



Fulton County, GA

# Department of Purchasing & Contract Compliance

*Cecil S. Moore, CPPO, CPPB, CPSM, C.P.M., A.P.P*  
**Director**

August 23, 2011

**Re: 11ITB79954K-JAJ**  
**Fire Station #11 Construction Services**

Dear Bidders:

Attached is one (1) copy of Addendum 1, hereby made a part of the above referenced **Invitation to Bid**.

Except as provided herein, all terms and conditions in the Bid referenced above remain unchanged and in full force and effect.

Sincerely,

*James A. Jones*

**James A. Jones**  
**Assistant Purchasing Agent**

Winner 2000 - 2009 Achievement of Excellence in  
Procurement Award • National Purchasing Institute



**11ITB799954K-JAJ**  
**Fire Station # 11 Construction Services**  
**Addendum No. 1**  
**Page Two**

This Addendum forms a part of the contract documents and modifies the original ITB documents as noted below:

1. **Attachment I - American Recovery and Reinvestment Act (ARRA) language**  
**Which is hereby included with the solicitation documents.**
2. **Attachment II - Wage Rates are attached and made apart of the solicitation**  
**documents.**

**ACKNOWLEDGEMENT OF ADDENDUM NO. 1**

The undersigned proposer acknowledges receipt of this addendum by returning one (1) copy of this form with the proposal package to the Department of Purchasing & Contract Compliance, Fulton County Public Safety Building, 130 Peachtree Street, Suite 1168, Atlanta, Georgia 30303 by the ITB due date and time **September 22, 2011, at 11:00 A.M.**

This is to acknowledge receipt of Addendum No. 1, \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

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

\_\_\_\_\_  
Signature of Authorized Representative

\_\_\_\_\_  
Title

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**ATTACHMENT 1**

**Special Conditions # 2**

**SPECIAL CONDITIONS FOR AMERICAN RECOVERY AND  
REINVESTMENT ACT (ARRA) PROJECTS**

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***The special conditions set forth in this section must be incorporated into any architectural, engineering and design specifications for this project and incorporated in and deemed part of the Bid and Contract Documents.***

### **3.1 ACKNOWLEDGEMENT OF FEDERAL FUNDING**

The Contractor agrees that any publication (written, visual or sound) but excluding press releases, newsletters and issue analyses, issued by the Contractor describing programs or projects funded in whole or in part with federal funds under this Agreement, shall contain the following acknowledgement:

“Acknowledgement: This project is funded in whole or in part by funds made available through the American Recovery and Reinvestment Act (ARRA).”

Fulton County Government (“County”), as a recipient of American Recovery and Reinvestment Act (“Act”) funds, is legally obligated to meet accountability and reporting requirements under the Act. The County or the federal funding source may also identify additional requirements or other changes in requirements. Such requirements may be in statute, regulation, policy or procedure.

### **3.2 REPORTING**

All sub-recipients and their partners, contractors and/or vendors are responsible for reporting pursuant to Section 1512 of the American Recovery and Reinvestment Act of 2009. The County, as a prime recipient of Recovery Act funds, must comply with the Recovery Act’s extensive reporting requirements, including quarterly financial and programmatic reporting. The County will require quarterly reports from its sub-recipients in order to fulfill its obligation. The sub-recipient receiving Recovery Act funds may expect that a standard form(s) and/or reporting mechanism will be available to streamline the process. The sub-recipient agrees to provide the County all reports, documentation, or other information, as may be required to meet reporting obligations under the Recovery Act. The sub-recipient’s receipt of funds is contingent on meeting the Section 1512 reporting requirements.

Additional instructions and guidance regarding the required reporting will be provided as they become available. For planning purposes, however, sub-recipients receiving Recovery Act funds should be aware of the current Recovery Act section 1512(c) requirements.

Sub-recipient Reports: Not later than five days after the end of each calendar quarter (January 5, April 5, July 5, and October 5, etc., throughout the contract period), each sub-recipient that received recovery funds from a Federal agency shall submit a report to the County via email that contains:

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- Financial data
  - Sub-recipient (and if applicable, vendor) FTEs: jobs created or retained reported as single number; jobs directly funded by Recovery Act.
  - Project activity milestones (based on sub-recipient scope of work)

### **3.3 SITE VISITS**

The County and the Federal agency's authorized representatives have the right to make site visits at reasonable times to review project accomplishments and management control systems to provide technical assistance, if required. Grantee must provide, and must require its sub-awardee to provide reasonable access to facilities, office space, resources, and safety and convenience of the government representatives in the performance of their duties.

All site visits and evaluations must be performed in a manner that does not unduly interfere with or delay the work.

### **3.4 LAWS**

The Contractor shall comply with all applicable laws, ordinances, codes, regulations, and policies of local, state, and federal governments, as now or hereafter amended, including, but not limited to:

#### **United States Laws, Regulations and Circulars (Federal)**

A. American Recovery and Reinvestment Act (ARRA) of 2009

B. Audits:

Office of Management and Budget (OMB) Revised Circular A-133 "Audits of States, Local Governments, and Non-Profit Organizations."

Labor and Safety Standards:

Drug-Free Workplace Act of 1988, 41 USC 701 et seq.

Federal Fair Labor Standards Act, 29 U.S.C. 201 et seq.

Work Hours and Safety Act of 1962, 40 U.S.C. 327-330 and Department of Labor Regulations, 29 CFR Part 5

C. Laws against Discrimination which includes but are limited to:

Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin;

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Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex;

Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps;

Age Discrimination Act of 1975, as amended (42 U.S.C.6101-07), which prohibits discrimination on the basis of age;

Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, **relating** to nondiscrimination on the basis of drug abuse;

Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L.91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism;

§§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C.§§290-dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records;

Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing;

Any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and

The requirements of any other nondiscrimination statute(s) which may apply to the application.

D. Other:

Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases;

Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds;

Davis-Bacon Act (40 U.S.C. §276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction sub

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agreements;

Any other requirements required in the Assurance attached as Exhibit 3; and

Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

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## Special Condition 1 – Buy American Preferences

*The following provisions shall be incorporated in and deemed part of the RFP:*

- (a) The American Recovery and Reinvestment Act (ARRA) of 2009, states that no funds appropriated for a project for public infrastructure or public works, as defined in the Buy American Act, unless all of the iron, steel, and manufactured goods used in the project is produced in the United States. The following terms apply:
1. Steel and manufactured products. As used in this clause, steel and manufactured products include (i) steel produced in the United States or (ii) a manufactured product produced in the United States, if the cost of its components mined, produced or manufactured in the United States exceeds 60 percent of the cost of all its components and final assembly has taken place in the United States. Components of foreign origin of the same class or kind as the products referred to in subparagraphs 1.2. (i) or (ii) shall be treated as domestic.
  2. Components. As used in this clause, components means those articles, materials, and supplies incorporated directly into steel and manufactured products.
  3. Cost of Components. This means the costs for production of the components, exclusive of final assembly labor costs.
- (b) The successful bidder will be required to assure that only domestic steel and manufactured products will be used by the CONTRACTOR, subcontractors, material men and suppliers in the performance of this contract. The Federal agency involved may waive these requirements in the following instances:
1. That the domestic materials are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality;
  2. That the Federal agency has determined, that domestic preference would be inconsistent with the public interest; or
  3. That inclusion of domestic material will increase the cost of the overall project contract by more than 25 percent.

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**1.0 SPECIAL PROVISIONS 2 – CIVIL RIGHTS ACT OF 1964, TITLE VI  
(49 CFR PART 21)**

***The following provisions shall be incorporated in and deemed part of the Contract:***

During the performance of this contract, the CONTRACTOR, for itself, its assignees and successors in interest (hereinafter referred to as the "CONTRACTOR") agrees as follows:

- 1. Compliance with Regulations.** The CONTRACTOR shall comply with the Regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- 2. Nondiscrimination.** The CONTRACTOR, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The CONTRACTOR shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
- 3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment.** In all solicitations either by competitive bidding or negotiation made by the CONTRACTOR for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the CONTRACTOR of the CONTRACTOR's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
- 4. Information and Reports.** The CONTRACTOR shall provide all information and reports required by the Regulations or directives issued pursuant thereto and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Sponsor or the Federal Agency to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of a CONTRACTOR is in the exclusive possession

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of another who fails or refuses to furnish this information, the CONTRACTOR shall so certify to the sponsor or the FAA, as appropriate, and shall set forth what efforts it has made to obtain the information.

