood Preservers Association (AWPA). All fire retardant treated wood products shall bear an Underwriter's Laboratories, Inc. label.*
- F. *Prior to initiation of any structural wood framing, the Contractor shall schedule a meeting at the job site with the Architect, Owner's Representative, Framing Subcontractor and all other related Sub Contractors to discuss Sequencing, Schedule, and other framing related criteria.*
- G. *Pre-engineered wood I-Joists shall be manufactured in accordance with APA PRI Performance, Standard for APA EWS I-Joists.*

## II. PART 2 - PRODUCTS

### 2.1 LUMBER

- A. *Indicated lumber dimensions are nominal. Actual dimensions conform to industry standards established by the American Lumber Standards Committee and the rules writing agencies.*
- B. *Moisture content of rough framing lumber shall be 18% maximum at time of permanent closing in of building or structure, except as otherwise noted.*
- C. *Lumber shall be surfaced on four sides (S4S).*
- D. *Lumber, 2" to 4" thickness, shall be the following grades:*
  - 1. *Plates, blocking, bracing, furring and nailers shall be utility grade or No. 3 southern pine. Lumber in contact with concrete slabs, exterior masonry walls or in conjunction with gravel stops and copings shall be preservative treated in accordance with specified standards. Lumber shall be minimum 2 x 6.*
  - 2. *All interior lumber shall be fire treated unless noted otherwise.*

## 2.2 SHEET MATERIALS

### A. Plywood

1. Exterior plywood decking/sheathing shall be APA sheathing 24/16, 15/32", Exposure I, in 4' x 8' sheets. Use fire rated at Concession / Press Box Building rear stair walls.
2. Interior plywood shall be fire-retardant treated  $\frac{3}{4}$ " thick APA rated plywood interior type, grade AC in 4' x 8' sheets.
3. All plywood shall be manufactured using exterior glue (resorcinol or phenolic resin based).
4. All plywood sheet materials shall be preservative treated for exterior use and fire treated for interior use.

### B. See Section 07 21 00 for nailable roof insulation.

## 2.3 FIRE-RETARDANT TREATED MATERIALS

### A. Standards

1. Lumber shall comply with AWPA C-20-99.
2. Plywood shall comply with AWPA C-27-99.

## 2.4 PRESERVATIVE TREATED MATERIALS

### A. Standards

1. Lumber shall comply with AWPA C-2-99.
2. Plywood shall comply with AWPA C-9-99.

## 2.5 ROUGH HARDWARE

- A. Provide all nails, bolts, spikes, plugs, wall plugs, anchors and such other rough hardware for securing work in place.
- B. Aluminum ply clips shall be installed at midspan of decking. Use two for 48" or greater spans and one for lesser spans.
- C. Anchors and fasteners for securing wood items, unless noted otherwise, shall be as follows: Bolts, nuts, studs and lag screws shall conform to ANSI B18.2.1. Anchor bolts for securing wood nailers to CMU bond beams shall be 8" long x  $\frac{1}{2}$ " diameter threaded steel rods with a 2" hooked end set in the bond beam. Anchor shall be spaced at 4'-0" o.c. Wood screws shall conform to Federal Specification FF-S-111. Provide style and material best suited for the purpose. Nails and staples shall conform to Federal Specification FF-N-105B. Provide type and size best suited for the intended purpose unless noted otherwise.
- D. Anchors for securing wood nailers to steel deck shall be 12-14 x 2" flat head screws teks/3 18" o.c. staggered.

## III. PART 3 - EXECUTION

### 3.1 WORKMANSHIP

- A. All wood members shall be cut square on bearing, closely fitted, accurately set to required lines and levels and rigidly secured in place.



- B. *Accurately layout the work to provide correct openings to receive work of other trades.*
- C. *Cover and protect rough carpentry from damage.*
- D. *Install all wood members as required by the construction documents and/or necessary for proper installation of other project components.*
- E. *Leave 1/16" space at end joint and 1/8" at edge joints of plywood.*

### 3.2 TEMPORARY SUPPORTS

- A. *Wood framing or other necessary supports for openings in masonry walls shall be accurately and strongly made. Properly brace and secure in position until masonry has thoroughly set.*
- B. *Wood members shown on the drawings and as required shall be provided and installed by the Contractor. Wood members shall be secured firmly with anchors at not more than 24" on center.*

### 3.3 SHEET MATERIAL INSTALLATION

- A. *Install plywood sheathing and decking with face grain perpendicular to supports. Terminate panels over supports. Stagger end joints of adjacent panels.*
  - 1. *Allow 1/16" between end joints and 1/8" between edge joints for expansion.*
  - 2. *Attach plywood using screws at 6" on center along each metal support.*
  - 3. *Caulk all joints between sheets.*

### 3.4 STORAGE AND PROTECTION

- A. *Stack all wood products to ensure proper ventilation and drainage. Protect lumber from the elements. Store materials under cover in a well ventilated building where not exposed to extreme changes of temperature or humidity.*

### 3.5 FIRE RETARDANT TREATED WOOD IN CONTACT WITH METALS

- A. *Wherever fire retardant treated wood products are in contact with galvanized steel and copper metal materials, a 30 mil bituminous coating shall be applied between the wood and metal.*

### 3.6 WOOD BLOCKING

- A. *Provide fire retardant treatment wood blocking in all metal stud walls at locations for markerboards, tackboards, TV brackets and any other items shown on drawings either in Contract or by Owner that attach to metal stud and gypsum board walls.*

END OF SECTION 06 10 00

## SECTION 07 19 10

## EXTERIOR WALL AIR BARRIERS

I. PART 1 - GENERAL

## 1.1 SCOPE

A. *Install at exterior wall infill.*

## 1.2 DELIVERY, STORAGE AND HANDLING

A. *Deliver materials to project site in manufacturer's original packaging or containers.*

B. *Store to prevent damage, deterioration and contamination.*

II. PART 2 - PRODUCTS

## 2.1 EXTERIOR WALL AIR BARRIER

A. *Exterior wall air barrier shall be 9 mil thick non perforated, non woven polyolefin. The product shall display the following properties:*

1. *Moisture vapor transmission rate shall be 59 perms maximum when tested in accordance with ASTM E-96, Procedure A.*
2. *Air porosity shall be 491 sec/100 cc maximum when tested in accordance with TAPPI T-460.*
3. *Water resistance shall be 45" when tested in accordance with AATCC 127.*
4. *Tensile MD shall be 32 #/in. minimum when tested in accordance with ASTM D-882.*
5. *Tensile CD shall be 32 #/in. minimum when tested in accordance with ASTM D-882.*
6. *Rolls shall be 9'-0" wide.*
7. *Tape to be used at air barrier seams shall be UV resistant polypropylene film.*
8. *Air barrier shall be fabricated with custom logo on all surfaces visible. Owner shall provide logo information to air barrier manufacturer.*
9. *Acceptable products for exterior wall vapor barrier shall be "R Wrap Housewrap" as manufactured by Ludlow Coated Products (800-345-8881).*
10. *All surfaces required to receive self adhering flashing tape, and / or waterproofing membrane at perimeter of exterior wall openings shall be coated with a rubber based primer prior to application of membranes equal to "Primer 100" as manufactured by The Protecto Wrap Company (303-777-3001).*
11. *Self adhered flashing tape to be used at base of exterior wall openings shall be equal to "Flexwrap" as manufactured by Dupont (800-448-9835).*

12. Self adhered waterproofing membrane to be applied at perimeter of exterior wall openings shall be equal to "BT-20 XL" supplied in 9" wide and 12" wide rolls as manufactured by The Protecto Wrap Company (303-777-3001).

### III. PART 3 - EXECUTION

#### 3.1 EXTERIOR WALL AIR BARRIER INSTALLATION

- A. Prior to application of exterior wall air barrier to all exterior sheathing surfaces, the following construction shall be performed at the building perimeter:
  1. Following complete installation of all exterior sheathing materials, Contractor shall attach a 4'-0" wide x 4'-0" high section of 30# asphalt saturated felt underlayment to all interior and exterior building corners at the second floor level. Bottom edge of felt shall begin 2" below second floor slab level. Vertical centerline of felt shall be centered on the corner.
- B. Air Barrier shall be installed over all exterior sheathing surfaces in horizontal bands. Bottom edge of first band of air barrier shall be installed 2" below floor slab level. All subsequent bands of air barrier shall overlap preceding band by 1'-0". Fastener products and spacing shall be performed in strict compliance with written recommendations of the air barrier manufacturer to accommodate specific project conditions encountered. All horizontal laps of adjacent air barrier sheets shall be 4" minimum.
- C. Continue air barrier application over all exterior wall openings. After air barrier has been fastened, cut an X-shaped opening at all exterior wall penetration openings and fold 3 triangular-shaped flaps of air barrier into the building at the opening head and jambs. Fasten triangular flaps at building interior at 3 sides of opening. Cut an 8" diagonal slot in the air barrier at the two head/jamb corners to allow the air barrier to be lifted during application of the specified self adhered waterproofing membrane at window head corners below.
- D. Prime all surfaces to which self adhered flashing tape and self adhered waterproofing membrane specified herein are to be applied at perimeter of exterior wall openings with the specified primer. Surfaces shall be cleaned to remove all loose dust and debris prior to primer application. Apply primer to all surfaces using roller, brush or spray at an application rate of 200 sf / gallon. Primed surfaces shall be free of all runs, puddles and excessive primer. Prime only as much surface as can be covered with self adhered flashing tape or self adhered waterproofing membrane in a 4 hour period. Protect primed surfaces from dust and do not apply self adhered flashing tape or waterproofing membrane until primer is tacky but not wet. Primed areas not covered within 8 hours of primer application shall be reprimed. If an area must be reprimed do not remove existing primer, but be certain area is clean and dry. Surface shall be free of dust, dirt and moisture. Reprime and again allow primed area to become tacky but not wet prior to applying the self adhered flashing tape or self adhered waterproofing membrane. For all vertical applications over 8'-0" in height,

- a second coat of primer shall be applied to the top 10" of the surface to be covered. The self adhered flashing tape or self adhered waterproofing membrane shall be applied when the second coat of primer is tacky, but not wet. The top 10" of the self adhered flashing tape or self adhered waterproofing membrane shall be firmly rolled along with all overlaps.
- E. The specified self adhered waterproofing membrane shall be applied in a continuous strip at the sill of all rough openings . Half of the self adhered waterproofing membrane shall be adhered on the vertical surface of the exterior wall and half shall be adhered to the horizontal surface of the rough opening sill. The continuous strip of self adhered waterproofing membrane shall be adhered vertically up both jambs of the rough opening 1'-0". The vertical surface only of the self adhered waterproofing membrane shall be cut to produce the bend upward at the jambs from the sill.
  - F. Install the specified self adhered flashing tape at the two intersections of the sill-to-jamb conditions completely covering the inside corners of the rough opening.
  - G. Install the specified one part polyurethane sealant on the back side of all perimeter nailing fins on windows to be applied within the rough window openings at the head and jambs only of the windows prior to window installation and anchor windows in place with unfastened air barrier flap folded outward temporarily at head.
  - H. Apply self adhered waterproofing membrane over the exterior surfaces of the fins at the window jambs and then at the window head, overlapping the membrane applied over the jamb fins, under the air barrier flap.
  - I. Provide and install 24 gauge aluminum Zee-shaped flashing at window head prefinished to match window frames with a 15 degree horizontal slope to shed water. Cut and bend flashing ends to form a dam at the intersection of the head and jambs.
  - J. Apply self adhered waterproofing membrane over top flange of head flashing following application of primer to substrate.
  - K. Apply a 12" wide strip of self adhered waterproofing membrane over the vertical/horizontal joint at the jamb/head corners to seal the cut in the air barrier closed. Overlap the self adhered waterproofing membrane and the vertical portion of the aluminum flashing with the air barrier flap.
  - L. Caulk the inside of the window frame sill and vertically upward 2" from the sill at each jamb with the specified one part polyurethane sealant.
  - M. In addition to the work specified above, perimeter of all other penetrations of exterior wall surfaces shall be sealed with one part polyurethane sealant and taped with self-adhered waterproof membrane.

END OF SECTION 07 19 10

## SECTION 07 21 00

## INSULATION

I. PART 1 - GENERAL

## 1.1 DELIVERY, STORAGE, AND HANDLING

- A. Protect materials from moisture, soiling and breakage. Comply with manufacturer's printed recommendations for handling and storage.
- B. Store materials 6" off ground and under waterproof cover.

## 1.2 SUBMITTALS

- A. Submit manufacturer's product specifications and installation instructions for each type of insulation listed.
- B. Provide all insulation materials from one source whenever possible.

## 1.3 FACTORY MUTUAL APPROVAL

- A. Material, products, assemblies and installations used in this Specification Section must be approved by Factory Mutual Research, with such approvals contained in their Approved Guide (Three Volumes: Building Materials, Fire Protection and Electrical Building Components). See Specification Section 01 01 00, Para 1.06 for additional relevant information.

II. PART 2 - PRODUCTS

## 2.1 BATT INSULATION

- A. Acceptable manufacturers shall be:
  - 1. Schuller
  - 2. Owens Corning
  - 3. CertainTeed Corp.
  - 4. USG Interiors
- B. Batt insulation includes a 3½" thick, R-13 unfaced, fiberglass batt material in rolls of a width to suit the spacing of framing members. Fiberglass insulation shall have a flame spread rating of 25 or less.
- C. Firestopping insulation shall be 3½" thick. Acceptable products include USG "Thermafiber" FS-15 blankets or approved equal by acceptable manufacturers in 2.1.A. Fire stopping insulation shall be placed at all floor, ceiling and wall penetrations of fire-rated installations.

## 2.2 FASTENERS AND ADHESIVES

- A. Adhesives shall comply with printed recommendations of rigid insulation manufacturer.
- B. Staples shall be flattened and galvanized with a  $\frac{7}{16}$ " minimum crown and a  $\frac{1}{2}$ " minimum shank.

### III. PART 3 - EXECUTION

#### 3.1 PREPARATION

- A. Prior to installation ensure that:
1. All preceding work to be concealed shall have been completed.
  2. Surfaces to receive insulation shall be dry, in uniform plane, and free of debris and projections which might damage insulation.
  3. Work which will conceal or protect insulation is ready for immediate installation.

#### 3.2 BATTS

- A. Install batts at all exterior wall gaps between surfaces to prevent air infiltration, such as between steel beams and CMU, steel deck and joists, etc.
- B. Install batts between roof joists.
- C. Install at all exterior metal stud walls, gaps in rigid insulation, or as shown on drawings.
- D. Install batts without gaps over entire surface to be insulated.
- E. Do not block required ventilation.
- F. Install batts snugly between framing members, including small areas between closely spaced framing members.
- G. Carefully cut batts to fit snugly around penetrations.
- H. Where pipe or conduit run in the wall space, install batts between pipes, conduits, etc. and the exterior, compressing insulation as required.
- I. Install sound attenuation batts at all floor joists.

#### 3.3 PROTECTION OF MATERIAL FROM DAMPNESS

- A. At the time construction materials are received on site, they shall be inspected for dryness, and any material not completely free of dampness shall be rejected and replaced prior to being set into the building areas. If materials are to be stored on site prior to use in construction, they shall be stored on pallets, clearly and visibly off the ground and away from any ponding or puddling of ground water. The stored material shall further be completely protected from rain and other moist weather with plastic sheeting, which shall be adequately vented to avoid condensation build-up. Once built into the construction, even though the building may not be dried-in, the materials shall be protected from becoming wet by rain or other moist weather with plastic sheeting.

END OF SECTION 07 21 00

## SECTION 07 62 00

## FLASHING AND SHEET METAL

I. PART 1 - GENERAL

## 1.1 SCOPE

- A. *Flashing and sheet metal shall be provided at all roof construction.*
- B. *Drawings and general provisions of the Contract shall apply to all work of this section.*
- C. *Extent of each type of flashing and sheet metal work is indicated on drawings and by provisions of this section.*
- D. *Types of work specified in this section include the following:*
  - 1. *Perimeter flashing*
  - 2. *Gutters, down-spouts and conductor boxes*

## 1.2 SUBMITTALS

- A. *Submit shop drawings which indicate material types, sizes, shapes, thicknesses, finishes, fabrication details, anchors, connections, expansion joints and relation to adjacent work. Drawings shall be drawn to large scale and, where practical, shall be full size.*
- B. *Submit product data which indicates product description, finishes and installation instructions, including interface with adjacent materials and surfaces.*
- C. *Submit actual 3" x 4" square full spectrum samples of all prefinished sheet metal materials. Submit mock up of actual coping, showing cleats, fastening devices, or pressure treated wood nailers.*

## 1.3 DELIVERY, STORAGE AND HANDLING

- A. *Store materials off ground, under waterproof cover. Protect from damage and deterioration.*
- B. *Handle materials to prevent damage to surface, edges and ends of sheet metal items. Damaged material shall be discarded and replaced.*

## 1.4 QUALITY CRITERIA

- A. *All sheet metal shall comply with "Architectural Sheet Metal Manual" published by the Sheet Metal and Air Conditioning Contractors National Association, Inc., (SMACNA), latest edition.*
- B. *Installation of sheet metal items shall comply with National Roofing Contractors Association "NRCA Roofing & Waterproofing Manual" latest edition.*
- C. *Do not place dissimilar metals in contact with one another, nor in a position where water sheds across dissimilar metals.*
- D. *Qualifications of Installers: Provide at least one person, present at all times during execution of the work of this section, who shall be thoroughly trained and experienced in the materials and methods*

*required and who shall direct the entire flashing and sheet metal fabrication and installation.*

#### 1.5 WARRANTY

- A. *Warranty flashing and sheet metal work to be free of defects in materials and workmanship for two (2) years.*
- B. *All flashing products and fasteners used in the roofing installation shall be approved by the roofing manufacturer and shall be included in the roofing guarantee.*
- C. *Submit to the Owner a written warranty signed by General Contractor and sheet metal subcontractor stating that sheet metal work shall be completely watertight for a period of two years following Final Payment. The warranty shall cover all costs for repairing and/or replacing defective work due to improper materials or workmanship.*

### II. PART 2 - PRODUCTS

#### 2.1 SHEET METAL MATERIALS

- A. *Sheet Steel, Gutters, Down spouts, Conductor Boxes and Parapet Copings:*
  - 1. *Concealed flashing shall be 24 gauge galvanized steel.*
  - 2. *Acceptable manufacturers*
    - a. *Petersen Aluminum Corporation*
    - b. *Firestone/UNA-CLAD Copper Sales, Inc.*
    - c. *Atlanta Metal Products,*
    - d. *Perma-Clad,*
    - e. *IMETCO,*
    - f. *Architectural Metal Systems*
    - g. *Berridge Manufacturing Co.*
  - 3. *Exposed prefinished steel products shall be 24 gauge galvanized with "KYNAR 500" coating of a color to be selected by Architect.*
- B. *Stainless Steel*
  - 1. *All stainless steel used shall be type #302, of standard analysis 18-8 containing a minimum of 17-19 percent chromium, 8-10 percent nickel and 0.08-0.20 percent carbon.*
  - 2. *Fractures or mill reject sheets that are not uniform in color and finish shall not be used. Sheet color and finish, whether mill or shop finished, shall be uniform throughout and shall have uniform finish and appearance.*
- C. *Reglet Flashing and Counterflashing*
  - 1. *Concealed reglet and counterflashing shall be 24 gauge galvanized steel, non-corrosive.*
  - 2. *Exposed flashing shall be prefinished roll-formed 24 gauge galvanized steel to match adjacent surfaces with "Kynar 500" resin fluoropolymer Color to be selected by Architect.*
  - 3. *Instal shop-formed metal flashings in 10 foot length maximum with a minimum number of pieces in each straight run.*



4. Anchors shall be provided at 16" o.c. or as recommended by manufacturer.

## 2.2 MISCELLANEOUS MATERIALS AND ACCESSORIES:

### A. Soldering Materials

1. Solder shall comply with ASTM D32-66T, alloy grade 50A, 50% pig lead and 50% block tin.
2. Solder flux for galvanized metal and copper shall be muriatic acid neutralized with zinc. For lead it shall be non-corrosive rosin.

### B. Fasteners shall be of the same material or compatible with sheet metal being fastened.

1. Screws to attach cleats and gutter to nailers shall be stainless steel flathead wood screws, of sufficient length to penetrate substrate  $\frac{3}{4}$ " minimum, 2 $\frac{1}{2}$ " long minimum.
2. Expansion shields shall be lead or bronze sleeves.
3. Screws for fastening gutter strap to stiffener bar shall be stainless steel, self-tapping type with round heads.
4. Bolts shall be zinc coated. Furnish with nuts and washers as required.
5. Rivets shall be round head with solid shank.
6. Blind clips and cleats shall be 18 gauge galvanized.

### C. Epoxy Seam Sealer: 2-part noncorrosive metal seam cementing compound, recommended by metal manufacturer for exterior/interior non-moving joints including riveted joints.

### D. Reglets: Metal units of type and profile indicated, compatible with flashing indicated, noncorrosive.

### E. Metal Accessories: Provide sheet metal clips, straps, anchoring devices and similar accessory units as required for installation or work, matching or compatible with material being installed, noncorrosive, size and gauge required for performance.

## 2.3 FABRICATED UNITS:

### A. General Metal Fabrication: Shop-fabricate work to greatest extent possible. Comply with details shown, and with applicable requirements of SMACNA "Architectural Sheet Metal Manual" and other recognized industry practices. Fabricate for waterproof and weather-resistant performance; with expansion provisions for running work, sufficient to permanently prevent leakage, damage or deterioration of the work. Form work to fit substrates. Comply with material manufacturer instructions and recommendations for forming material. Form exposed sheet metal work without oil-canning, buckling and tool marks, true to line and levels indicated, with exposed edges folded back to form hems.

### B. Seams: No exposed fasteners permitted. Brush back finished at area of joint and **SOLDER ALL METAL JOINTS** (except where expansion joints indicated). Touch-up pre-finished surfaces with two coats of matching paint to match surrounding surface.

- C. *Expansion Provisions: Form expansion joints of intermeshing hooked flanges, not less than 1" deep, filled with mastic sealant (concealed with joints), with standing seam joints.*
- D. *Sealed Joints: Where movable, non-expansion type joints are indicated or required for proper performance of work, form metal to provide for proper installation of elastomeric sealant, in compliance with SMACNA standards.*
- E. *Separations: Provide for separation of metal or fasteners from non-compatible metal or corrosive substrates by coating concealed surfaces at locations of contact, with bituminous coating or other permanent separation as recommended by manufacturer/fabricator.*
- F. *All bends shall have a  $\frac{1}{16}$ " minimum radius.*
- G. *Brazing, soldering and welding methods shall be suitable for the product used. Thoroughly remove flux residue after attachment.*
- H. *Fasteners shall not cause galvanic action with steel.*
- I. *Provide linear items in 10' long sections maximum and a minimum number of pieces in each straight run.*
- J. *Steel Gutters and Downspouts.*
  - 1. *Downspouts shall be box-style with locked and sealed longitudinal seams. Upper end shall be flanged  $\frac{1}{2}$ " and fastened and sealed to conductor box. Downspout size shall match existing.*
  - 2. *Downspout straps shall be of the same material as the downspouts, with same Kynar 500 finish,  $1\frac{1}{2}$ " wide, with hemmed edges.*
  - 3. *Downspout shall be fabricated in sections 10'-0" minimum in length from 24 GA galvanized steel. Anchors shall be stainless steel screws.*
  - 4. *Provide stainless steel sleeves for all fasteners at all down spout installations at EIFS in thickness to be flush with EIFS finish.*
  - 5. *Downspout connections shall be per SMACNA Manual, Plate Fig. 1-33, Latest Edition.*
  - 6. *Downspouts shall be spaced as shown on Drawings. All downspout locations shall be reviewed and approved by the Architect*

#### 2.4 OTHER SHEET METAL FABRICATION

- A. *Fabricate sheet metal work in accordance with reviewed shop drawings, contract documents and industry standards. Form sheet metal work with clear, sharp and uniform breaks. Hem exposed edges.*
- B. *Seam and solder all joints in sheet metal products. Solder sheet metal joints with heavy, well-heated coppers. Pre-tin joints not less than  $1\frac{1}{2}$ " wide. Provide 1" minimum soldered joints. After soldering, wash joints and neutralize remaining acid with alkaline solution. Paint to match.*
- C. *Provide linear sheet metal items in minimum 10'-0" sections except as otherwise noted. Form flashing using single pieces for the full width.*

III. PART 3 - EXECUTION

3.1 SHEET METAL INSTALLATION

- A. *Install work in accordance with contract documents, industry standards. Sheet metal items shall be installed true to line, watertight without buckling, waves, creasing, warp or wind in finished surfaces.*
- B. *Provide joints at maximum 10'-0" o.c. Joints shall be ¼" between sections.*
- C. *Isolate dissimilar materials to prevent galvanic action. Separate using bituminous paint both sides or roofing felt. All fasteners shall be fabricated from the same material as the product to be attached, unless noted otherwise.*
- D. *Form seams in direction of flow. Seams shall be flatlock with cleats filled with sealant. Lap seams occurring in members sloping 45 degrees or more 4" minimum and embed in flashing cement. Miter and solder inside and outside corners of all exposed metal products.*
- E. *Fastening*
  - 1. *Screws*
    - a. *Space screws evenly at 4" o.c. on cleats and gravel stops/fascias, staggered at 1" off front and back edge.*
    - b. *Space screws at 4" o.c. confined to one edge only of flashing 12" or less in width.*

END OF SECTION 07 62 00

## SECTION 07 65 10

## WALL FLASHINGS

I. PART 1 GENERAL

## 1.1 SUBMITTALS

- A. *Submit product data which indicates product description, finishes and installation instructions, including interface with adjacent materials and surfaces.*
- B. *Submit actual full spectrum samples of all flashing material.*

## 1.2 DELIVERY, STORAGE AND HANDLING

- A. *Store materials at least 6" off ground and under waterproof cover. Protect from damage and deterioration.*
- B. *Handle materials to prevent damage to surfaces, edges and ends of flexible flashing. Damaged material shall be discarded and replaced.*

## 1.3 QUALITY CRITERIA

- A. *Installation shall comply with National Roofing Contractors Association "NRCA Roofing and Waterproofing Manual" latest edition.*
- B. *Brick Institute's latest Technical Bulletins.*

## 1.4 INSPECTION

- A. *Owner shall employ a testing agency to visually inspect and record all building flashing locations and conditions.*

## 1.5 WARRANTY

- A. *Warrant flashing and installation to be free of defects in materials and workmanship for two years.*

II. PART 2 - PRODUCTS

## 2.1 THROUGH-WALL FLASHING

- A. *Typical Unless Noted Otherwise- see drawings for locations.*
- B. *Acceptable manufacturer's shall include the following:*
  - 1. *Keystone Flashing Company (800-526-8348)*
  - 2. *Scott-Lokk (718-384-3456)*
  - 3. *Cheney (800-322-2873)*
  - 4. *Fabricated components from Atlanta area fabrication shops are acceptable in the specified material and profile.*
- C. *Characteristics of wall flashing shall comply with the following requirements:*
  - 1. *Stainless steel through wall flashing shall be 26 gauge fabricated to the profiles indicated on the Drawings.*

*III. PART 3 - EXECUTION**3.1 INSTALLATION OF THRU WALL FLASHING*

- A. Install work in accordance with contract documents and industry standards. Steel metal items shall be installed true to line, watertight without buckling, waves, creasing, warp or wind in finished surfaces. Membrane shall be free of holes and tears.*
- B. Install wall flashing at exterior door heads, window heads and other wall openings and at weep wick locations, continuous in the bed joint beneath the weep wicks.*
- C. Extend flashing 8" beyond opening on each side. Lap joints 3" minimum and seal with adhesive.*
- D. Start flashing ½" in from outside face of exterior wythe, extend through cavity, rising not less than 4", and terminate in bed joint of interior wythe, ½" from inside face or tape at interior concrete wall. Do not extend past outside face of brick.*
- E. Locate flashing to ensure that portion extending thru exterior brick shall be one brick course above grade or sidewalk. If necessary move thru wall portion in bed joint of interior wythe up one course from slab.*
- F. Repair or replace all flashing during construction before covering up.*