**5. Sanctions for Noncompliance.** In the event of the CONTRACTOR's noncompliance with the nondiscrimination provisions of this contract, the sponsor shall impose such contract sanctions as it may determine to be appropriate, including, but not limited to:

- a. Withholding of payments to the CONTRACTOR under the contract until the CONTRACTOR complies, and/or
- b. Cancellation, termination, or suspension of the contract, in whole or in part.

**6. Incorporation of Provisions.** The CONTRACTOR shall include the provisions of paragraphs 1 through 5 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The CONTRACTOR shall take such action with respect to any subcontract or procurement as the sponsor may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, however, that in the event a CONTRACTOR becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the CONTRACTOR may request the Sponsor to enter into such litigation to protect the interests of the sponsor and, in addition, the CONTRACTOR may request the United States to enter into such litigation to protect the interests of the United States.

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## **2.0 SPECIAL CONDITION 3 – LOBBYING AND INFLUENCING FEDERAL EMPLOYEES (49 CFR PART 20)**

*The following provisions shall be incorporated in and deemed part of the Contract:*

- (1) No Federal appropriated funds shall be paid, by or on behalf of the CONTRACTOR, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the making of any Federal grant and the amendment or modification of any Federal grant.
  
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any Federal grant, the CONTRACTOR shall complete and submit Standard Form-LLL, "Disclosure of Lobby Activities," in accordance with its instructions.

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### 3.0 SPECIAL CONDITION 4 – DAVIS BACON REQUIREMENTS (29 CFR PART 5)

***The following provisions shall be incorporated in and deemed part of the Contract:***

1. Minimum Wages

- (i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalent thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the CONTRACTOR and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the CONTRACTOR and its subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

- (ii) (A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination

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and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination;
- (2) The classification is utilized in the area by the construction industry; and
- (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the CONTRACTOR and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the CONTRACTOR, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

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

- (iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an

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hourly rate, the CONTRACTOR shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

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

## 2. Withholding

The Federal Aviation Administration or the Sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the CONTRACTOR under this contract or any other Federal contract with the same prime CONTRACTOR, or any other Federally-assisted contract subject to David-Bacon prevailing wage requirements, which is held by the same prime CONTRACTOR, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the CONTRACTOR or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of work, all or part of the wages required by the contract, the Federal Aviation Administration may, after written notice to the CONTRACTOR, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

## 3. Payrolls and Basic Records

(i) Payrolls and basic records relating thereto shall be maintained by the CONTRACTOR during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or

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mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the CONTRACTOR shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual costs incurred in providing such benefits. CONTRACTORS employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

- (ii) (A) The CONTRACTOR shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the Federal Aviation Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under paragraph 5.5(a)(3)(i) above. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime CONTRACTOR is responsible for the submission of copies of payrolls by all subcontractors.

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the CONTRACTOR or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

- (1) That the payroll for the payroll period contains the information required to be maintained under paragraph (3)(i) above and that such information is correct and complete;
- (2) That each laborer and mechanic (including each helper, apprentice and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations 29 CFR Part 3;
- (3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage

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determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the CONTRACTOR or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The CONTRACTOR or subcontractor shall make the records required under paragraph (3)(i) of this section available for inspection, copying or transcription by authorized representatives of the Sponsor, the Federal Aviation Administration or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the CONTRACTOR or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the CONTRACTOR, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

#### 4. Apprentices and Trainees

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the CONTRACTOR as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted

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under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a CONTRACTOR is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the CONTRACTOR's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the CONTRACTOR will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the

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registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the CONTRACTOR will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

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

5. Compliance With Copeland Act Requirements.

The CONTRACTOR shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

6. Subcontracts.

The CONTRACTOR or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR Part 5.5(a)(1) through (10) and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime CONTRACTOR shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.

7. Contract Termination: Debarment.

A breach of the contract clauses in paragraph 1 through 10 of this section may be grounds for termination of the contract, and for debarment as a CONTRACTOR and a subcontractor as provided in 29 CFR 5.12.

8. Compliance With Davis-Bacon and Related Act Requirements.

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

9. Disputes Concerning Labor Standards.

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6 and 7. Disputes within the meaning of this clause include

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disputes between the CONTRACTOR (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of Eligibility.

- (i) By entering into this contract, the CONTRACTOR certifies that neither it (nor he or she) nor any person or firm who has an interest in the CONTRACTOR's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
- (ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
- (iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

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#### 4.0 SPECIAL CONDITION 5 – EQUAL EMPLOYMENT OPPORTUNITY

*The following provisions shall be incorporated in and deemed part of the Contract:*

During the performance of this contract, the CONTRACTOR agrees as follows:

1. The CONTRACTOR will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The CONTRACTOR will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
2. The CONTRACTOR will, in all solicitations or advertisements for employees placed by or on behalf of the CONTRACTOR, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.
3. The CONTRACTOR will send to each labor union or representative of workers with which s/he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the CONTRACTOR's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. The CONTRACTOR will comply with all provisions of Executive Order 11246 of September 24, 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.
5. The CONTRACTOR will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
6. In the event of the CONTRACTOR's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the

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CONTRACTOR may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedure authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

7. The CONTRACTOR will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The CONTRACTOR will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provision, including sanctions for noncompliance: *Provided, however,* that in the event a CONTRACTOR becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the CONTRACTOR may request the United States to enter into such litigation to protect the interests of the United States.

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**5.0 SPECIAL CONDITION 6 – STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (41 CFR PART 60.4.3)**

*The following provisions shall be incorporated in and deemed part of the Contract:*

1. As used in these specifications:
  - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
  - b. "Director" means Director, Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, or any person to whom the Director delegates authority;
  - c. "Employer identification number" means the Federal social security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;
  - d. "Minority" includes:
    - (1) Black (all) persons having origins in any of the Black African racial groups not of Hispanic origin);
    - (2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race);
    - (3) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
    - (4) American Indian or Alaskan native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the CONTRACTOR, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

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3. If the CONTRACTOR is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. CONTRACTORS shall be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each CONTRACTOR or subcontractor participating in an approved plan is individually required to comply with its obligations under the EEO clause and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other CONTRACTORS or subcontractors toward a goal in an approved Plan does not excuse any covered CONTRACTOR's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
  4. The CONTRACTOR shall implement the specific affirmative action standards provided in paragraphs 18.7a through 18.7p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the CONTRACTOR should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction CONTRACTORS performing construction work in a geographical area where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The CONTRACTOR is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.
  5. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the CONTRACTOR has a collective bargaining agreement to refer either minorities or women shall excuse the CONTRACTOR's obligations under these specifications, Executive Order 11246 or the regulations promulgated pursuant thereto.
  6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees shall be employed by the CONTRACTOR during the training period and the CONTRACTOR shall have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees shall be trained pursuant to training programs approved by the U.S. Department of Labor.
  7. The CONTRACTOR shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the CONTRACTOR's compliance with

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these specifications shall be based upon its effort to achieve maximum results from its actions. The CONTRACTOR shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:

- a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the CONTRACTOR's employees are assigned to work. The CONTRACTOR, where possible, will assign two or more women to each construction project. The CONTRACTOR shall specifically ensure that all foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the CONTRACTOR's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
- b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the CONTRACTOR or its unions have employment opportunities available, and maintain a record of the organizations' responses.
- c. Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the CONTRACTOR by the union or, if referred, not employed by the CONTRACTOR, this shall be documented in the file with the reason therefore along with whatever additional actions the CONTRACTOR may have taken.
- d. Provide immediate written notification to the Director when the union or unions with which the CONTRACTOR has a collective bargaining agreement has not referred to the CONTRACTOR a minority person or female sent by the CONTRACTOR, or when the CONTRACTOR has other information that the union referral process has impeded the CONTRACTOR's efforts to meet its obligations.
- e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the CONTRACTOR's employment needs, especially those programs funded or approved by the Department of Labor. The CONTRACTOR shall provide notice of these programs to the sources compiled under 7b above.