*END OF SECTION 07 65 10*

## SECTION 07 92 00

## JOINT SEALER

I. PART 1 - GENERAL

## 1.1 SCOPE

- A. *Work of this section includes furnishing and installing all sealants and caulking compounds where required by contract documents and manufacturers recommendations.*
- B. *A sealant is a weatherproof elastomer used for filling and sealing joints which has properties of adhesion, cohesion, extensibility under tension, compressibility and recovery Sealants shall be designed to make joints air and watertight. The sealant shall have been tested by the sealant manufacturer for compatibility and performance with the exterior finish. Material shall be designed for application to joints at exterior of structures and for other joints subject to movement and/or moisture infiltration at interior and exterior of structures.*
- C. *A caulking compound is an acrylic emulsion used for filling joints and seams, having properties of adhesion and cohesion. Caulking compounds shall not be required to have extensibility and recovery properties. It shall be applied to joints at interior of structures not subject to movement or moisture infiltration.*
- D. *Caulking is the process of filling joints without regard to type of material.*
- E. *Joint failure refers to a caulked joint exhibiting one or more of the following characteristics:*
  - 1. *Joint leaks air and/or water.*
  - 2. *Sealant or caulking compound migrates.*
  - 3. *Sealant or caulking compound loses adhesion.*
  - 4. *Sealant or caulking compound loses cohesion.*
  - 5. *Sealant or caulking compound does not cure.*
  - 6. *Sealant or caulking compound discolors.*
  - 7. *Sealant or caulking compound stains adjacent work.*
  - 8. *Sealant or caulking compound develops bubbles, air pockets or voids.*

## 1.2 SUBMITTALS

- A. *Submit manufacturer's product data indicating product description, conformance with specified requirements and installation instructions for each type caulking compound and sealant. Indicate preparation requirements for each substrate condition.*
- B. *Samples*
  - 1. *Submit samples of manufacturer's standard caulking compound/sealant material colors and special colors as indicated at least 30 days prior to application.*

2. *Samples shall be actual materials or literature depicting actual material colors. Architect reserves the right to reject work not in conformance with selected colors based upon samples submitted.*
3. *Should Contractor select a manufacturer meeting specified requirements, except for minimum color range requirements, the Contractor shall be responsible for furnishing special colors within color range requirements. Special colors shall be submitted for Architect's review.*

### 1.3 DELIVERY, STORAGE AND HANDLING

- A. *Deliver and store materials in manufacturer's unopened packaging with seals and labels intact. Comply with manufacturer's instructions regarding environmental conditions under which materials may be stored.*
- B. *Handle materials in accordance with manufacturer's printed instructions.*

### 1.4 PROJECT CONDITIONS

- A. *Environmental Conditions*
  1. *Install no materials under inclement weather conditions or when temperatures are below or above those recommended by manufacturer.*
  2. *Proceed with work only when forecasted weather conditions are favorable for joint cure and development of high early bond strength.*
  3. *Wherever joint width is affected by ambient temperature variations, install materials only when temperatures are in lower third of manufacturer's recommended installation temperature.*
- B. *Protection of Adjacent Surfaces*
  1. *Protect adjacent surfaces by applying masking material or manipulating application equipment to keep materials in joint. If masking materials are used, allow no tape to touch cleaned surfaces to receive sealant. Remove tape immediately after caulking, before surface skin begins to form.*
  2. *Remove misapplied materials from surfaces using solvents and methods recommended by manufacturer.*
  3. *Restore surfaces from which materials have been removed to original condition and appearance.*

### 1.5 WARRANTY

- A. *Warrant work to be free from defects in materials and workmanship, including joint failure, for a period of three years beginning at Date of Substantial Completion. In addition to the warranty of the material suppliers, the contractor shall provide a warranty of the interface between the sealant or caulking compound and adjacent surfaces equal to the greater warranty period of the adjacent materials.*

## II. PART 2 - PRODUCTS

### 2.1 SEALANTS

- A. Acceptable polyurethane sealant products for installation at exterior expansion joints, control joints, door/window exterior perimeters, other dynamic interior/exterior joints and as a general weatherproofing sealant shall be a two part sealant. Acceptable products include the following:
1. Tremco "Dymeric 240"
  2. Sonneborne, Division of Contech, Inc., "Sonolastic"
  3. W.R. Grace

### 2.2 FIRE BARRIER CAULK

- A. Fire barrier caulk shall be a synthetic elastomeric premium latex product with endothermic and intumescent properties designed to prevent fire, smoke, and toxic fumes from penetrating walls for a minimum of 1 hour. Fire barrier caulk shall be installed at all fire rated wall utility pipe penetrations.
- B. Acceptable products shall include the following:
1. 3M fire retardant CP 25 WB caulk.
  2. 3M fire barrier moldable putty (MP).
  3. Dow Corning firestop sealant.

### 2.3 COLORS

- A. For exposed applications of sealant and caulking compounds, colors shall be selected by Architect.
- B. For unexposed applications provide black color sealant and caulking compounds.

### 2.4 ACCESSORY MATERIALS

- A. Provide and install joint cleaner recommended by caulking compound/sealant manufacturer for substrates indicated.
- B. Provide and install joint primer/sealer recommended by caulking compound/joint sealer manufacturer.
- C. Apply polyethylene bond breaker tape to contact surfaces where bond to substrate or joint filler must be avoided for caulking compound/joint sealer performance.
- D. Provide and install compressible back-up rod stock polyethylene foam, polyethylene jacketed polyurethane foam, butyl rubber foam or neoprene foam as recommended by caulking compound/sealant manufacturer for compatibility with material. Provide size and shape of rod to control joint depth, break bond at bottom of joint, form optimum shape of bead on back side and minimize possibility of extrusion when joint is compressed. Acceptable manufacturers shall include Sandell Manufacturing Co. Polytite Acme Highway Products Corp., and Acmaseal.
- E. Provide and install tooling agent recommended by caulking compound/sealant manufacturer to ensure contact of material with inner joint faces.



- F. Provide and install synthetic rubber or closed cell synthetic foam divider strips not less than  $\frac{1}{16}$ " thick and full depth of caulking compound/sealant. Strips shall be approved by manufacturers of dissimilar materials as being compatible with each.
- G. Provide precompressed expanding foam sealant composed of open cell polyester polyurethane foam impregnated with neoprene rubber. Sealant shall be factory produced in precompressed sizes and in roll or stick form to fit joint widths indicated and to develop a watertight and airtight seal when compressed to degree specified by manufacturer. Provide products which are permanently elastic, mildew resistant, non-migratory, nonstaining, compatible with joint substrates and other joint sealants. Will-Seal construction foams "Will Seal 150" is acceptable, similar products of other manufacturers shall be subject to Architect's review.

### III. PART 3 - EXECUTION

#### 3.1 JOINT SURFACE PREPARATION

- A. Clean joint surfaces immediately before caulking joints. Remove dirt, unsecure coatings, moisture and other substances which would interfere with bond.
- B. Etch concrete and masonry joint surfaces to remove excess alkalinity, unless caulking compound/sealant manufacturer's printed instructions indicate that alkalinity does not interfere with bond and performance. Etch with 5% solution of muriatic acid and neutralize with dilute ammonia solution. Rinse with clean water and allow to dry before caulking.

#### 3.2 APPLICATION

- A. Comply with caulking compound/sealant manufacturer's printed installation instructions except where more stringent requirements are shown or specified.
- B. Prime or seal joint surfaces where recommended by caulking compound/sealant material manufacturer. Do not allow primer/sealer to spill or migrate onto adjacent surfaces.
- C. Install backup rod for all caulking compound/sealant materials, except where recommended to be omitted by material manufacturer for application indicated.
- D. Apply installation techniques which will ensure that caulking compound/sealant materials are deposited in uniform, continuous ribbons without gaps or air pockets, with complete wetting of joint bond surfaces. Except as otherwise indicated, fill joint to concave surface, slightly below adjoining surfaces. Where joints are between a horizontal surface and a vertical surface, fill joint to form slight cove, so that joint will not trap moisture and debris.
- E. Do not allow materials to overflow or spill onto adjacent surfaces. Use masking tape or other precautionary devices to prevent staining of adjacent surfaces.

- F. *Remove excess and misplaced materials as work progresses. Clean the adjoining surfaces to eliminate evidence of misplaced materials without damage to adjacent surfaces and finishes.*
- G. *Exterior finish material shall be cured prior to sealant application.*
- H. *Cure caulking compound/sealant materials in accordance with manufacturer's printed instructions to obtain high early bond strength, internal cohesive strength and surface durability.*
- I. *Install fire barrier caulk at all penetrations through all fire-rated or smoke-rated walls.*

*END OF SECTION 07 92 00*

## SECTION 08 30 00

## OVERHEAD DOORS

I. PART 1 - GENERAL

## 1.1 DESCRIPTION OF WORK

- A. *This Section covers furnishing and installation of overhead doors as listed herein. Supplying of additional fastenings, features and other items not mentioned specifically herein, but which are necessary to make complete installation, shall be included.*

## 1.2 QUALITY ASSURANCE

A. *Source Quality Control:*

1. *Source: Furnish each overhead sectional door as a complete unit produced by one manufacturer, including hardware, accessories, mounting and installation components.*
  - a. *Furnish overhead rolling door units by one manufacturer for entire project.*
  - b. *Exterior rolling insulated service doors shall be designed to withstand at least a twenty (20) pounds per square foot windload. Windlocks shall be installed on 20 gauge exterior slat doors over 12' 1" wide and on 16 gauge exterior slat doors over 14' 1" wide.*
  - c. *All rolling insulated service doors shall be designed to a standard maximum of 25 cycles per day and an overall maximum of 50,000 operating cycles for the life of the door.*

## 1.3 SUBMITTALS

A. *Manufacturer's Product Data:*

1. *Specifications and Installation Data: Submit material specifications and installation data for products specified under Part 2 - Products.*
  - a. *Modifications: Modify submission by letter form to reflect project requirements and job conditions.*
  - b. *Recommendations: Submit manufacturers recommendations specified herein.*
  - c. *Storage and Handling Instructions: Include instructions for storage, handling and protection of products.*
  - d. *Installer Copy: Indicate by transmittal form that copies of modified (if any) specifications and installation data have been distributed to Installer.*
  - e. *Required Product Data Submittals:*
    - (1) *Catalog cuts of slat design and cover.*
    - (2) *Supplementary installation instructions: Retain at job site manufacturer's supplementary installation instructions for products specified under Part 2 - Products. Maintain*

and make available installation instructions retained at job site.

- B. **Shop Drawings:**
  - 1. **General:** Submit shop drawings for fabrication and erection not fully described by manufacturer's data.
    - a. Include plans and elevations at not less than ½" to 1' 0" scale, and details at not less than 3" to 1' 0" scale.
    - b. Indicate required anchorage and accessory items, field dimensions, and finishes.
- C. **Maintenance Data and Operating Instructions:**
  - 1. **Manufacturer's instructions and recommendations for maintenance, cleaning and repairing each product installed. Include precautions against materials and methods which may be detrimental to finishes and operation performance efficiency.**
    - a. **Furnish two manuals of operating and maintenance instructions, which shall also include nearest maintenance service available. Instruct Owner's delegated representatives in care, use and maintenance of doors. This shall be done in compliance with, and in addition to, above-required manual.**
- D. **Warranty:** Provide warranty for two years from date of Final Payment against defects in materials and workmanship.

#### 1.4 JOB CONDITIONS

- A. **Inserts and Anchorages:** Furnish inserts and anchoring devices which must be set in concrete or built into masonry for installation of rolling door framing assembly. Provide setting drawings, templates, instructions and directions for installation of anchorage devices.

## II. PART 2 - PRODUCT

### 2.1 MATERIALS

- A. The door curtain shall be constructed of interconnected strip aluminum slats. The slats shall be designated by The Cookson Company as No. 45 (measuring 3" high by 7/8" deep) consisting of a 20 gauge exterior slat and a 20 gauge interior slat separated by 13/16" of rigid insulation for doors up to 20' wide.
- B. The finish on the door curtain shall be 204-R1 clear anodized finish.
- C. The bottom bar shall consist of two 1/8" angles mechanically joined together with a 1" diameter vinyl covered foam edge astragal continuous along the bottom. The finish on the bottom bar shall be 204-R1 clear anodized finish.
- D. The guides shall consist of 2 aluminum angles and 1 steel wall angle bolted together with 3/8" fasteners to form a channel for the curtain to travel and shall include an extruded vinyl snap-on weatherstripping continuously along the exterior leg of the guide. The steel wall angle portion shall be continuous and fastened to the surrounding structure with minimum 1/2" fasteners on 36" centers. The finish on the aluminum angles shall be mill finish. The finish on the steel wall angle shall be aluminum prime paint to match the aluminum angles.