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- f. Disseminate the CONTRACTOR's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the CONTRACTOR in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
  - g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review of these items with onsite supervisory personnel such as superintendents, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
  - h. Disseminate the CONTRACTOR's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the CONTRACTOR's EEO policy with other CONTRACTORS and subcontractors with whom the CONTRACTOR does or anticipates doing business.
  - i. Direct its recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students; and to minority and female recruitment and training organizations serving the CONTRACTOR's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the CONTRACTOR shall send written notification to organizations, such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
  - j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a CONTRACTOR's workforce.
  - k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
  - l. Conduct, at least annually, an inventory and evaluation at least of all minority

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and female personnel, for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

- m. Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the CONTRACTOR's obligations under these specifications are being carried out.
  - n. Ensure that all facilities and company activities are non-segregated except that separate or single user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
  - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction CONTRACTORS and suppliers, including circulation of solicitations to minority and female CONTRACTOR associations and other business associations.
  - p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the CONTRACTOR's EEO policies and affirmative action obligations.
8. CONTRACTORS are encouraged to participate in voluntary associations, which assist in fulfilling one or more of their affirmative action obligations (18.7a through 18.7p). The efforts of a CONTRACTOR association, joint CONTRACTOR union, CONTRACTOR community, or other similar groups of which the CONTRACTOR is a member and participant, may be asserted as fulfilling any one or more of its obligations under 18.7a through 18.7p of these specifications provided that the CONTRACTOR actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the CONTRACTOR's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the CONTRACTOR. The obligation to comply, however, is the CONTRACTOR's and failure of such a group to fulfill an obligation shall not be a defense for the CONTRACTOR's noncompliance.
9. A single goal for minorities and a separate single goal for women have been established. The CONTRACTOR, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, if the particular group is employed in a substantially disparate manner (for example,

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even though the CONTRACTOR has achieved its goals for women generally,) the CONTRACTOR may be in violation of the Executive Order if a specific minority group of women is underutilized.

10. The CONTRACTOR shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
11. The CONTRACTOR shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
12. The CONTRACTOR shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination, and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any CONTRACTOR who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The CONTRACTOR, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 18.7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the CONTRACTOR fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
14. The CONTRACTOR shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government, and to keep records. Records shall at least include for each employee, the name, address, telephone number, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, CONTRACTORS shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

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## **SPECIAL CONDITION 7 – TERMINATION OF CONTRACT (49 CFR PART 18.36)**

*The following provisions shall be incorporated in and deemed part of the Contract:*

- a. The Sponsor may, by written notice, terminate this contract in whole or in part at any time, either for the Sponsor's convenience or because of failure to fulfill the contract obligations. Upon receipt of such notice services shall be immediately discontinued (unless the notice directs otherwise) and all materials as may have been accumulated in performing this contract, whether completed or in progress, delivered to the Sponsor.
- b. If the termination is for the convenience of the Sponsor, an equitable adjustment in the contract price shall be made, but no amount shall be allowed for anticipated profit on unperformed services.
- c. If the termination is due to failure to fulfill the CONTRACTOR's obligations, the Sponsor may take over the work and prosecute the same to completion by contract or otherwise. In such case, the CONTRACTOR shall be liable to the Sponsor for any additional cost occasioned to the Sponsor thereby.
- d. If, after notice of termination for failure to fulfill contract obligations, it is determined that the CONTRACTOR had not so failed, the termination shall be deemed to have been effected for the convenience of the Sponsor. In such event, adjustment in the contract price shall be made as provided in paragraph 2 of this clause.
- e. The rights and remedies of the sponsor provided in this clause are in addition to any

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## **6.0 SPECIAL CONDITION 8 – CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS (29 CFR PART 5)**

*The following provisions shall be incorporated in and deemed part of the Contract:*

### **1. Overtime Requirements.**

No CONTRACTOR or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic, including watchmen and guards, in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

### **2. Violation; Liability for Unpaid Wages; Liquidated Damages.**

In the event of any violation of the clause set forth in paragraph (1) above, the CONTRACTOR and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such CONTRACTOR and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph 1 above, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1 above.

### **3. Withholding for Unpaid Wages and Liquidated Damages.**

The Federal Aviation Administration or the Sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any monies payable on account of work performed by the CONTRACTOR or subcontractor under any such contract or any other Federal contract with the same prime CONTRACTOR, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime CONTRACTOR, such sums as may be determined to be necessary to satisfy any liabilities of such CONTRACTOR or subcontractor for

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unpaid wages and liquidated damages as provided in the clause set forth in paragraph 2 above.

4. Subcontractors.

The CONTRACTOR or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs 1 through 4 and also a clause requiring the subcontractor to include these clauses in any lower tier subcontracts. The prime CONTRACTOR shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1 through 4 of this section.

General Decision Number: GA100225 08/05/2011 GA225

Superseded General Decision Number: GA20080225

State: Georgia

Construction Type: Building

County: Fulton County in Georgia.

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

Modification Number	Publication Date
0	03/12/2010
1	03/19/2010
2	04/02/2010
3	05/28/2010
4	07/09/2010
5	08/13/2010
6	10/22/2010
7	12/10/2010
8	12/31/2010
9	01/14/2011
10	04/01/2011
11	04/29/2011
12	07/01/2011
13	08/05/2011

ASBE0048-001 04/01/2010

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR.....	\$ 25.07	12.41

CARP0225-002 07/01/2008

	Rates	Fringes
CARPENTER (including drywall hanging; excluding acoustical ceiling installation and form work).....	\$ 21.45	6.35

CARP1263-001 07/01/2009

	Rates	Fringes
MILLWRIGHT.....	\$ 22.42	11.95

ELEC0613-014 09/01/2010

	Rates	Fringes
ELECTRICIAN (including installation of temperature controls for HVAC Systems).....	\$ 29.00	8.09

FOOTNOTES: Work on bar joists, walk logs, exposed steel and swinging scaffolds when the surface the worker stands or sits on exceeds twenty-five (25) feet above solid floor and the worker is subject to free fall: \$1.00 per hour additional. Work of a similar nature above fifty (50) feet: \$3.00 per hour additional.

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 ELEV0032-001 01/01/2011

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 35.23	21.785+a+b

PAID HOLIDAYS:

a. New Year's Day, Memorial Day, Independence Day, Labor Day, Vetern's Day, Thanksgiving Day, the Friday after Thanksgiving, and Christmas Day.

b. Employer contributes 8% of regular hourly rate to vacation pay credit for employee who has worked in business more than 5 years; 6% for less than 5 years' service.

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 ENGI0926-027 07/01/2010

	Rates	Fringes
Operating Engineers:		
Backhoe/Excavator, Hoist and Mechanic.....	\$ 27.13	9.28
Bulldozer, Compactor, Drill, Forklift, Loader, and Scraper.....	\$ 23.49	9.28
Crane and Boom.....	\$ 27.13	9.28
Oiler.....	\$ 22.50	9.28

FOOTNOTE: Paid Holidays - Labor Day and Christmas Day, if the worker has one year of continuous employment with the same contractor.

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 IRON0387-001 08/01/2009

	Rates	Fringes
IRONWORKER, STRUCTURAL.....	\$ 24.04	9.86

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 LABO0515-002 07/01/2008

	Rates	Fringes
LABORER: Common or General.....	\$ 14.22	4.30

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 PAIN0193-011 07/01/2011

	Rates	Fringes
PAINTER: Brush, Roller and Spray.....	\$ 20.87	8.80

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 PAIN1940-001 04/01/2011

	Rates	Fringes
GLAZIER.....	\$ 21.30	7.90

FOOTNOTE: Paid holidays: Thanksgiving Day, Christmas Day, New Year's Day, National Memorial Day, July 4th and Labor Day; if the employee works the day before and the day after the holiday.