- E. *The brackets shall be constructed of steel not less than 1/4" thick and shall be bolted to the wall angle with minimum 1/2" fasteners. The finish on the brackets shall be one (1) coat of aluminum prime paint.*
- F. *All gears shall be cast iron with teeth cast from machine cut patterns. The pinion gear shall not be less than a 3" pitch diameter. The gear ratio shall be designed for a maximum effort of not more than 30 pounds.*
- G. *The barrel shall be steel tubing of not less than 6" in diameter. Oil tempered torsion springs shall be capable of correctly counter balancing the width of the curtain. The barrel shall be designed to limit the maximum deflection to .03" per foot of opening width. The springs shall be adjusted by means of an exterior wheel. The finish on the barrel shall be one (1) coat of bronze rust-inhibiting prime paint.*
- H. *The hood shall be fabricated from .040 aluminum and shall be formed to fit the curvature of the brackets. The hood shall contain a waterproof baffle to control air infiltration. The finish on the hood shall be 204-R1 clear anodized finish.*

## 2.2 OPERATION

- A. *Chain operated doors shall open and close with a maximum of 30 pounds of effort utilizing an endless chain and cast iron reduction gears.*

## 2.3 LOCKING MECHANISMS

- A. *The chain door shall be secured by means of a chain lock.*

# III. PART 3 - EXECUTION

## 3.1 INSTALLATION/APPLICATION/PERFORMANCE/ERECTION

- A. *Construct work according to detail and in accordance with best standard practice and assemble in workmanlike manner. Finished work shall be strong and rigid, neat in appearance and free from defects. Surfaces shall be smooth and free from warps and buckles. Deliver work to Job complete and ready for installation. Work shall be rigidly secured in workmanlike manner, plumb, level, and in perfect alignment.*
- B. *Installation shall be in accordance with manufacturer's printed instructions.*

## 3.2 ADJUSTMENT AND CLEANING

- A. *Adjust and Clean: Perform final adjustments of door assembly prior to final inspection. Clean exposed surfaces of door, hardware, fittings and accessories, using materials and methods recommended by door manufacturer.*
- B. *Protection: Protect units after installation to prevent damage to finish surfaces prior to time of acceptance. Replace damaged work.*

END OF SECTION 08 30 00

## SECTION 09 21 00

## GYPSUM BOARD SYSTEMS

I. PART 1 - GENERAL

## 1.1 SUBMITTALS

- A. *Submit product data which includes product descriptions, evidence of compliance with applicable codes and installation requirements. Mark manufacturer's brochures to indicate only those products proposed for use.*

## 1.2 DELIVERY, STORAGE AND HANDLING

A. *Delivery and Handling*

1. *Deliver materials to the project site with manufacturer's labels intact and legible. Handle materials with care to prevent damage. Install no materials which become damaged during handling.*
2. *Deliver fire-rated materials bearing testing agency label and required fire classification numbers.*

B. *Storage*

1. *Store materials inside under waterproof cover at least 6" off the floor.*
2. *Stack gypsum board so that long lengths are not over short lengths. Do not overload floor system.*
3. *Store adhesives and joint compounds in a dry area. Provide protection against freezing at all times.*

## 1.3 PROJECT CONDITIONS

- A. *Install wallboard only after building is enclosed. In cold weather, maintain a temperature of 55 degrees F to 70 degrees F for 24 hours before, during and 24 hours after gypsum board installation and joint treatment application.*

B. *Ventilation*

1. *Provide adequate ventilation during and following adhesive and joint treatment applications to remove excess moisture. Interior installation of gypsum products shall not commence until relative humidity in interior of building is 60% or less.*
2. *Use temporary air circulators in enclosed areas lacking natural ventilation.*
3. *Under slow drying conditions, allow additional drying time between coats of joint treatment.*

## 1.4 QUALITY CRITERIA

- A. *For all gypsum work throughout the project, provide gypsum materials, including accessories and fasteners produced by one manufacturer.*

- B. All installations shall comply with fire resistance ratings as indicated and as required by governing authorities and codes. Provide materials, accessories and application procedures which have been listed by UL or tested according to ASTM E119 for the type of construction shown.
- C. Shim gypsum work as required to comply with specified tolerances. Do not exceed  $\frac{1}{16}$ " offset between plates of abutting sheets (at edges or ends). Do not exceed  $\frac{1}{8}$ " in 8'-0", all locations and directions, for bow or out-of-plane for plumb, level, incline or curvatures.
- D. Gypsum sheet product installations shall conform to ASTM C840: Application and Finishing of Gypsum Board. No visible defects shall be allowed in completed installation.
- E. At the time construction materials are received on site, they shall be inspected for moisture damage, and any material not completely free of moisture damage shall be rejected and replaced prior to being set into the building areas. If materials are to be stored on site prior to use in construction, they shall be stored on pallets, clearly and visibly off the ground and away from any ponding or puddling of ground water. The stored material shall further be completely protected from moisture damage with plastic sheeting, which shall be adequately vented to avoid condensation build-up. Once built into the construction, even though the building may not be dried-in, the materials shall be protected from moisture damage with plastic sheeting.

## II. PART 2 - PRODUCTS

### 2.1 ACCEPTABLE PRODUCTS

- A. Manufacturers listed below are intended to indicate standard of quality required. Manufacturers offering products which comply with specifications include:
  1. U.S. Gypsum Company
  2. BPB America, Inc., CertainTeed
  3. National Gypsum Company, Gold Bond
  4. Georgia Pacific Gypsum Corporation
  5. LaFarge North America, Continental Gypsum
  6. American Gypsum

Note: USG products are used as the example for the remainder of Section 09 21 00.

### 2.2 GYPSUM BOARD

- A. Regular gypsum board shall be  $\frac{5}{8}$  inch gypsum panels with tapered edges. Regular gypsum board shall be used as a component of non-fire rated partitions and headwalls. All gypsum board shall comply with ASTM C36-85.

### 2.3 WATER RESISTANT GYPSUM BOARD

- A. Provide  $\frac{5}{8}$ " water resistant gypsum board with tapered edges in all toilet and mechanical rooms, for application over furring channels @ 12" o.c. All gypsum board shall comply with ASTM C36-85.

#### 2.4 FIRE RATED BOARD

- A. Fire retardant board shall be Type X "Sheetrock"  $\frac{5}{8}$ " thick with tapered edges. Type X panels shall be installed at fire rated beams, joists, walls and ceiling construction, to provide fire separation integrity at all fire rated walls. Type X gypsum panels shall comply with ASTM C36-85. See Paragraph 2.1.A for manufacturers.

#### 2.5 JOINT MATERIALS AND ADHESIVES

- A. Joint tape shall be equal to U.S.G. "Perf-A-Tape".
- B. Joint compound shall be equal to U.S.G. "Ready-Mixed Joint Compound", a vinyl based, ready-mixed tape embedment and topping compound for above grade use which complies with ASTM C475.
- C. Exterior joint compound shall be equal to U.S.G. "Durabond 210 Joint Compound". Finish joints in exterior gypsum ceiling board with exterior joint compound.
- D. Joints in gypsum sheathing shall be sealed with 15#/SQ. building felt installed in 6" wide strips with construction adhesive.

#### 2.6 FASTENERS

- A. Adhesive
1. Adhesive for laminating gypsum board to surfaces and in multi-layer fire rated installations shall be equal to "Durabond 90". Provide supplemental fasteners according to manufacturer's printed recommendations.
- B. Screws
1. For application of single layer gypsum wall board to metal framing, provide Type S bugle head screws.
  2. For application of double layer gypsum board to metal framing, provide  $1\frac{5}{8}$ " long Type S bugle head screws.
  3. For application of gypsum sheathing to metal framing provide 1" long Type S-12 cadmium plated, bugle head screws.

#### 2.7 ACCESSORIES

- A. Control Joints shall be equal to U.S.G. Control Joint #093. Other manufacturers are listed in Paragraph 2.1.A.
- B. Locate as recommended by manufacturer.

### III. PART 3 - EXECUTION

#### 3.1 WORKMANSHIP

- A. Installer shall examine the supporting structure and other conditions in which gypsum products are installed and shall notify the Contractor and Architect (in writing) of any conditions detrimental to the proper and timely completion of the work. Installer shall not proceed with the installation until satisfactory conditions have been corrected in a manner acceptable to the Architect.



- B. *Install gypsum board in accordance with manufacturer's printed installation instructions, except where more stringent requirements are specified.*
- C. *Use gypsum board of maximum lengths available to minimize end joints. Stagger end joints.*
- D. *Abut gypsum board without forcing. Fit ends and edges of gypsum board. Do not place butt ends against tapered edges.*
- E. *Support ends and edges of gypsum board panels on framing or furring members.*
- F. *Attach gypsum board using fasteners specified spaced at 8" o.c. on walls and 7" o.c. on ceilings. Begin fastening gypsum board at center and proceed toward outer edges.*

### 3.2 JOINT TREATMENT

- A. *Taping or embedding joints*
  - 1. *Apply compound in uniform layer to all joints and corners. Center tape over joint and seat tape into compound. Leave approximately  $\frac{1}{64}$ " to  $\frac{1}{32}$ " compound under tape to provide bond.*
  - 2. *Apply skim coat immediately following tape embedment but not to function as fill or second coat. Fold tape and embed in angles to provide true angle. Allow 24 hours minimum for embedding coat to dry prior to application of fill coat.*
- B. *Filling*
  - 1. *Apply joint compound fill coat over embedding coat to cover tape. Feather out fill coat beyond tape and previous joint compound line.*
  - 2. *Do not apply fill coat on interior angles.*
  - 3. *Allow fill coat 24 hours minimum to dry prior to application of finish coat.*
- C. *Finishing*
  - 1. *Spread joint compound finish coat over and beyond fill coat on all joints. Feather to a smooth uniform finish.*
  - 2. *Apply finish coat to taped angles to cover tape and taping compound.*
  - 3. *Sand final application of compound with 200 grit silicon carbide sandpaper to provide surface ready for decoration.*
- D. *Filling and finishing depressions*
  - 1. *Apply joint compound as first coat to fastener depressions. Apply at least two additional coats of compound after first coat is dry.*
  - 2. *Leave filled and finished depressions level with plane of gypsum board.*
- E. *Finishing beads and trim*
  - 1. *Apply joint compound fill coat to beads and trim. Feather out from ground to plane of the gypsum board. Allow compound 24 hours minimum to dry prior to application of second coat.*
  - 2. *Apply joint compound second coat in same manner as fill coat. Extend beyond fill coat onto face of gypsum board. Allow compound 24 hours minimum to dry prior to application of finish coat.*

3. *Apply joint finish coat compound to bead and trim. Extend beyond second coat and feather finish coat from ground to plane of the gypsum board. Sand finish coat with 200 grit silicon carbide sandpaper to provide smooth surface ready for decoration.*
- F. *Repair screw pops by the following process:*
1. *Drive new screw approximately 1½" from unseated screw and reseal screw.*
  2. *When face paper is punctured, drive new screw approximately 1½" from defective fastener and remove defective fastener.*
  3. *Fill damaged surface with joint finishing compound and sand level with plane of gypsum board.*
- G. *Provide control joints in ceilings and exterior soffits per manufacturer's recommendations and per drawings. Keep joints free of finishing materials. Provide ½" space at perimeter of ceiling for expansion. Seal joints with backer rod and sealant.*

*END OF SECTION 09 21 00*

## SECTION 09 65 00

## RESILIENT FLOORING

I. PART 1 - GENERAL

## 1.1 SUBMITTALS

- A. *Submit product data which includes product characteristics, installation requirements and manufacturer's recommended adhesive and maintenance instructions.*
- B. *Submit full size samples for each type, color and pattern of flooring and accessory required.*

## 1.2 DELIVERY, STORAGE AND HANDLING

- A. *Deliver materials to project site in manufacturer's original, unopened containers with labels indicating brand names, colors, patterns and quality designations legible and intact.*
- B. *Store and protect materials in accordance with manufacturer's printed recommendations.*
- C. *Store materials in original containers at not less than 70 degrees F for not less than 24 hours immediately prior to installation.*

## 1.3 PROJECT CONDITIONS

- A. *Environmental Requirements*
  - 1. *Maintain temperature in space to receive resilient materials between 70 degrees F and 90 degrees F for not less than 48 hours before, during and 48 hours after installation.*
  - 2. *Maintain minimum temperature of 55 degrees F after flooring is installed.*
- B. *Protect finished flooring, base and accessories from staining, marring or other physical damage by work of other trades. Cover or mask surfaces as required.*

## 1.4 QUALITY CRITERIA

- A. *Variations in substrate shall not exceed 1/8" in 10'-0". Leveling of substrate shall be accomplished using a latex underlayment to fill in low areas.*
- B. *All resilient flooring shall have a flame spread rating of 75 or less when tested in accordance with ASTM E-84.*
- C. *All flooring shall meet requirements of governing accessibility codes.*
- D. *Floor slab shall be tested for moisture content per Specification 03 300 prior to installation of finish flooring materials.*
- E. *Flooring shall meet Federal Specification SS-T-312-B (1), Type IV, Composition 1.*

## 1.5 MAINTENANCE MATERIAL

- A. *Provide 2% additional base and resilient flooring material and adhesives as maintenance material to be used by Owner in manufacturer's original, sealed packaging.*

### 1.6 GUARANTEE

- A. *Flooring manufacturers shall guarantee that flooring shall be free from defects in materials and workmanship for a period of one year from Date of Substantial Completion.*

## II. PART 2 - PRODUCTS

### 2.1 LUXURY VINYL TILE (LVT)

- A. *Provide LVT and where shown on drawings.*
- B. *Product shall be Class III solid vinyl tile AVA "STRO22".*
  - 1. *Provide 20 year warranty.*
  - 2. *Tiles shall be set in 1/3 offset pattern.*
  - 3. *Wear layer shall be minimum 22MIL (0.55 MM).*
  - 4. *Total thickness shall be 2.5 mm (Glue Down).*
  - 5. *Contact: Trinity Surfaces  
Katie Godfrey  
404-824-0538*

### 2.2 ACCESSORIES

- A. *All areas scheduled to receive flooring of LVT shall also receive 4" rubber cove base, Dark Gray in color. Base shall be provided in 4'-0" lengths and shall be installed using matching end stops and factory preformed outside corner units.*
- B. *Acceptable accessory manufacturers shall include the following:*
  - 1. *Flexco Division/Textile Rubber Company*
  - 2. *Johnsonite Rubber Company*
  - 3. *R.C. Musson Rubber Company*
  - 4. *Roppe Rubber Corp.*
  - 5. *Allstate Rubber Company*
  - 6. *Armstrong*
  - 7. *Azrock*

### 2.3 APPLICATION MATERIALS

- A. *Adhesive for all LVT and rubber tile shall be equal to SprayLock Platinum 9500.*
- B. *Provide and apply types and brands of adhesive recommended by material manufacturer for type of material and installation.*
- C. *Provide and apply waxes and cleaners recommended by floor tile manufacturer for the particular type of material and installation.*
- D. *Protect circulation paths with heavy brown paper.*

## III. PART 3 - EXECUTION

### 3.1 PREPARATION

- A. *Before beginning operations, installer shall examine the substrates that are in connection with the work included in this Section and shall notify the Contractor and Architect, in writing, of any defects which he considers detrimental to the completion of work according to these Specifications.*

- B. *The installer shall be held responsible for blemishes "telegraphing" through the tile and shall correct all such defects.*
- C. *Remove dirt, oil, grease or other foreign matter from surfaces to receive floor covering and accessories. Vacuum substrate prior to tile installation.*
- D. *Prime surfaces as recommended by resilient flooring and adhesive manufacturer.*