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 PLAS0148-001 01/01/2010

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 22.00	6.09

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 \* PLUM0072-012 08/01/2011

	Rates	Fringes
PIPEFITTER, Including HVAC Pipe Installation.....	\$ 28.90	12.76
PLUMBER (Excluding HVAC Pipe Installation).....	\$ 28.90	12.76

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 SFGA0669-001 04/01/2011

	Rates	Fringes
SPRINKLER FITTER (Fire Sprinklers).....	\$ 25.05	15.25

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 \* SHEE0085-001 08/01/2011

	Rates	Fringes
SHEET METAL WORKER, Includes Installation of HVAC Duct and Metal Roofs		
Buildings over 100,000 square feet.....	\$ 29.70	13.41
Buildings up to 100,000 square feet.....	\$ 25.49	11.73

FOOTNOTE: Work on swinging stages, boatswains chairs or scaffolds, booms, or scissors lifts over 50 ft. high: \$1.25 per hour additional.

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 SUGA2008-180 08/21/2008

	Rates	Fringes
ACOUSTICAL CEILING MECHANIC.....	\$ 14.00	0.00
BRICKLAYER.....	\$ 16.00	0.00
CARPENTER (Form Work Only).....	\$ 11.80	0.00
CARPET & HARDWOOD FLOOR INSTALLER.....	\$ 15.00	0.54

HVAC MECHANIC: System Installer (Excluding HVAC Duct and Pipe Installation).....	\$ 16.26	1.26
IRONWORKER, REINFORCING.....	\$ 11.05	0.21
LABORER: Pipelayer.....	\$ 13.06	3.56
OPERATOR: Grader/Blade.....	\$ 9.00	0.24
OPERATOR: Roller.....	\$ 10.88	0.00
ROOFER (Excluding Metal Roof)....	\$ 10.00	0.00
TILE SETTER.....	\$ 15.00	0.00
TRUCK DRIVER.....	\$ 12.27	1.56
WATERPROOFER.....	\$ 10.50	0.00

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.  
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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

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In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

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WAGE DETERMINATION APPEALS PROCESS

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

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

On survey related matters, initial contact, including requests

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

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

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

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

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

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

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

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

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

END OF GENERAL DECISION





Fulton County, GA

# Department of Purchasing & Contract Compliance

*Cecil S. Moore, CPPO, CPPB, CPSM, C.P.M., A.P.P*  
**Director**

**September 13, 2011**

**Re: 11ITB79954K-JAJ**  
**Fire Station # 11 Construction Services**

Dear Bidders:

Attached is one (1) copy of Addendum 2, hereby made a part of the above referenced Invitation to Bid.

Except as provided herein, all terms and conditions in the Bid referenced above remain unchanged and in full force and effect.

Sincerely,  
*James A. Jones*

**James A. Jones**  
**Assistant Purchasing Agent**

Winner 2000 - 2009 Achievement of Excellence in  
Procurement Award • National Purchasing Institute



**11ITB79954K-JAJ**  
**Addendum No. 2**  
**Page Two**

This Addendum forms a part of the contract documents and **modifies** the original ITB documents as noted below:

- 1. Question:** On page 3 of 4 of the bid form it list items for unit prices but does not include any quantities. What quantity are we to insert for each item?  
**Answer:** Contractor is to estimate the quantity based on the information contained in the geotechnical report provided as well as the civil drawings.
- 2. Question:** Are there any liquidated damages associated with this project? If so, what is the daily amount?  
**Answer:** No.
- 3. Question:** Under Purchasing Forms and Instructions on page 20, there is a form requiring a 40 Hour OSHA Certificate for Superintendent. OSHA does not have a 40 hour certificate but does have a 30 hour certificate. Please clarify.  
**Answer:** 30 hour is correct. Please submit the 30 hour OSHA Certificate for Superintendent.
- 4.** First sentence on page 2 Invitation to Bid, section Term of Contract, is hereby changed to read "fully complete all work under this contract within **182** consecutive calendar days".
- 5. See Attachment 1 Revised Bid Form.**
- 6. See Attachment 2 changes to Volume 2 Technical Specifications.**
- 7. See Attachment 3 Revised Drawings.**
- 8. Clarification: All Contract Compliance documents must be submitted with the bid.**

ACKNOWLEDGEMENT OF ADDENDUM NO. 2

The undersigned proposer acknowledges receipt of this addendum by returning one (1) copy of this form with the proposal package to the Department of Purchasing & Contract Compliance, Fulton County Public Safety Building, 130 Peachtree Street, Suite 1168, Atlanta, Georgia 30303 by the ITB due date and time **Thursday, September 22, 2011, 11:00 A.M.**

This is to acknowledge receipt of Addendum No. 2, \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

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

\_\_\_\_\_  
Signature of Authorized Representative

\_\_\_\_\_  
Title

**BID FORM**

Submitted To: Fulton County Government

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

For: Fire Station #11 Construction Services

Submitted on \_\_\_\_\_, 20\_\_.

The undersigned, as Bidder, hereby declares that the only person or persons interested in the Bid as principal or principals is or are named herein and that no other person than herein mentioned has any interest in this Bid or in the Contract to be entered into; that this Bid is made without connection with any other person, company or parties making a Bid; and that it is in all respects fair and in good faith without collusion or fraud.

The Bidder further declares that he has examined the site of the work and informed himself fully in regard to all conditions pertaining to the place where the work is to be done; that he has examined the Drawings and Specifications for the work and contractual documents relative thereto, and has read all instructions to Bidders and General Conditions furnished prior to the openings of bids; that he has satisfied himself relative to the work to be performed.

The Bidder proposes and agrees, if this Bid is accepted, to contract with the Board of Commissioners of Fulton County, Atlanta, Georgia, in the form of contract specified, to furnish all necessary materials, equipment, machinery, tools, apparatus, means of transportation and labor necessary, and to complete the construction of the work in full and complete accordance with the shown, noted, and reasonably intended requirements of the Specifications and Contract Documents to the full and entire satisfaction of the Board of Commissioners of Fulton County, Atlanta, Georgia, with a definite understanding that no money will be allowed for extra work except as set forth in the attached General Conditions and Contract Documents for the following prices.

THE BASE BID IS THE AMOUNT UPON WHICH THE BIDDER WILL BE FORMALLY EVALUATED AND WHICH WILL BE USED TO DETERMINE THE LOWEST RESPONSIBLE BIDDER.

The base bid may not be withdrawn or modified for a period of sixty (60) days following the receipt of bids.

**BASE BID AMOUNT** (Do not include any Bid Alternates)

\$ \_\_\_\_\_  
**(Dollar Amount In Numbers)**

\_\_\_\_\_  
**(Dollar Amount in Words)**

The Bidder agrees hereby to commence work under this Contract, with adequate personnel and equipment, on a date to be specified in a written order of the Contracting Officer and to fully complete all work under this Contract within **One Hundred and Thirty (130)** consecutive calendar days from and including said date.

The Bidder declares that he understands that the quantities shown for the unit prices items are subject to either increase or decrease, and that should the quantities of any of the items of work be increased, the Bidder proposes to do the additional work at the unit prices stated herein; and should the quantities be decreased, the Bidder also understands that payment will be made on the basis of actual quantities at the unit price bid and will make no claim for anticipated profits for any decrease in quantities; and that actual quantities will be determined upon completion of work, at which time adjustments will be made to the contract amount by direct increase or decrease.

The Bidder furthermore agrees that, in the case of a failure on his part to execute the Contract Agreement and Bonds within ten days after receipt of conformed contract documents for execution, the Bid Bond accompanying his bid and the monies payable thereon shall be paid into the funds of the Owner as liquidated damages for such failure.

Enclosed is a Bid Bond in the approved form, in the sum of:

\_\_\_\_\_ Dollars

(\$ \_\_\_\_\_) according to the conditions of "Instructions to Bidders" and provisions thereof.

**The following form shall be used for submitting Bid Prices:**

**COST PROPOSAL FORM**

<b>DIVISION</b>	<b>COMPONENT DESCRIPTION</b>	<b>QUANTITY</b>	<b>UNIT COST</b>	<b>COST</b>
1	General Conditions/Requirements			
2	Site Work & Demolition			
3	Excavate and compact 240lf of 4' deep X 5'wide trench			
4	Concrete			
5	Masonry			
6	Misc. Steel			
7	Pre-Engineered Metal Building			
8	Wood & Plastic			
9	Moisture Protection			
10	Doors & Windows			
11	Finishes			
12	Specialties			
13	Equipment			
14	Furnishing			
15	Special Construction			
16	Conveying System			
17	Mechanical			
18	Electrical			
<b>SUB-TOTAL (Lines 1-18)</b>				
	<b>UNIT PRICING</b>			<b>COST</b>
19	Contractor Profit			
20	Contractor Overhead			
21	County Controlled Contingency			<b>\$200,000</b>
<b>TOTAL BASE BID AMOUNT (Lines 1-21)</b>				

		UNIT	UNIT PRICE	COST
22	Mass Rock including Contractor overhead and profit			
23	Trench Rock including Contractor overhead and Profit			

The undersigned acknowledges receipt of the following addenda (list by the number and date appearing on each addendum) and thereby affirms that its Bid considers and incorporates any modifications to the originally issued Bidding Documents included therein.

ADDENDUM # \_\_\_\_\_ DATED \_\_\_\_\_  
 ADDENDUM # \_\_\_\_\_ DATED \_\_\_\_\_  
 ADDENDUM # \_\_\_\_\_ DATED \_\_\_\_\_  
 ADDENDUM # \_\_\_\_\_ DATED \_\_\_\_\_

**BIDDER:** \_\_\_\_\_

Signed by: \_\_\_\_\_  
[Type or Print Name]

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

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

Business Phone: \_\_\_\_\_

Bidder's Contractor License No: \_\_\_\_\_  
[State/County]

License Expiration Date: \_\_\_\_\_

Note: If the Bidder is a corporation, the Bid shall be signed by an officer of the corporation; if a partnership, it shall be signed by a partner. If signed by others, authority for signature shall be attached.

The full name and addresses of persons or parties interested in the foregoing Bid, as principals, are as follows:

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

END OF SECTION

# Fulton County Fire Station No. 11

## Addendum No. 2

September 9, 2011

*~~NOTE TO ALL BIDDERS~~*

The Construction Documents for this project are hereby amended or clarified as set out below. This Addendum forms a part of the Contract Documents. Bidders must acknowledge receipt of this Addendum and the inclusion of the provisions set out, in the space provided on the proposal form.

**General:**

1. Provide at Apparatus Bay 120 and Loft 201, 3" THERMAX™ Heavy Duty Insulation [or equal] with a glass-fiber reinforced polyisocyanurate foam core faced with 4.0 mil embossed white acrylic-coated aluminum on one side and 1.25 mil embossed aluminum on the other side for the roof insulation in lieu of vinyl faced batt insulation.
2. The following sheets are re-issued with this Addendum:
  - Sheet A3.1
  - Sheet A3.2
  - Sheet A4.2
  - Sheet A7.1
  - Sheet A9.1
  - Sheet A10.1
  - Sheet A10.2
3. Provide a ¼" gas line to the rear patio for a gas grill to be provided by the owner.
4. Provide a 1½" hose connection on wall hydrant on the front of the building between the bay doors.
5. Provide a gas line to the range in the kitchen. Size as required by range manufacturer.

**Project Manual:**

1. Table of Contents: insert the attached revised Table of Contents.
2. Section 10191 - Cubicle Curtains and Tracks: Insert this section into the Project Manual. Provide Curtain and Track at entrance to each Bunk Bed Room (12 locations) and bunk room in the Captains' Suite (2 locations).
3. Section 04810 – Unit Masonry Assemblies: Contractor to allow for up to 3 different colors of brick to be selected by the Architect.
4. Section 07214 - Foamed-In-Place Masonry Wall Insulation: Insert this section into the Project Manual. Install where indicated on the contract documents.

**Drawings:**

1. Sheet A2.1: at Bunk Bed Rooms and Captains' Suite provide 3 Heavy Duty Metal Lockers, Single tier 18" wide x 24" deep x 72" high for each room as specified in Section 10511 Metal Lockers.
2. Sheet A2.1: at the Turnout Gear Room 130, Provide 24 Mobile Gear Storage Lockers as specified in Section 10511 Metal Lockers.
3. Sheet A2.1: Storage 151 truss bearing height shall be 9'-4" above finish floor.
4. Sheet A2.1: move location of owner supplied grill at BBQ Shed 10'-0" to the left [Northwest].
5. Sheet A2.1: at Apparatus Bay 120, slope floor to trench drains.
6. Sheet A2.3: attention is called to the note at the bottom of the sheet: All CMU Walls are 6" wide except: Bathroom chase walls are 4"; Walls surrounding the Apparatus Bay are 12"; remaining exterior walls are 8".
7. Sheet A3.3: provide (6) 18" square attic relief vents equally spaced and within 36" of the highest point of the attic on each side of the building.
8. Sheet A4.1: at window elevation B, change window height to 4'-0" at 3'-4" above finished floor.
9. Sheet A4.1: add window elevation D, 3'-4" wide x 4"-8" high, hollow metal frame, with 1/4" clear tempered glass, installed 2'-8" above finished floor.
10. Sheet A4.1: at window elevation E, change to operable casement window over fixed.
11. Sheet A4.1: at window elevations K and L, these windows are to be fixed, aluminum framed windows with insulated glass.
12. Sheet A4.1: furnish all exterior windows with insulated glass.
13. Sheet A4.2: Finish Schedule, change the floor finish of the Captain's Office 121 from Carpet to Polished and Dyed Concrete.
14. Sheet A5.1: where windows are within the brick portion of the exterior walls, provide brick rowlock sills. Where windows occur within the metal panels, provide metal sills.
15. Sheet A5.1: delete note "Standing Seam Metal Roof Over 2" Iso. Insul. Bd. Over Moisture Barrier Over Metal Decking". Replace with "Standing Seam Roof Panels Over Vinyl Faced Batt Insulation [Poly-Iso Board At Apparatus Bay 120 & Loft 201]"
16. Sheet A5.2: delete note "Standing Seam Metal Roof Over 2" Iso. Insul. Bd. Over Moisture Barrier Over Metal Decking". Replace with "Standing Seam Roof Panels Over Vinyl Faced Batt Insulation [Poly-Iso Board At Apparatus Bay 120 & Loft 201]"
17. Sheet A5.2: where windows are within the brick portion of the exterior walls, provide brick rowlock sills. Where windows occur within the metal panels, provide metal sills.

18. Sheet A5.2: at right and left sides of building, provide 8" x 16" wall vents at 11'-8" AFF spaced at approximately 12'-0" o.c.
19. Sheet A5.2: along right side elevation, provide self-adhering waterproofing from foundation to 48" AFF.
20. Sheet A6.1: at Loft 201, Mechanical/Electrical Room 202, and Storage 203, all walls are to be sealed to deck above. Extend CMU to bottom of beams and provide metal studs and gypsum board to seal off between beams to deck. Caulk all joints.
21. Sheet A6.1: delete reference to ¾" plywood deck at Storage 203. Floor systems shall be as indicated on structural drawings.
22. Sheet A9.2: change "running slack bond" and "slack bond" to "stack bond".
23. Sheet A9.2: delete note "Standing Seam Metal Roof Over 2" Iso. Insul. Bd. Over Moisture Barrier Over Metal Decking". Replace with "Standing Seam Roof Panels Over Vinyl Faced Batt Insulation [Poly-Iso Board At Apparatus Bay 120 & Loft 201]"

**Attachments:**

Table of Contents (Revised)

Section 07214 - Foamed-In-Place Masonry Wall Insulation

Section 10191 - Cubicle Curtains and Tracks

Re-Issued Sheets:

Sheet A3.1

Sheet A3.2

Sheet A4.2

Sheet A7.1

Sheet A9.1

Sheet A10.1

Sheet A10.2

**END OF ADDENDUM 6**

**FULTON COUNTY FIRE DEPARTMENT FIRE STATION #11**

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02630	FACILITY STORM DRAINAGE PIPING
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## ADDENDUM 2

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NOT USED	

## ADDENDUM 2

### **DIVISION 15**

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16540	EXTERIOR LIGHTING AND LAMPS
16721	FIRE ALARM SYSTEMS

SECTION 07214 - FOAMED-IN-PLACE MASONRY WALL INSULATION

PART 1 - GENERAL

DESCRIPTION OF WORK:

- A. Applications of insulation specified in this section include the following:
  - 1. Foamed-In-Place masonry insulation for thermal, sound and fire resistance values.