### 3.2 APPLICATION OF ADHESIVES

- A. *Mix and apply adhesives to substrate with notched trowel or other tools in accordance with manufacturer's printed instructions.*
- B. *Provide adequate ventilation and other safety precautions during mixing and application of adhesive as recommended by adhesive manufacturer.*
- C. *Apply adhesive only to that area which can be covered by resilient material within the recommended working time of the adhesive.*
  - 1. *Remove adhesive which dries or films over.*
  - 2. *Do not soil walls, bases or adjacent areas with adhesives.*
  - 3. *Remove spilled or misplaced materials.*

### 3.3 INSTALLATION OF TILE MATERIALS

- A. *Lay tile from center of area to receive it, working toward perimeter.*
- B. *Cut corner tile to fit within 1/32" of abutting surfaces.*
- C. *Fit flooring material into recesses, against bases, around pipes and penetrations, under saddles and thresholds and around built-in cabinets and equipment.*
- D. *Lay adjacent tiles with grain or pattern running in same direction at adjacent tiles.*
- E. *Tile shall be laid out to eliminate slivers less than 4" wide.*
- F. *Tile shall be installed in strict compliance with manufacturer's written instructions.*
- G. *Tile terminations at doors shall be under the doors.*

### 3.4 INSTALLATION OF ACCESSORIES

- A. *Workmanship*
  - 1. *Install base with tight butt joints with no joint widths greater than 1/64".*
  - 2. *Base shall be set plumb, level and straight with a full backing of adhesive.*
- B. *Top-set base*
  - 1. *Apply adhesive and adhere base to wall surfaces.*
  - 2. *Press down so that bottom cove edge follows floor profile.*
  - 3. *Form internal corners using pre-molded rubber base material.*
  - 4. *Form external corners by using premolded material.*
  - 5. *Scribe base to abutting materials.*

### 3.5 CLEANING AND FINISHING

- A. *Upon completion of resilient floorings and accessory installation, clean surfaces using a neutral cleaner acceptable to material manufacturer.*

- B. *Protection: The General Contractor shall protect the finished floor from the time the contractor completes the work until final inspection. Cover all floors with heavy-duty, non-staining construction paper taped in place.*

*END OF SECTION 09 65 00*

## SECTION 09 91 20

## PAINTING

I. PART 1 - GENERAL

## 1.1 SCOPE

A. *Work described in this section includes the following:*

1. *Touching up of shop-applied prime coats.*
2. *Preparation of surfaces to receive painted or stained finishes.*
3. *Priming and backpriming of finish carpentry.*
4. *Painting, staining or otherwise finishing of all surfaces, except as otherwise indicated.*

## 1.2 SUBMITTALS

A. *Product Data*

1. *Submit a complete list of products proposed for use at least 30 days prior to commencement of painting work.*
2. *Indicate manufacturer, brand name, quality and product type for each surface to be finished.*
3. *Intent of Contractor to use products specified does not relieve him from responsibility of submitting a product list.*

B. *Submit two sets of full range color samples from manufacturers proposed for use for color selections by Architect. Submit 8½ x 11 color sample of actual paint for each finished paint type and color.*

## 1.3 DELIVERY, STORAGE AND HANDLING

A. *Delivery*

1. *Deliver materials to project site ready-mixed in original containers with labels intact.*
2. *Provide legible labels bearing manufacturer's name, product type, color and recommended installation and reducing procedures.*

B. *Storage and Handling*

1. *Store materials in location acceptable to the Owner to prevent all forms of damage to materials. Protect material from severe temperature extremes.*
2. *Maintain neat, clean conditions in storage area. Remove rags, empty cans, waste rubbish and similar materials from the site at the end of each day's work.*
3. *Close all material containers at end of each day's work.*
4. *Painting Contractor shall be liable for damage to surrounding areas.*

#### 1.4 PROJECT CONDITIONS

- A. Environmental Requirements
  - 1. Comply with manufacturer's recommendations regarding environmental conditions under which materials may be applied.
  - 2. Apply no materials in spaces where dust is being generated.
- B. Cover finished work of other trades prefinished items and surfaces not being painted concurrently.
- C. Safety Precautions
  - 1. Provide temporary fire protection equipment in materials storage area.
  - 2. Smoking shall be prohibited in material storage area and during application.
- D. Products shall not be modified in any manner on the job site by the installer.

#### 1.5 MAINTENANCE MATERIALS

- A. Provide one unopened gallon of each type and color of all products used on the project for the Owner's use in future maintenance operations.

### II. PART 2 - PRODUCTS

#### 2.1 PAINTING MATERIALS

- A. Materials specified shall provide the coating types and set a standard of quality from the top line of materials by the following acceptable manufacturers:
  - 1. Sherwin Williams Company
  - 2. PPG
  - 3. Benjamin Moore
- B. Where products are specified as a standard of quality in the product schedule, such products have been selected in accordance to their binders or vehicles to achieve specific results. Substitutions shall be allowed only with Architect's review.
- C. Miscellaneous Materials
  - 1. Paint thinners and tints shall be products of same manufacturer as paints or approved by paint manufacturer for use with their products. Tinting shall be done by supplier. Material shall not be modified in any manner on the job.
  - 2. Shellac, turpentine, patching compounds and similar materials required for execution of work shall be pure, best quality products.
- D. Product colors shall match Gwinnett County Public School System's standard colors.
- E. No paint shall contain more than 6/10 of one percent lead content by weight.
- F. Putty shall be pure, linseed oil-whiting putty complying with Federal Specification TY-P791a, Type 1. Acceptable manufacturers shall be Dicks-Armstrong-Pontius Company, or Pecora, Inc., Tremco



Manufacturing Company and U. S. Gypsum. Putty made with cottonseed oil will not be acceptable. Exterior putty shall be job-mixed consisting of 5 percent by weight white lead paste or 10 percent white lead-whiting putty in compliance with Federal Specification above, Type II.

- G. Filler for open grade woods shall be a pure, silica-based filler in thin paste form, capable of mixing with wood stains specified. After application and drying period, the filler shall be non-absorbent and non-shrinking.

## 2.2 PAINTING COLORS

- A. Interior wall paint.
1. Basis of design shall be Sherwin-Williams with the following colors approved: Sherwin-Williams SW6126 "Navajo White".
- B. Interior gypsum board ceiling paint.
1. Basis of design shall be Sherwin-Williams with the following colors approved:
    - a. SW1004 "Pure White"
- C. Metal doors, frames, and lite kits.
1. Basis of design shall be Sherwin-Williams with the following colors approved:
    - a. SW7075 "Web Gray"
    - b. Door view lite frames shall be painted to match door frames.
- D. Other approved manufacturers include PPG and Benjamin Moore. Paint products by these manufacturers shall match the basis of design colors. Provide samples of each separate finish coat. Submit samples for review on all substrates receiving a finish coat. Samples shall be submitted and approved for color, sheen and texture for every project.

## 2.3 PAINTING PRODUCTS & LOCATIONS

- A. Gypsum Drywall / Walls and Ceiling Systems Locations:
1. One Coat: Primer/Sealer (Apply to ensure complete coverage.) Sherwin Williams ProMar 200 Zero VOC Latex Primer, B28W02600, or approved equal.
  2. Two Coats (Minimum): Latex Eggshell Enamel (4 mils WFT each coat). Sherwin Williams ProMar 200 Zero VOC Latex Egg Shell, B20-2600, or approved equal.

## 2.4 Ferrous Metal (includes door/window framing, exposed building structures, exposed conduit & piping):

- A. One Coat: Rust Inhibitive alkyd primer. Sherwin Williams KEM BOND HS Universal Metal Primer, B50Z Series, or approved equal.
- B. Two Coats (Minimum): Gloss alkyd industrial enamel (3.5 mils WFT each coat). Sherwin Williams Pro-Industrial Urethane Alkyd Enamel, B54 Series, or approved equal.

## 2.5 Interior Concrete Floors (Sealed):

- A. Porter products used as basis of design and includes mechanical rooms, electrical rooms, custodial rooms.
- B. Floor shall be acid etched with muriatic acid solution prior to application.

- C. *First Coat: 3201 Plex-Seal clear acrylic masonry finish thinned 25 percent.*
- D. *Second Coat: 3201 Plex-Seal clear acrylic masonry finish (full strength).*

### III. PART 3 - EXECUTION

#### 3.1 SURFACE PREPARATIONS

- A. *Surfaces to receive finishes shall be dry and free of debris, oils, dust and other deleterious materials.*
- B. *Lumber, Plywood and Veneered Wood Surfaces*
  - 1. *Apply shellac to knots, pitch and resinous sapwood prior to application of first paint or stain coat.*
  - 2. *For surfaces to be painted, fill nail holes, cracks, joints and defects with spackling compound. Apply after first coat of paint.*
  - 3. *For surfaces to receive transparent finish, fill nail holes, cracks and defects with wood filler matching finish color.*
  - 4. *Sand surfaces smooth. Dust to remove debris.*
- C. *Concrete Masonry Units*
  - 1. *Rub CMU to remove loose mortar and debris. Fill irregularities with cement grout.*
  - 2. *Ensure that paint on existing walls is compatible with new paint type specified. Contractor shall be responsible for priming, sanding, stripping, filing existing cracks and holes, and otherwise preparing existing walls for new paint per manufacturer's recommendations.*
- D. *Wash galvanized metals with xylol to remove grease, oil and contaminants. Wipe dry with clean cloth.*
- E. *Ferrous Metals*
  - 1. *Wire brush or sandpaper surfaces to remove rust and mill scale.*
  - 2. *Clean with xylol to remove grease, oil and contaminants. Wipe dry with a clean cloth.*
  - 3. *Sand exposed steel columns smooth.*
  - 4. *Completely field prime exterior steel after cleaning and sanding.*
- F. *Hollow Metal Frames and Doors*
  - 1. *Marred prime coat finish shall be thoroughly cleaned and sanded smooth removing all mortar and caulking before paint is applied. Touch up prime coat.*
  - 2. *Finish paint products shall be brush applied to frames and roller-applied to doors.*
- G. *All surfaces to be painted shall be maintained between 60 degrees and 90 degrees F for 48 hours prior to, during, and 48 hours after application depending on relative humidity based on manufacturer's directions.*
- H. *Concrete*
  - 1. *Patch large openings and holes with Portland Cement Mortar and finish flush with adjacent surface. After priming, fill any remaining small holes with Swedish putty made by mixing dry whiting with prime coat of paint.*
  - 2. *Remove form oil from poured-in-place concrete by washing concrete with Xylol.*

### 3.2 APPLICATION

- A. Apply paint only when moisture content of finish surface is within manufacturer's recommended limits.
- B. Apply paint materials using clean brushes and rollers. Apply paint to recommended dry film thickness as specified by manufacturer, unless noted otherwise in the specification.
- C. No spray applications are allowed except block filler, which must be backrolled into CMU and concrete pores per manufacturer's recommendations and except the following structural elements which may be sprayed: exposed structure, conduit, piping in mechanical, electrical custodial rooms. **FINISH COATS OF PAINT MAY NOT BE SPRAY APPLIED IN ANY MANNER.**
- D. Paint is **NOT** allowed to touch Data Cabling in any manner. Any overspray must be removed immediately. Any damaged cable will be replaced at the Contractor's expense.
- E. Apply materials at a rate not to exceed that recommended by paint manufacturer for surface being painted, less ten percent for losses. Primers may be tinted if required by application or material color conditions.
- F. Comply with manufacturer's recommendations for drying time between coats.
- G. Sand and dust surface between coats to remove visible defects.
- H. Finish coats shall be smooth, free of brush marks, streaks, laps, pile-up of paint, skipped and missed areas. Final coat shall be specified color. **BLOCK FILL AND INTERMEDIATE COATS SHALL EACH BE ONE-HALF TINT LIGHTER THAN SUBSEQUENT COATS.**
- I. **DO NOT APPLY ADDITIONAL COATS UNTIL COMPLETED COAT HAS BEEN REVIEWED BY ARCHITECT. ONLY REVIEWED COATS OF PAINT SHALL BE CONSIDERED IN DETERMINING NUMBER OF COATS APPLIED.**
- J. Make edges of paint adjoining other materials or colors clean and sharp without overlapping.
- K. Primer coats may be omitted for surfaces specified to receive factory applied primer.
- L. Total dry film thickness of paint over ferrous metals, excluding primer first coat, shall be a minimum of 2.5 mils.
- M. Prime and finish tops, bottoms and side edges of interior and exterior doors.
- N. Paint exposed pipes and duct work in all areas same color as adjacent wall surfaces, including all overhead pipes and duct work and exposed structure.
- O. Apply primers to any bare metal within the same working day as the metal is made bare to prevent immediate rusting.

END OF SECTION 09 91 20

## SECTION 11 16 00

## LOADING DOCK EQUIPMENT

I. PART 1 - GENERAL

## 1.1 SCOPE

- A. *Furnish all labor, equipment and materials for the complete installation of loading dock equipment as specified herein.*

## 1.2 SUBMITTALS

- A. *Submit shop drawings in accordance with Section 01 33 00 - Submittals. Indicate construction, materials and finishes, dimensions resulting from job measurements, fabrication and installation instructions.*
- B. *Submit manufacturer's literature in accordance with Section 01 33 00 Submittals. Include manufacturer's product description for each component. Furnish manufacturer's installation and maintenance instructions.*
- C. *Submit color samples of each color and finish available for Architect's selection.*

## 1.3 DELIVERY, STORAGE AND HANDLING

- A. *Deliver material to Project site in manufacturer's original packaging after building is enclosed.*
- B. *Store and handle materials to prevent damage to prefinished surfaces and operating components. Replace damaged products.*

## 1.4 WARRANTY

- A. *Provide manufacturer's standard 1 year warranties covering parts and labor for all loading dock equipment as well as additional manufacturer's warranties covering specific parts and/or services. Warranties shall be from date of Substantial Completion.*

II. PART 2 - PRODUCTS

## 2.1 HYDRAULIC DOCK LEVELER

- A. *Acceptable manufacturers of hydraulic dock levelers shall be Aaron Bradley, Kelley Dock Products or Flexion, Inc. Similar products of other manufacturers shall be subject to Architect's review. Specified model numbers are those of Aaron Bradley Products.*
- B. *Dock leveler shall be 6'-0" wide x 6'-0" long, Model No. AHC6625.*
- C. *Pit installed dock leveler shall provide 25,000 lb. capacity in accordance with ANSI MH4.1-84. Levelers shall incorporate the use of hydraulics to raise and lower both the platform and lip. A single push- button activates a hydraulic pump for operating both lip and hoist cylinders. Unit shall conform to OSHA, U.S. Dept. of Commerce Standard CS-202-56 and is manufactured in compliance with the American National Standard of Safety Performance and Testing of Dock Leveling Devices (ANSI) MH 30.1. The platform shall be constructed of 1/4" thick, 4-way high tensile 50,000*

minimum yield A572 steel safety tread-plate. The leveler shall be controlled remotely from a wall mounted control panel. Leveler shall be factory-assembled and shop-painted.

- D. Provide the following dock leveler manufacturer's options:
1. Abrasive, Skid Resistant Ramp and Lip Surface
  2. Galvanized Ramp, Lip and Frame

## 2.2 DOCK BUMPERS

- A. Dock bumpers shall be Model B4H1014. Similar products of other manufacturers shall be subject to Architect's review. Bumper material shall be rubberized-fabric truck tires cut to uniform size pads and punched to receive  $\frac{3}{4}$ " diameter support rods. Pads shall be closed with 2 - 3" x 2 - 1/2" x 1/4" structural steel angles under 1500 pounds of pressure. Angles shall be welded to  $\frac{3}{4}$ " diameter rods at one end and closed with threaded rod and nut at the other end. Anchor leg of angle shall extend a minimum of 2-1/2" beyond rubber surface at either end and shall contain 3-3/16" anchor bolt holes. Finish for exposed metal parts shall be hot-dipped galvanized. Bumpers shall be manufactured to absorb at least 80% of impact energy.

## 2.3 RETRACTABLE WAREHOUSE BELT BARRIER

- A. Retractable belt barrier should be clamp mount and include metal belt clip which loops around uprights and posts and clips back onto the belt. Yellow barrier belt should have black stripes should be made of weather resistant, heavy duty woven polyester. Basis of design is Tensabarrier model T9F652989.

### III. PART 3 - EXECUTION

#### 3.1 INSTALLATION

- A. Install all loading dock equipment in accordance with manufacturer's printed instructions and in compliance with all applicable codes. Comply with applicable sections of Division 15 - Mechanical and Division 16 - Electrical. Install all equipment to be fully operational.
- B. Adjust mounting heights of all equipment and accessories in accordance with Architectural Drawings. Rigidly secure all equipment and accessories.
- C. Protect finished surfaces from damage and staining.
- D. Clean all finishes and remove associated debris from project site prior to date of Substantial Completion.

END OF SECTION 11 16 00

## SECTION 15 00 00

## MECHANICAL SPECIFICATION

I. PART 1 - GENERAL

## 1.1 DESCRIPTION OF WORK

- A. *The work includes demolition and replacement of hvac and plumbing systems and related work. Provide each system complete and ready.*
- B. *Plumbing systems including fixtures, equipment, materials, installation, workmanship, examination, inspection, and testing shall be in accordance with the 2018 International plumbing code, 2018 International Mechanical Code and 2018 International Fuel Gas Code, with Georgia Amendments, except as modified herein. All plumbing products intended to dispense water for human consumption thru drinking or cooking shall comply with NSF/ANSI 372 and NSF/ANSI 61.*

II. PART 2 - PRODUCTS

## 2.1 DWV (DRAIN, WASTE, AND VENT) PIPING

- A. *Schedule 40 PVC.*

## 2.2 PIPING

- A. *Domestic Water Piping*
  - 1. *ASTM B 88, type L, with ANSI B16.18 or ANSI B16.22 solder joint fittings using ASTM B 32, Grade SN 96 tin-silver solder and flux containing not more than 0.2 percent lead, or with ANSI B16.26 flared joint fittings.*
- B. *Ball valves*
  - 1. *Ball valves used in connection with piping 2 inches in size and smaller, shall have screwed or sweat ends, bronze body, bronze ball and resilient seal. Valve shall be serviceable from either top or end without removing piping. For water service, valves shall be designed for 200 lbs.WOG and 250 degrees F.*
- C. *Gas piping*
  - 1. *ASTM A53 schedule 40 black steel piping with ANSI B16.3 malleable iron welded fittings.*
- D. *Insulation*
  - 1. *Insulate all domestic cold water piping with 1" thick fiberglass insulation with all service jacket.*

III. PART 3 - EXECUTION

## 3.1 INSTALLATION

- A. *Installation of plumbing systems including fixtures, equipment, materials, and workmanship shall be in accordance with the 2018 International Plumbing Code.*

### 3.2 *THREADED CONNECTIONS*

- A. *Jointing compound for pipe threads shall be Polytetrafluoroethylene (PTFE) pipe thread tape, pipe cement and oil, or PTFE powder and oil; apply only on male threads. Provide exposed ferrous pipe threads with one coat of primer applied to a minimum dry film thickness Of 1.0 mil.*

### 3.3 *PIPE SUPPORTS (HANGERS)*

- A. *In accordance with the 2018 International Plumbing Code code or MSS-SP-69.*

### 3.4 *DISINFECTION*

- A. *Disinfect the new water piping in accordance with 2018 International Plumbing Code. Fill the piping systems with solution containing minimum of 50 parts per million of available chlorine and allow solution to stand for minimum of 24 hours. Flush the solution from the systems with clean water until the chlorine is purged from the system.*

### 3.5 *FIELD TESTING*

- A. *Before final acceptance of the work, test each system as in service to demonstrate compliance with the contract requirements. System tests shall be as specified in 2018 International Plumbing Code. Correct all defects in the work provided by the Contractor, and repeat the tests until the work is in compliance with contract requirements.*

END OF SECTION 15 00 00

## SECTION 16 00 00

## ELECTRICAL SPECIFICATION

I. PART 1 - GENERAL

## 1.1 CODES

- A. Work covered by this section of the specifications shall conform to NFPA 70, the National Electrical Code, 2020 Edition with subsequent Georgia State Amendments.

## 1.2 STANDARDS FOR MATERIALS

- A. All material shall be new and shall be listed by the Underwriters' Laboratories, Inc., as conforming to its standards in every case where such a standard has been established for the particular type of material in question or except as otherwise specified or implied herein.

## 1.3 SUBMITTALS

- A. Where equipment is specified herein or on drawings, by manufacturers' names or numbers, this shall denote minimum requirements as to quality, type, capacity, function, and performance. All equipment must have the Engineer's approval before ordering.
- B. Submittals may be submitted in electronic \*.pdf format. File name shall include the job name, specification section and date of the submittal. Submittals containing multiple items must include a table of contents with hyperlinks to the cover page for each item. The cover page for each piece of equipment shall itemize equipment features to show compliance with or deviation from the requirements contained in the specifications and drawings. If the supporting product data is more than ten (10) pages long, include hyperlinks on the item's cover page to the supporting information.

## 1.4 OPERATION AND MAINTENANCE INSTRUCTIONS

- A. The Contractor shall furnish not less than three (3) copies of operating and maintenance instructions for all equipment he has furnished and installed.

## 1.5 TESTING

- A. At the completion of the work, a thorough test shall be made in the presence of the Engineer or a representative, with all equipment, machinery, and appliances in operation and free from defects.
- B. The Contractor shall uncover all concealed areas and remove all panelboard covers during the inspection if requested.



### 1.6 EXCAVATION AND BACKFILL

- A. All excavation and backfill for work under this section shall be in accordance with Division 2, Site Work.
- B. Trenches shall be of sufficient width and depth to permit proper installation of the conduit. Backfilling shall be thoroughly compacted by placing loose earth in the trench in six inch layers and tamping in place. Backfill material shall not contain large rock, paving materials, sharply angular substances or corrosive materials.

### 1.7 UTILITY CONNECTIONS

- A. Determine from the Telephone Company and Power Company the exact location of the services. Advise the Engineer of any discrepancies before any work is done.
- B. Provide all service entrance equipment as required for a complete installation, all in accordance with the utility company's requirements.
- C. All charges for service entrance or metering equipment shall be included in the bid price.

### 1.8 ELECTRICAL SYSTEM CHARACTERISTICS

- A. Electrical system characteristics shall be as indicated on the drawings.

## II. PART 2 - PRODUCTS

### 2.1 FIXTURE OUTLETS, CONDUIT JUNCTION BOXES

- A. Furnish and install all outlet boxes and junction boxes, as indicated on the drawings or as required. The approximate locations of the outlets are shown on the plans. The right is reserved to change the exact location of any switch, ceiling outlet, or other outlet in any area before it is permanently installed. Contractor shall specifically verify all door swings and install all lighting switches on the latch side of the door. Boxes for fixtures and devices shall be securely attached to the building structure, using wood screws for wood construction, expansion bolts for concrete, and bolts or galvanized clamps for steel construction. Boxes set in concrete or masonry shall be secured in place with cement mortar.
- B. Ceiling outlet boxes shall be code gauge galvanized steel and shall be 4" octagon boxes, 1-1/2" deep minimum, larger where required.
- C. Switch and receptacle outlet boxes concealed in walls shall be standard utility or gang boxes except that outlet boxes installed in tile or exposed masonry walls shall be square corner boxes. Sectional switch boxes shall not be used. Outlet boxes installed in concrete or concealed masonry shall be provided with 1" deep plaster cover. The box shall be positioned so that concrete or mortar shall fill around the plaster cover and the device plate can be installed flush with the finished surface. Single switches shall be installed in utility boxes without plaster covers.

- D. *Switch and receptacle boxes exposed on walls shall be cast iron type with threaded hubs and sheet steel covers.*
- E. *Floor outlet boxes shall be adjustable formed steel concrete-tight class boxes with brass covers. Provide carpet flanges on boxes in carpeted floors.*
- F. *Junction boxes and pull boxes installed outside and exposed to the weather or underground shall be constructed of polymer concrete reinforced with fiberglass with bolt on covers.*
- G. *Pull boxes shall be installed in conduits as needed so that pulls do not exceed 180 feet in length or 360 of bends.*
- H. *Locate all boxes so that covers are accessible and removable. Boxes shall be equipped with cover plates of the correct type and size for the box. All unused knockouts shall be plugged.*

## 2.2 CONDUITS

- A. *All wiring shall be installed in conduit unless otherwise specified herein. All conduit shall be U.L. listed.*
- B. *All conduit installed inside the building and above grade shall be galvanized steel electrical metallic tubing except where rigid or intermediate steel conduit is shown on the drawings or required by code or by other paragraphs in the specifications.*
- C. *No above grade conduit shall be installed in floor slabs above grade. Conduit shall be installed below the floor slab in the ceiling cavity of the floor below, or above the ceiling of the floor shown.*
- D. *All conduit installed exposed below 6'0" in a mechanical room, kitchen or in an area subject to damage shall be rigid or intermediate steel conduit with threaded connections.*
- E. *All conduit installed underground outside the building or in or under the building floor slab on grade shall be schedule 40 rigid PVC conduit except where indicated otherwise. Conduit shall be placed below the slab and vapor barrier and not within the slab. Vertical penetrations are allowed.*
- F. *Where PVC conduit turns up through the slab inside a wall, the PVC conduit shall extend up to the first junction box. Where PVC conduit turns up exposed, steel conduit shall begin at a point 2" below the slab.*
- G. *A green ground wire of the size required by Table 250-95 in the National Electrical Code shall be installed in every conduit, PVC and steel used for current carrying conductors.*
- H. *Conduit underground outside the building shall be installed a minimum of 24" below grade. All joints and connections shall be sealed water tight.*
- I. *Install warning tapes 12" above all underground conduit. Warning tapes shall be T&B/Westline NA-0608 (yellow) for electric lines, NA-0602 (orange) for telephone or cable TV lines and NA-0606 (red) for high voltage primary by power company or approved equal by Brady or Seton.*

- J. *Conduits shall be supported on not more than 8'0" centers when concealed and 5'0" centers when exposed. Conduits shall be supported by means of approved galvanized iron clamps or hangers, attached to masonry with inserts and bolts or lead expansion shields or to structural members by means of approved galvanized iron clamps or hangers. Where installed exposed, conduits shall be parallel with, or at right angles to walls or ceilings.*
- K. *Except where terminating in a threaded hub fitting, all conduits shall terminate in outlet boxes, junction boxes, pull boxes, cabinets, etc., with one locknut installed outside the box and one locknut and a bushing inside the box. The locknuts shall be tight to make both a mechanical and electrical connection. Bushings for all rigid conduit shall be insulating end bushing, and shall be grounding type where required.*
- L. *EMT coupling and box connectors shall be steel set screw type when used inside the building on conduits 1-1/2" and larger and raintight compression type when used on conduits 1" and smaller or on any conduit outside or in wet locations. Connectors shall be as manufactured by Appleton, Efcor, O.Z., Raco, Steel City, or T&B.*
- M. *A polyolefin fish wire shall be pulled into each empty conduit.*

### 2.3 FLEXIBLE CONDUIT

- A. *Furnish and install flexible metal conduit connections to all motors and to all equipment subjected to vibration. Minimum size shall be 1/2". Length shall be approximately 15" minimum and shall not exceed 6'0" maximum.*
- B. *Nominal size 3/8" flexible metal conduit in lengths not exceeding 6'0" may be used for connecting individual lighting fixtures.*
- C. *Provide "Sealtight" conduit and Appleton, Ideal or T&B liquid-tight fittings at all flexible connections subject to weather or located in mechanical rooms or kitchen area.*
- D. *Install a green ground conductor in each piece of flexible conduit. The conductor shall be of the size required by the National Electrical Code.*
- E. *Do not install flexible conduit inside a wall.*

### 2.4 CONDUCTORS FOR CONDUIT SYSTEMS

- A. *Furnish and install all wire, cable and conductors required for the electrical installation. All conductors shall be copper. All sizes shall be AWG. All conductors #10 and smaller shall be solid. Minimum size for power and lighting circuits shall be #12. Minimum size for low voltage (24 volts) control circuits shall be #18. Minimum size for 120 volt control circuits shall be #14. Minimum insulation rating on all conductors shall be 600 volts. Insulation shall be as follows, except as otherwise noted on the drawings:*