QUALITY ASSURANCE:

- A. Insulation shall be installed as per manufacture's recommendation and must come from the manufacturer pre-mixed to ensure consistency. Upon request, a one year product and installation warranty will be issued by both the manufacturer and installer.
- B. Engage an experienced dealer/appliator who has been trained and licensed by the product manufacturer and which has not less than three years direct experience in the installation of the product used.

PART 2 - PRODUCTS

- A. ACCEPTABLE MANUFACTURERS
  - a. **"Core-Fill 500™"** as manufactured by  
Tailored Chemical Products  
P.O. Drawer 4186  
Hickory, N.C. 28603  
(800) 627-1687
  - b. Approved Equal
- B. MINIMUM PRODUCT PERFORMANCE STANDARDS
  - a. Fire-Resistance Ratings: Minimum four (4) hour fire resistance wall rating (ASTM E-119) for 8" and 12" concrete masonry units when used in standard two (2) hour rated CMUs.
  - b. Surface Burning Characteristics: Maximum flame spread, smoke developed and fuel contributed of 0, 5 and 0 respectively.
  - c. Combustion Characteristics: Must be noncombustible, Class A building material.
  - d. Thermal Values: "R" Value of 4.91/inch @ 32 degrees F mean; ASTM C-177.
  - e. Sound Abatement: Minimum Sound Transmission Class ("STC") rating of 53 and a minimum Outdoor Indoor Transmission Class ("OITC") rating of 44 for 8" wall assembly ASTM E90-90).

PART 3 - EXECUTION

- A. INSTALLATION GUIDELINES
  - a. Fill all open cells and voids in hollow concrete masonry walls where shown on drawings. The foam insulation shall be pressure injected through a series of 5/8" to 7/8" holes drilled into every vertical column of block cells (every 8" on center) beginning at an approximate height of four (4) feet from finished floor level. Repeat this procedure at an approximate height of ten (10) feet above the first horizontal row of holes (or as needed) until the void is completely filled. Patch holes with mortar and score to resemble existing surface.

**SECTION 10191 - CUBICLE CURTAINS AND TRACKS****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY****A. Section Includes:**

- 1. Curtain tracks and carriers.
- 2. Cubicle curtains.

**B. Related Requirements:**

- 1. Section 06100 "Rough Carpentry" for supplementary wood framing and blocking for mounting items requiring anchorage.
- 2. Section 09111 "Non-Load-Bearing Steel Framing" for supplementary metal framing, and blocking for mounting items requiring anchorage.

**1.3 ACTION SUBMITTALS****A. Product Data:** For each type of product.

- 1. Include durability, laundry temperature limits, fade resistance, applied curtain treatment, and fire-test-response characteristics for each type of curtain fabric indicated.
- 2. Include data for each type of track.

**B. Shop Drawings:**

- 1. Show layout and types of cubicles, sizes of curtains, number of carriers, anchorage details, and conditions requiring accessories. Indicate dimensions taken from field measurements.
- 2. Include details on blocking above ceiling.

**C. Samples:** For each exposed product and for each color and texture specified, 10 inches (254 mm) in size.**D. Samples for Initial Selection:** For each type of curtain material indicated.**E. Samples for Verification:** For each type of product required, prepared on Samples of size indicated below:

**ADDENDUM 2**

1. Curtain Fabric: 10-inch- (254-mm-) square swatch or larger as required to show complete pattern repeat, from dye lot used for the Work, with specified treatments applied. Mark top and face of material.
2. Curtain Track: Not less than 10 inches (254 mm) long.
3. Curtain Carrier: Full-size unit.

F. Curtain and Track Schedule: Use same designations indicated on Drawings.

#### 1.4 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For curtains, track, and hardware to include in operation and maintenance manuals.

#### 1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials described below, before installation begins, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
1. Curtain Carriers and Track End Caps: Full-size units equal to 3 percent of amount installed for each size indicated, but no fewer than 10 units.
  2. Curtains: Full-size units equal to 10 percent of amount installed for each size indicated, but no fewer than two units.

### PART 2 - PRODUCTS

#### 2.1 PERFORMANCE REQUIREMENTS

- A. Curtains: Provide curtain fabrics with the following characteristics:
1. Launderable to a temperature of not less than 160 deg F (71 deg C).
  2. Flame resistant and identical to those that have passed NFPA 701 when tested by a testing and inspecting agency acceptable to authorities having jurisdiction.
    - a. Identify fabrics with appropriate markings of a qualified testing agency.

#### 2.2 CURTAIN SUPPORT SYSTEMS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. ADC Hospital Equipment; Division of Automatic Devices Company.
  2. Alderman Acres Mfg, Inc.
  3. Barjan Manufacturing Ltd.
  4. Coldraco, Inc.
  5. Covoc Corporation.
  6. K. N. Crowder Manufacturing, Inc.
  7. C/S General Cubicle.

## ADDENDUM 2

8. Cubicle Curtain Factory, Inc.
9. Diamond Drapery Co.
10. Erwin and Associates, Inc.
11. Hospi-Tel Manufacturing Co.
12. Imperial Fastener Company, Inc.
13. InPro Corporation.
14. A. R. Nelson Co.
15. Pryor Products.
16. Salsbury Industries.
17. Silent Gliss USA Inc.
18. Standard Textile Company, Inc.
19. Tubular Specialties Manufacturing, Inc.
20. Approved Equal.

B. Extruded-Aluminum Curtain Track: Not less than 1-1/4 inches wide by 3/4 inch high (32 mm wide by 19 mm high); with manufacturer's standard wall thickness.

1. Finish: Baked enamel, acrylic, or epoxy.

C. Curtain Track Accessories: Fabricate splices, end caps, connectors, end stops, coupling and joining sleeves, wall flanges, brackets, ceiling clips, and other accessories from same material and with same finish as track.

1. Suspended-Track Support: Not less than 5/8-inch- (16-mm-) square tube.
2. End Stop: Removable with carrier hook.
3. Switch Unit: Shuttle and coupling device for rerouting and securing cubicle curtain, with pull chain for switching track.

D. Curtain Carriers: Two nylon rollers and nylon axle with chrome-plated steel hook.

E. Exposed Fasteners: Stainless steel.

F. Concealed Fasteners: Stainless steel.

## 2.3 CURTAINS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. ADC Hospital Equipment; Division of Automatic Devices Company.
2. Alderman Acres Mfg, Inc.
3. Barjan Manufacturing Ltd.
4. Catalina Curtain Company.
5. Coldraco, Inc.
6. Covoc Corporation.
7. C/S General Cubicle.
8. Cubicle Curtain Factory, Inc.
9. Diamond Drapery Co.
10. Erwin and Associates, Inc.
11. Hospi-Tel Manufacturing Co.
12. Imperial Fastener Company, Inc.
13. InPro Corporation.

## ADDENDUM 2

14. A. R. Nelson Co.
  15. Pryor Products.
  16. Salsbury Industries.
  17. Standard Textile Company, Inc.
  18. Tubular Specialties Manufacturing, Inc.
  19. Approved Equal.
- B. Cubicle Curtain Fabric: Curtain manufacturer's standard, 100 percent polyester; inherently and permanently flame resistant, stain resistant, and antimicrobial.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. INVISTA; Avora FR.
    - b. Trevira, R-M Schulz Consulting, Inc.; Trevira CS.
    - c. Approved Equal.
  2. Pattern: As selected by Architect from manufacturer's full range.
  3. Color: As selected by Architect from manufacturer's full range.
- C. Curtain Grommets: Two-piece, rolled-edge, rustproof, nickel-plated brass; spaced not more than 6 inches (152 mm) o.c.; machined into top hem.
- D. Mesh Top: Not less than 20-inch- (508-mm-) high mesh top of No. 50 nylon mesh.
- E. Curtain Tieback: Nickel-plated brass chain; one at each curtain termination.