Main Service Conductors      Type THHN/THWN or XHHN

Feeders                              Type THHN/THWN

Branch Circuits                  Type THHN/THWN

- B. Branch circuit conductors shall be color coded as follows:
1. 208Y/120 Volt System: Phase A - black, Phase B - red, Phase C - blue, Neutral - white, Ground - green, Isolated ground - green with yellow stripe.
  2. 480Y/277 volt system: Phase A - brown, Phase B - Orange, Phase C - yellow, Neutral - gray, Ground - green, Isolated ground - green with yellow stripe.
- C. Feeder and service entrance conductors shall be color coded by the use of colored plastic tape applied within 6" of each conductor end or tap. Color coding conductor markers shall be Brady, Ideal or T&B Westline.
- D. Lubricants shall be used on all feeder cables and as otherwise required to facilitate the pulling of wires. Lubricants shall be specifically identified on the label as being wire or cable pulling lubricants.
- 2.5 TYPE MC CABLE
- A. Type MC cable may NOT be used.
- 2.6 WIRING CONNECTORS
- A. Splices, joints and taps in outlet boxes, pull boxes, or wiring troughs shall be made with wire nut electrical spring connectors for conductors #8 and smaller. Joints or taps in conductors larger than #8 shall be made with alloy set screw connectors or compression type connectors, each with 600 volt insulating covers.
- 2.7 WIRING TROUGHS
- A. Furnish and install all necessary wiring troughs at panels, starter or built-up control center locations, and where noted on the drawings. The troughs shall be of adequate length and size to contain all power wiring and control wiring.
- B. Wiring troughs shall be steel, code gauge, all seam welded, no knockouts, and with screw cover.
- 2.8 SUPPORTS
- A. Provide and install supports for all equipment and materials installed under these specifications. Supports shall be steel angle or channel or B-Line, Kindorf or Unistruct channel and fittings as approved. Minimum size rods shall be 3/8".
- 2.9 SWITCHBOARD
- A. Switchboard shall be self-supporting with all vertical sections aligning at rear. All protective devices shall be group mounted and isolated between sections.

- B. *Switchboard shall conform to U.L. Standard UL891 and NEMA Standard PB-2. Service entrance section shall be U.L. labeled as being suitable for use as service entrance equipment.*
- C. *Buses shall be tin plated aluminum with a current density not exceeding 750 ampere per square inch.*
- D. *Enclosure shall be code gauge steel finished with NSI-61-33 grey baked enamel.*
- E. *A permanent label shall be field or factory applied showing the following information:*
  - 1. *Nominal system voltage*
  - 2. *Available fault current @ service overcurrent device*
  - 3. *Clearing time of service overcurrent device based on available fault current*
  - 4. *The date the label was applied*
- F. *Provide an arc-fault reduction maintenance switch in accordance with NFPA 70A-2017, paragraph 240.87.*
- G. *The main circuit breaker shall have a solid state programmer with current sensors and solid-state logic circuits. The solid state control shall provide adjustable current setting, instantaneous pickup and ground fault pickup with adjustable ground fault delay.*
- H. *The switchboard shall be equipped with a ABB-G.E. EPM6010 power quality meter with ethernet which shall measure current, voltage, voltage unbalance, power factor, hertz, KWH usage and demand. The meter shall have a 40 character display and a keypad for input. Output shall be through the ethernet connection. Provide software necessary to program meter and to allow it to communicate with the building EMS.*
- I. *Branch circuit breakers shall be as scheduled on the drawings and shall be molded case circuit breakers with thermal magnetic overload protection.*
- J. *Provide a laminated plastic nameplate engraved with the name of the load served for each branch circuit device and for the main. Secure with screws or bolts.*
- K. *The ground-fault protection system shall be performance tested by an independent testing agency and a written record of this test shall be made available to the engineer and to the electrical inspector.*
- L. *Switchboard shall be a General Electric ABB AV-line, or approved equal by Eaton, Siemens or Square D-Schneider.*

#### 2.10 PANELBOARDS

- A. *Furnish and install all panelboards as scheduled on the drawings. Panelboards shall be surface or flush mounted as indicated and shall have front trim with doors and latches. Panelboards shall have door-in-door front trim where front is hinged to box.*
- B. *Panelboards shall be U.L. labeled. Service entrance panelboards shall be U.L. labeled as being suitable for use as service entrance equipment.*

- C. *Branch circuit breakers or switches shall be arranged in the panelboards as scheduled on the drawings and branch circuit conductors shall be connected to panelboards by branch circuit number as scheduled. A typewritten directory of circuit numbers shall be installed under clear plastic inside each panelboard door. Directories shall indicate the type of load served and the room number of the rooms served by the circuit. Spares shall be noted on directories in pencil.*
- D. *Panelboards shall be as manufactured by General Electric or approved equal by Eaton, Siemens or Square D-Schneider.*

#### 2.11 DRY TYPE TRANSFORMERS

- A. *Furnish and install dry type, totally enclosed, self-cooling transformers as scheduled on the plans. Enclosures shall be ventilated on 30 kva and larger units.*
- B. *Transformers 30 kva and larger shall have 220 C temperature class insulation and shall be rated for a 150 C rise and a 40 C ambient unless otherwise indicated on the drawings.*
- C. *Transformers 150 kva and larger which are not located in fire rated electrical rooms shall have 150 C temperature class insulation and shall be rated for an 80 C rise and a 40 C ambient.*
- D. *Basic impulse level shall be 10 kv. Sound level shall not exceed NEMA standard sound levels of 45 dB up to 50 kva, 50 dB up to 150 kva and 55 dB up to 300 kva.*
- E. *Transformers shall be as manufactured by General Electric or approved equal by Eaton, Siemens or Square D-Schneider.*

#### 2.12 CIRCUIT BREAKERS

- A. *Furnish and install all individually mounted circuit breakers as indicated on the drawings. Circuit breakers shall have NEMA-I enclosures, surface or flush mounted as indicated. Circuit breakers shall be as manufactured by General Electric or approved equal by Eaton, Siemens or Square D- Schneider.*

#### 2.13 SAFETY SWITCHES

- A. *Furnish and install all fusible or non-fusible safety switches as indicated on drawings. Safety switches shall be general duty type with NEMA 1 enclosures when installed inside the building and NEMA 3R raintight enclosures when installed outside. Safety switches shall have the number of poles, wires and voltage rating for the load served and shall have ground lugs. Safety switches shall be as manufactured by General Electric or approved equal by Eaton, Siemens or Square D-Schneider.*

#### 2.14 FUSES

- A. *Fuses in safety switches serving all motor branch circuits shall be Bussmann Fusetron, dual element, time delay, size and voltage as noted on the drawings.*

- B. *Install labels in all fused devices indicating proper size and type installed under this contract.*
- C. *Fuses shall be Bussmann as scheduled above or approved equal by Gould-Shawmut, Littelfuse or Cefco.*

#### 2.15 PHASE FAILURE RELAYS

- A. *Phase failure relays shall be used to monitor lighting panels and turn on emergency lights if any phase fails. Phase failure relays shall be single pole NO-NC and shall be energized if any phase voltage varies more than +15/-20% of nominal voltage.*
- B. *Phase failure relays shall be General Electric type RSFF or approved equal by Eaton, Siemens or Square D-Schneider.*

#### 2.16 CONTACTORS (NORMALLY CLOSED)

- A. *Contactors shall be electrically operated, magnetically held, normally closed type with the number of poles, voltage and ampere rating as indicated on the drawings. Contactors shall have Nema 1 enclosures. Provide accessories as indicated on the drawings.*
- B. *Contactors shall be as manufactured by Square D-Schneider or approved equal by Eaton, General Electric or Siemens.*

#### 2.17 MOTOR STARTERS

- A. *Install and connect all separately mounted motor starters provided under other sections of the specifications.*

#### 2.18 MOTORS, EQUIPMENT, CONTROLS, AND CONTROL WIRING

- A. *All fan motors, air conditioning units, heating units, etc. will be furnished and installed under other sections of these specifications.*
- B. *Provide power connections for all equipment furnished and installed under other sections of these specifications.*
- C. *Provide control wiring, conduit and junction boxes only where noted on the drawings.*
- D. *The installation, connection, and operation of controls not noted on the drawings will be done under other sections of the specifications, including the furnishing and installing of conduits, wiring, outlet boxes, control components and all connections.*
- E. *Control wiring shall be in accordance with the drawings and/or manufacturer's certified and approved wiring diagrams.*
- F. *Control wiring shall be marked with "E-Z" tape markers at all terminal points.*

#### 2.19 FIXTURES

- A. *Furnish and install all fixtures as indicated on the drawings and scheduled. Fixtures shall be equipped with all hanging and mounting accessories required for complete installation. All*

- fixtures recessed in plastered ceilings shall be provided with plaster frames.*
- B. All fixtures recessed in acoustical tile ceilings shall be provided with the proper mounting flanges for installation in the type ceiling specified and shall be securely fastened to the ceiling framing member by U.L. listed clips.*
  - C. Install a minimum of two safety chains on each four foot section of lay-in type light fixture. Chains shall be #12 steel jack chain with a working load limit of 29 pounds. Chains shall be installed on opposite corner of fixture, shall connect to steel bar joist above and shall have enough slack that fixture is not supported by chain. Chains shall be furnished for all lay-in type fixtures.*
  - D. Where LED fixtures are specified, the manufacturer of substitute fixtures shall submit Photometric room layouts showing the footcandle level produced by the fixture in each typical room.*
  - E. LED lamp drivers shall facilitate 0-10 volt dimming down to 10%.*

#### 2.20 LAMPS

- A. LED lamps shall have a limited 10 year warranty. Lumen maintenance for LED lamps shall be L80/60,000 meaning the fixture shall produce 80% of the initial light output for 60,000 hours. LED lamps shall be manufactured by Acuity, Cree or Phillips.*

#### 2.21 WIRING DEVICES AND RECEPTACLES

- A. Furnish and install all wiring devices and receptacles except as noted otherwise. Devices shall be as scheduled on the drawings, and shall be as manufactured by Arrow-Hart, General Electric, Hubbell, Leviton or Pass & Seymour.*

#### 2.22 LIGHTING CONTROL DEVICES

- A. Occupancy sensors shall be dual technology type with both passive infrared and ultrasonic technologies. The sensor shall have swivel mounting bracket so it can be either ceiling or wall mounted. Ultrasonic transmission shall operate at 40 Khz. Time delays shall be either automatic or fixed at 5, 10, 15, 20 or 30 minute intervals. The sensors shall be set in the automatic mode so that the required time delay and sensitivity are learned by the device over time. The sensor shall be aimed toward the teachers desk. Built in light level sensor shall work from 2 to 200 footcandles. The sensor shall contain an isolated relay with normally open and normally closed contacts rated at 1 ampere at 24 volts. Occupancy sensors shall be Wattstopper as indicated on the drawings.*
- B. Power packs shall be a self contained transformer and relay contained in a UL2043 plenum rated housing and configured to mount onto a junction box with ½" knockouts. The secondary control voltage shall be 24 volts. Relay contacts shall be rated at*



20 amperes at either 120 volts or 277 volts as indicated on the drawings. An auxiliary relay pack providing an additional relay contact shall be available as an accessory. Power packs shall be Wattstopper as indicated on the drawings.

- C. *Lighting control devices shall be as manufactured by Hubbell, Leviton, SensorSwitch or Wattstopper.*
- D. *Daylight controllers shall be single zone variable voltage devices using a digital multi-band photosensor to dim lights automatically when sufficient natural daylight is present. The sensor shall have an on set point range of 1 to 850 footcandles. If the photosensor lighting drops below the ON setpoint light shall remain on. If the sensor's lighting level rises above the OFF setpoint the lights shall turn off. Daylight controllers shall be Wattstopper as indicated on the drawings.*
- E. *Lighting control devices shall be installed in accordance with the manufacturer's published installation instructions. A meeting at the jobsite with the manufacturer's representative shall be scheduled for review of the installation requirements before installation of the devices begins.*

#### 2.23 OUTLET AND DEVICE PLATES

- A. *Furnish and install outlet and device plates on all junction boxes. Plates for concealed outlets shall be 0.032" satin finish stainless steel. Plates for exposed outlets shall be sheet steel suitable for outlet use. Finish on screws shall match finish on plate or cover. Furnish jumbo plates for devices in masonry walls. Furnish blank covers on all unused outlets.*

#### 2.24 TELEPHONE, DATA AND SECURITY SYSTEM

- A. *Furnish and install a conduit system, including outlets and conduits, as indicated on the drawings. A polyolefin fish wire shall be pulled into each empty conduit for telephone system and left for use by others. All conduit for telephone system shall be a minimum of 3/4" unless otherwise indicated on the drawings. Blank covers shall be provided for unused wall outlets.*

#### 2.25 ENERGY MANAGEMENT SYSTEM

- A. *A central computerized Energy Management System for the building will be furnished and installed under ATC&EMS Section.*
- B. *The Contractor shall provide contactors at lighting panels as indicated on the drawings.*
- C. *The Contractor shall install conduit and wiring as indicated on the drawings for connection of the Energy Management System to various electrical systems or equipment.*

**2.26 CABLE HANGERS**

- A. *Furnish and install cable hangers to support low voltage plenum rated cables for systems provided in other sections of the specifications.*
- B. *Cable hangers shall be installed in corridors above accessible ceilings at 3'-0" on center to the extent indicated on the drawings.*
- C. *Cable hangers shall be metal hangers of the size and configuration indicated on the drawings and as manufactured by Mono-Systems or approved equal by Atlas, B-Line or Southern Specialities. Install hangers to walls using bolts or screws and masonry anchors.*

**2.27 CABLE TRAY**

- A. *Cable tray shall be constructed of aluminum alloy or galvanized steel wire. The tray shall consist of a main support spline with rungs to support cable.*
- B. *Cable tray shall include all hanging, mounting and transition brackets and supports for a complete system.*
- C. *Cable trays shall be of the size and configuration indicated on the drawings and shall be as manufactured by Atlas, B-line, Cablofil, Mono-systems, Niedax or Wiremaid.*

**2.28 EMERGENCY POWER SYSTEM**

- A. *Furnish and install an emergency power system of the size, kw capacity, voltage and phase indicated on the drawings. The system shall be complete, factory tested and shall consist of:*
  - 1. *A diesel engine driven, radiator cooled, electric generating set to provide standby power.*
  - 2. *An engine-alternator control console resiliently mounted on the generating set shall include complete engine start-stop control and solid state monitoring systems.*
  - 3. *An automatic transfer switch to initiate automatic starting and stopping of the engine and switching of the load.*
- B. *Warranty: The complete standby electric power system shall be warranted for a period of five years or fifteen hundred operating hours, whichever occurs first, from the date of initial start-up.*
- C. *Performance: Voltage regulation shall be +/- 2 percent of rated voltage for any constant load between no load and rated load. Frequency regulation shall be 5% from steady state no load to steady state rated load. The engine-generator set shall be capable of single step load pick up of 100% nameplate kW and power factor, less applicable derating factors, with the engine-generator set at operating temperature when provided with a minimum of 7" wc gas pressure.*
- D. *The AC Generator shall be a four-pole, brushless synchronous type, revolving field, with direct drive centrifugal blower fan. No brushes will be allowed. Generator shall be directly connected to engine flywheel housing and driven through a flexible coupling to insure permanent alignment. Insulation shall meet NEMA standards for Class F up to 45 kW or Class H for 60 kW and above.*

- E. The broad range generator shall be capable of delivering rated output (kVA) at rated frequency and power factor, at any voltage within the broad range. Voltage regulator shall be temperature compensated solid-state design. Exciter shall be three-phase, full-wave, rectified, with heavy-duty silicon diodes. Provide an exciter field automatic circuit breaker, mounted on the control panel.
- F. The engine-generator set control shall have automatic remote start capability from a panel-mounted 3-position (Stop, Run, Remote) switch. Provide cycle cranking of 15 sec(ON)/15 SEC (OFF) for three attempts (75 SEC). If engine fails to start lockout the engine and indicate overcrank on alarm status panel.
- G. The control shall shut down and lock out upon: failing to start (overcrank), overspeed, low lubricating oil pressure, high engine temperature, or operation of a remote manual stop station. A panel mounted switch shall reset the engine monitor and test all the lamps. Lamp indications on the control panel shall include:
- Overcrank shutdown - red
  - Overspeed shutdown - red
  - Low oil pressure shutdown - red
  - High engine temperature shutdown - red
  - High engine temperature prealarm - yellow
  - Low engine oil pressure prealarm - yellow
  - Low coolant temperature - yellow
  - Low fuel - yellow Run - green
  - Not in automatic start - flashing red
- H. The NEMA 1 enclosed control panel shall be isolated from engine/generator vibration by vibration isolator. A front control panel illumination lamp with ON/OFF switch shall be provided. Control panel mounted indicating meters and devices shall include: Engine Oil Pressure Gauge, Coolant Temperature Gauge, DC Voltmeter, and Running Time Meter (hours).
- I. The AC meter package shall include voltage adjusting rheostat, Analog AC Voltmeter, Analog AC Ammeter, Analog Frequency/RPM meter, seven position phase selector switch with OFF position to allow meter display of current and voltage in each generator phase. When supplied with reconnectable generators, the meter panel shall be reconnectable for the voltage specified.
- J. The engine shall have a governed engine speed of 1800 rpm, and shall be equipped with the following:
1. Electronic isochronous governor capable of 0.25% steady-state frequency regulation.
  2. 24-volt positive-engagement solenoid shift-starting motor.
  3. 70-ampere automatic battery charging alternator with a solid-state voltage regulation.
  4. Positive displacement, full-pressure lubrication oil pump, cartridge oil filters, dipstick, and oil drain.
  5. Dry-type replaceable air cleaner elements for normal applications.

6. *Engine-driven or electric fuel-transfer pump including fuel filter and electric solenoid fuel shutoff valve capable of lifting fuel.*
7. *The turbocharged, Intercooled engine shall be fueled by diesel.*
8. *The engine shall have a minimum of 12 cylinders and be liquid-cooled by Unit Mounted Radiator 122°F/50°C.*
9. *The engine shall be EPA certified from the factory.*
- K. *Electronic governing system shall control generator system frequency, and shall have an adjustable speed regulation of 5% maximum from no-load to full-load output with automatic overspeed shutdown.*
- L. *Engine shall be radiator cooled by skid base mounted radiator system including belt-driven pusher fan, coolant pump, and thermostat temperature control. The cooling system shall be rated for full rated load operation in a 50 C ambient. Radiators shall be provided with a duct adaptor flange. Provide 50% ethylene glycol antifreeze solution to fill engine cooling system.*
- M. *The engine-generator set shall include a 12 volt DC, solenoid shift electric starter, positive displacement mechanical full pressure lubrication oil pump, full flow lubrication oil filters with replaceable elements, pressure relief valve, dipstick oil level indicator, and oil drain valve with hose extension dry element air cleaner with replaceable element engine starter, battery charging alternator with solid-state voltage regulator, secondary fuel gas pressure regulator, air/gas valve, and throttle body.*
- N. *Each engine-generator set shall be mounted on a heavy duty steel base and shall include vibration isolators.*
- O. *Generator set accessories shall include the following:*
  1. *Main circuit breaker, set-mounted and wired, UL listed, molded case thermal-magnetic type. Field circuit breakers shall not be acceptable for generator overcurrent protection.*
  2. *Engine mounted, thermostatically controlled, water jacket heater.*
  3. *Starting batteries, sealed, maintenance free lead acid type, 12 volt DC, with battery cables and connector.*
  4. *Critical grade exhaust muffler with vertical discharge elbow and rain cap.*
  5. *A remote alarm annunciator located in the Administration Area adjacent to the fire alarm panel. The remote annunciator shall provide all the indications and audible alarms called for by NFPA Standard 110 as provided on the engine-generator set control panel and in addition shall provide indications for high battery voltage, low battery voltage, normal battery voltage, and battery charger malfunction. Alarm silence and lamp test switches shall be provided.*

6. *The generator control panel shall be provided with two(2) Modbus connection points, one(1) to supply data to the remote annunciator and one(1) to supply data to the building energy management system. The connections shall use Modbus RTU-2 protocols. The data transmitted to the building energy management system shall be the same as that transmitted to the remote annunciator plus any other data made available by the manufacturer.*
  7. *Outdoor weather-protective housing, factory-assembled to generator set base and equipped with radiator cowling. The housing shall have hinged side-access doors and rear control door. All doors shall be lockable. All sheetmetal shall be primed and finish painted with the manufacturers standard color.*
- P. *A double wall secondary containment subbase fuel tank used in conjunction with a diesel powered generator set will contain sufficient number of gallons of fuel to support the generator set for a period of 24 hours at 100% of rated load and met the following requirements:*
1. *The subbase fuel system is listed under UL 142, subsection entitled Special Purpose Tanks EFVT category, and will bear their mark of UL Approval according to their particular classification.*
  2. *The above ground steel secondary containment rectangular tank for use as a sub base for diesel generators is manufactured and intended to be installed in accordance wit Flammable and Combustible Liquids Code-NFPA 30, the Standard for Installation and Use of Stationary Combustible Engine and Gas Turbines-NFPA 37, and Emergency and Standby Power Systems-NFPA 110.*
  3. *Primary Tank. It will be rectangular in shape and constructed in clam shell fashion to ensure maximum structural integrity and allow the use of a full throat fillet weld.*
  4. *Steel Channel Support System. Reinforced steel box channel for generator support, with a load rating of 5,000 lbs. per generator mounting hole location. Full height gussets at either end of channel and at generator mounting holes shall be utilized.*
  5. *Exterior Finish. The exterior coating has been tested to withstand continuous salt spray testing at 100 percent exposure for 244 hours to a 5 percent salt solution at 92-97° F. The coating has been subjected to full exposure humidity testing to 100 percent humidity at 100° F for 24 hours. Tests are to be conducted in accordance with The American Standard Testing Methods Society.*
  6. *Venting. Normal venting shall be sized in accordance with the American Petroleum Institute Standard No 2000,*

- Venting Atmospheric and Low Pressure Storage Tanks not less than 1-1/4" (3 cm.) nominal inside diameter.*
7. *Emergency Venting. The emergency vent opening shall be sized to accommodate the total capacity of both normal and emergency venting and shall be not less than that derived from NFPA 30, table 2-8, and based on the wetted surface area of the tank. The wetted area of the tank shall be calculated on the basis of 100 percent of the primary tank. The vent is spring-pressure operated: opening pressure is 0.5/psig and full opening pressure is 2.5 psig. The emergency relief vent is sized to accommodate the total venting capacity of both normal and emergency vents.*
  8. *Fuel Fill. There shall be a 2" NPT opening within the primary tank and lockable manual fill cap.7 gallon spill with 95% shut off per FDEP requirements*
  9. *Fuel Level. A direct reading, UL listed, magnetic fuel level gauge with a hermetically sealed vacuum tested dial shall be provided to eliminate fogging.*
  10. *Low Fuel Level Switch. Consists of a 30 watt float switch for remote or local annunciation of a (50% standard) low fuel level condition.*
- Q. *The automatic transfer switch shall be of the size, ampere rating, voltage and phase indicated on the drawings and enclosed in a NEMA 1 enclosure. The transfer switch shall be U.L. listed and shall be rated to carry 100 percent of rated current continuously. And shall include the following:*
1. *Transfer switch shall be double-throw, electrically and mechanically interlocked, and mechanically held in both positions.*
  2. *Main switch contacts shall be high-pressure silver alloy. Contact assemblies shall have arc chutes.*
  3. *Provide one set Form C auxiliary contact on both sides, operated by transfer switch position, rated 10 amps 250 VAC.*
  4. *Enclosure shall be equipped with key-locking door. Provide switch position indicator lamps and power available lamps for both sources (four total) on the outside cabinet door.*
  5. *Provide two normally open contacts for connection to the building energy management system. One contact shall close to indicate "Generator running" and the second contact shall close to indicate "failure to crank".*
  6. *Control shall be solid-state. Undervoltage sensors shall simultaneously monitor all phases of both sources. Pick-up and drop-out settings shall be adjustable.*
  7. *Automatic controls shall signal the engine-generator set to start upon signal from normal source sensors. Solid-state time delay start, adjustable from 0 to 5 seconds, shall avoid nuisance start- ups.*

8. *The switch shall transfer when the emergency source reaches the set point voltage and frequency. Provide a solid-state time delay on transfer, adjustable from 0 to 120 seconds.*
  9. *The switch shall retransfer the load to the normal source after a time delay retransfer, adjustable from 0 to 30 minutes. Retransfer time delay shall be immediately bypassed if the emergency power source fails.*
  10. *Controls shall signal the engine-generator set to stop after a time delay, adjustable from 0 to 10 minutes, beginning on return to the normal source.*
  11. *Provide a key-operated selector switch on cabinet front to provide the functions: Test - Normal - Retransfer.*
  12. *Transfer switch shall be equipped with exerciser clock, Battery Charger, Manual Selector Switch, and Phase Sequence Monitor/Balance Module.*
  13. *Provide two transfer switches, one for emergency loads and one for legally required loads. The emergency transfer switch shall transfer in 10 seconds or less. The legally required transfer switch shall transfer in 60 seconds or less.*
- R. *Provide factory start-up and testing of the system including a load test. This testing shall include coordination with the building energy management system and confirmation that the required data is being properly transmitted.*
- S. *The generator set and transfer switch shall be of the size, capacity, and arrangement specified and as manufactured by Cummins/Onan or approved equal by Allison/Detroit Diesel or Generac.*

## 2.29 SURGE PROTECTIVE DEVICES

- A. *Surge protective devices shall be of the type scheduled on the drawings and as manufactured by Current Technology. Surge protective devices shall have U.L. 1449 clamping levels not to exceed the values scheduled. Surge current ratings shall be as scheduled and all modes (L-N,L-L,L-G,N-G) shall be protected. The ANSI C62.41-1994 category C3 clamping levels shall not exceed 1250 volts (L-N) for 480Y/277V units or 900 volts (L-N) for 208Y/120V units. All ratings shall be with options and accessories noted in the schedule.*
- B. *Surge protective devices shall have a U.L. 1283 listed high frequency noise power filter with a minimum effective frequency range of 50KHz to 100MHz. Noise attenuation levels shall be greater than 30dB throughout the range, peaking at greater than 50dB.*
- C. *Approved equal surge protective devices as manufactured by Advanced Protection Technology, Eaton, EFI, General Electric, Intermatic, LEA, Liebert, Northern Technology, Siemens, Square D-Schneider, Surge Suppression of Georgia, Tycor or Weat*

*Eaton-Innovative Technology are acceptable. Submittals shall include independent test values for all information in the schedule.*

2.30 LABELING

- A. *Provide laminated plastic labels on all panelboards. Lettering shall be 3/8" high. Labels shall be black with white core on 208Y/120V panels and red with white core on 480Y/277V panels.*
- B. *Junction box covers concealed above ceilings or exposed in mechanical or electrical rooms shall be labeled using black indelible marker to indicate which circuits are contained in the box. Do not label device plates in finished areas.*

2.31 GROUNDING

- A. *All wiring systems including conduit, panelboards, safety switches, lighting fixtures and wiring devices shall be grounded in accordance with Article 250 of the National Electrical Code.*
- B. *The neutral conductor shall be grounded at the supply side of the service disconnecting device by connecting the grounding conductor indicated on the drawings to the neutral inside the service disconnect device enclosure.*
- C. *All splices in grounding conductors shall be made with T&B compression connectors. All connections to equipment and boxes shall be made with T&B two bolt hole compression lugs. Connections to water pipes or ground rods shall be made with T&B heavy duty ground clamps. Approved equal devices by Burndy, Dossert, or Ideal are acceptable.*

III. PART 3 - EXECUTION

3.1 INSTALLATION

- A. *Tightening of switchgear components shall be performed with a calibrated torque tool as required by NEC Section 110.14 (D).*

END OF SECTION 16 00 00