## 2.4 CURTAIN FABRICATION

- A. Fabricate curtains as follows:
1. Width: Equal to track length from which curtain is hung plus 10 percent added fullness, but not less than 12 inches (305 mm) added fullness.
  2. Length: Equal to floor-to-ceiling height, minus depth of track and carrier at top, and minus clearance above the finished floor as follows:
    - a. Cubicle Curtains: 12 inches (305 mm).
  3. Top Hem: Not less than 1 inch (25.4 mm) and not more than 1-1/2 inches (38 mm) wide, triple thickness, reinforced with integral web, and double lockstitched.
  4. Mesh Top: Top hem of mesh not less than 1 inch (25.4 mm) and not more than 1-1/2 inches (38 mm) wide, triple thickness, reinforced with integral web, and double lockstitched. Double lockstitch bottom of mesh directly to 1/2-inch (13-mm) triple thickness, top hem of curtain fabric.
  5. Bottom Hem: Not less than 1 inch (25.4 mm) and not more than 1-1/2 inches (38 mm) wide, double thickness and double lockstitched.
  6. Side Hems: Not less than 1/2 inch (13 mm) and not more than 1-1/4 inches (32 mm) wide, with double turned edges, and single lockstitched.
- B. Vertical Seams: Not less than 1/2 inch (13 mm) wide, double turned and double stitched.

**PART 3 - EXECUTION****3.1 EXAMINATION**

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

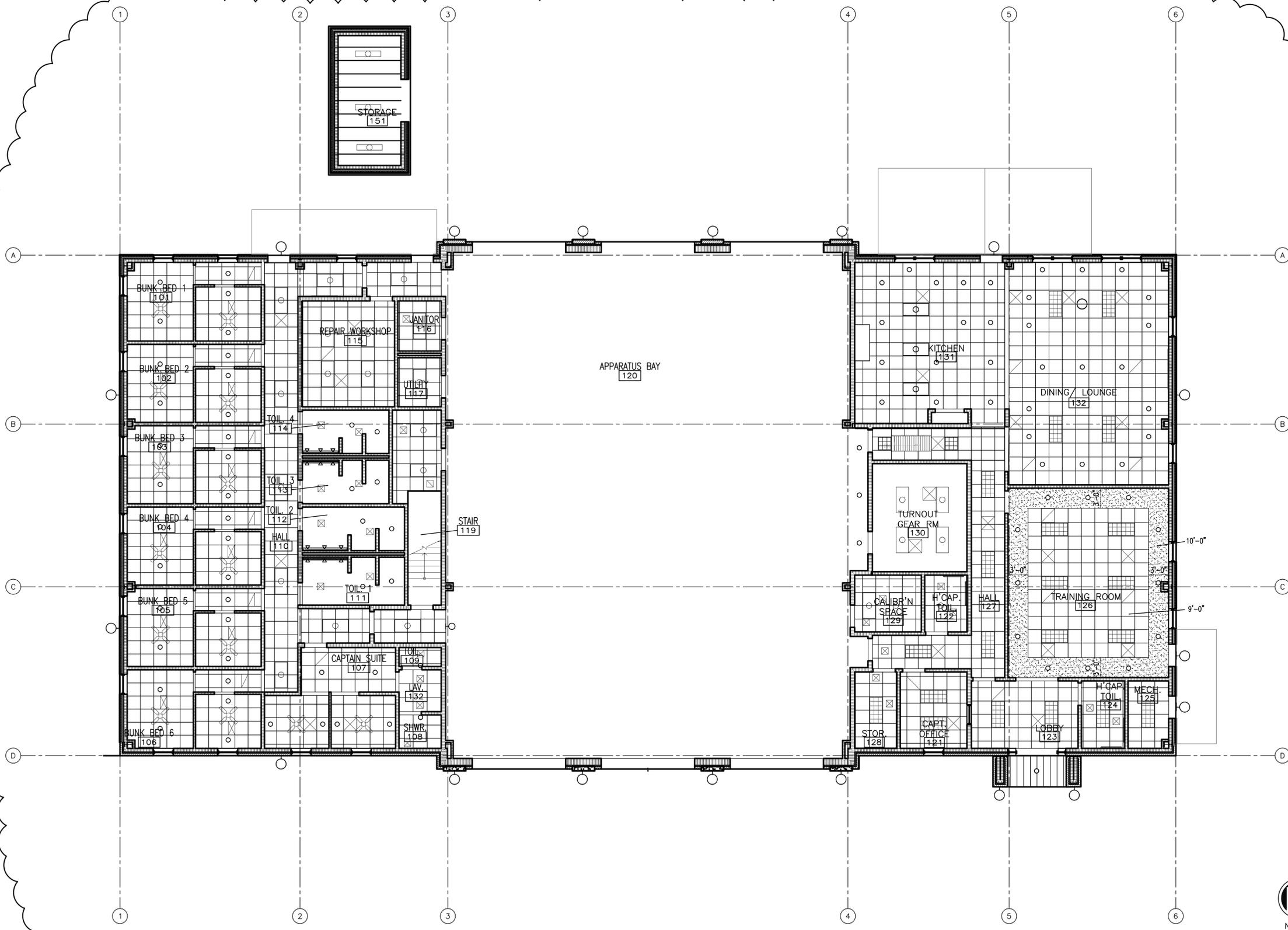
**3.2 INSTALLATION**

- A. General: Install tracks level and plumb, according to manufacturer's written instructions.
- B. Up to 20 feet (6.0 m) in length, provide track fabricated from single, continuous length.
  - 1. Curtain Track Mounting: Suspended.
- C. Surface-Track Mounting: Fasten tracks to ceilings at intervals recommended by manufacturer. Fasten tracks to structure at each splice and tangent point of each corner. Center fasteners in track to ensure unencumbered carrier operation. Attach track to ceiling as follows:
  - 1. Mechanically fasten to furring through suspended ceiling with screw and tube spacer.
- D. Track Accessories: Install splices, end caps, connectors, end stops, coupling and joining sleeves, and other accessories as required for a secure and operational installation.
- E. Curtain Carriers: Provide curtain carriers adequate for 6-inch (152-mm) spacing along full length of curtain plus an additional carrier.
- F. Curtains: Hang curtains on each curtain track. Secure with curtain tieback.

END OF SECTION 10191

S:\Engineer\10ATL02\_Fulton\_Co\_Stanley\_A&E\_Svc\Task\_55\Drawings\Architectural\10ATL02A3.1\_REFLECTED\_CLG\_PLAN.dwg September 09, 2011 - 5:00pm wanderson

CEILING LEGEND	
	2x4 FLUORESCENT
	2x4 FLUORESCENT - PARABOLIC
	2x2 FLUORESCENT - PARABOLIC
	42" FAN
	2x2 HVAC SUPPLY DIFF.
	2x2 HVAC RETURN AIR
	FLUORESCENT WALL MOUNTED LIGHT FIXTURE
	RECESSED DOWNLIGHT FIXTURE
	RECESSED DOWNLIGHT HALFCOVER
	EMERGENCY EXIT LIGHT
	SPEAKER
	FLUORESCENT LIGHT
	SPRINKLER
	2x2 DIRECT/ INDIRECT COMPACT FLUORESCENT LIGHT FIXTURE
	GWB CEILING/SOFFT AT HEIGHT INDICATED
	2x2 ACOUSTICAL CEILING GRID AT HEIGHT INDICATED (TEGULAR CEILING TILES)
<b>ROOM</b> 000 0'-0" TYPE	ROOM NAME & NUMBER, CEILING HEIGHT AND TYPE



REFLECTED CEILING PLAN  
1/8"=1'-0"



**KHAFRA**  
ENGINEERING CONSULTANTS, INC.  
225 PEACHTREE STREET, SUITE 1600  
ATLANTA, GEORGIA 30303  
404-525-2120 FAX 404-522-7941

DSGN	RKGA	9/9/11	ADDENDUM No. 2	NDBL	JTRY
DR	RKGA/NDBL				
CHK	JTRY				
APVD	CWRE	NO.	DATE	REVISION	BY
					APVD

**REUSE OF DOCUMENTS**  
THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF KHAFRA AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION.

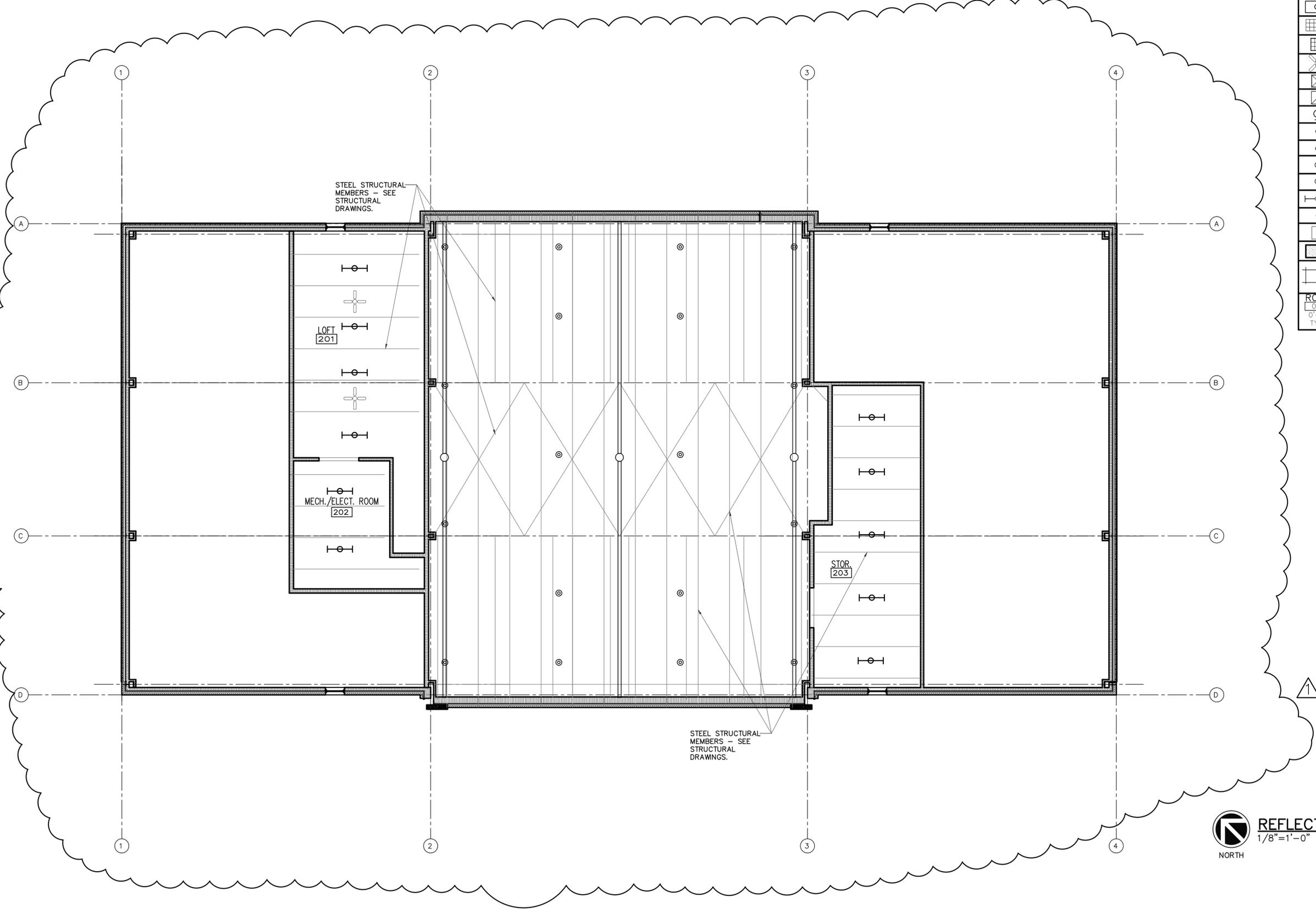
**VERIFY SCALES**  
BAR IS ONE INCH ON ORIGINAL DRAWING  
0 1"  
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

Fulton County Fire Department  
FIRE STATION No. 11  
4760 Fulton Industrial Blvd.  
Atlanta, Georgia 30336

ARCHITECTURAL	SHEET 23 OF 69
<b>REFLECTED CEILING PLAN</b>	DWG NO. <b>A3.1</b>
	DATE JULY 15, 2011
	PROJ NO. 10ATL02-55

S:\Engineer\10ATL02-Fulton Co. Stanley A&E Svc\Task 55\Drawings\Architectural\10ATL02A3.2 REFLECTED CLG. LOFT PLAN.dwg September 09, 2011 - 5:00pm wadgeson

CEILING LEGEND	
	2x4 FLUORESCENT
	2x4 FLUORESCENT - PARABOLIC
	2x2 FLUORESCENT - PARABOLIC
	42" FAN
	2x2 HVAC SUPPLY DIFF.
	2x2 HVAC RETURN AIR
	FLUORESCENT WALL MOUNTED LIGHT FIXTURE
	RECESSED DOWNLIGHT FIXTURE
	RECESSED DOWNLIGHT HALFCOVER
	EMERGENCY EXIT LIGHT
	SPEAKER
	FLUORESCENT LIGHT
	SPRINKLER
	2x2 DIRECT/ INDIRECT COMPACT FLUORESCENT LIGHT FIXTURE
	GWB CEILING/SOFFT AT HEIGHT INDICATED
	2x2 ACOUSTICAL CEILING GRID AT HEIGHT INDICATED (TEGULAR CEILING TILES)
<b>ROOM</b> 0'-0" TYPE	ROOM NAME & NUMBER, CEILING HEIGHT AND TYPE



REFLECTED CEILING LOFT PLAN  
1/8"=1'-0"



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404-525-2120 FAX 404-522-7941

DSGN	RKGA	9/9/11	ADDENDUM No. 2	NDBL	JTRY
DR	RKGA/NDBL				
CHK	JTRY				
APVD	CWRE	NO.	DATE	REVISION	BY
					APVD

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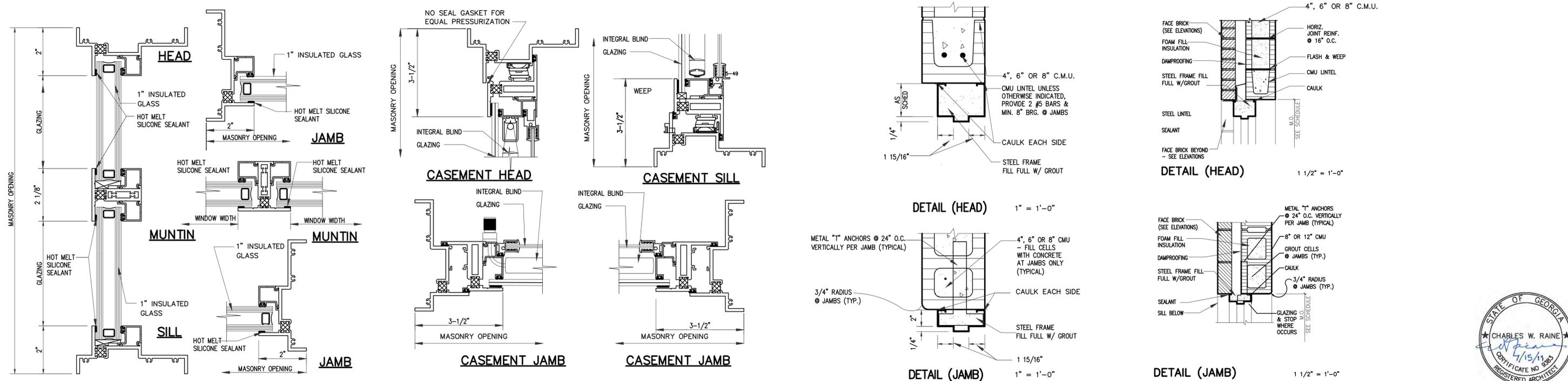
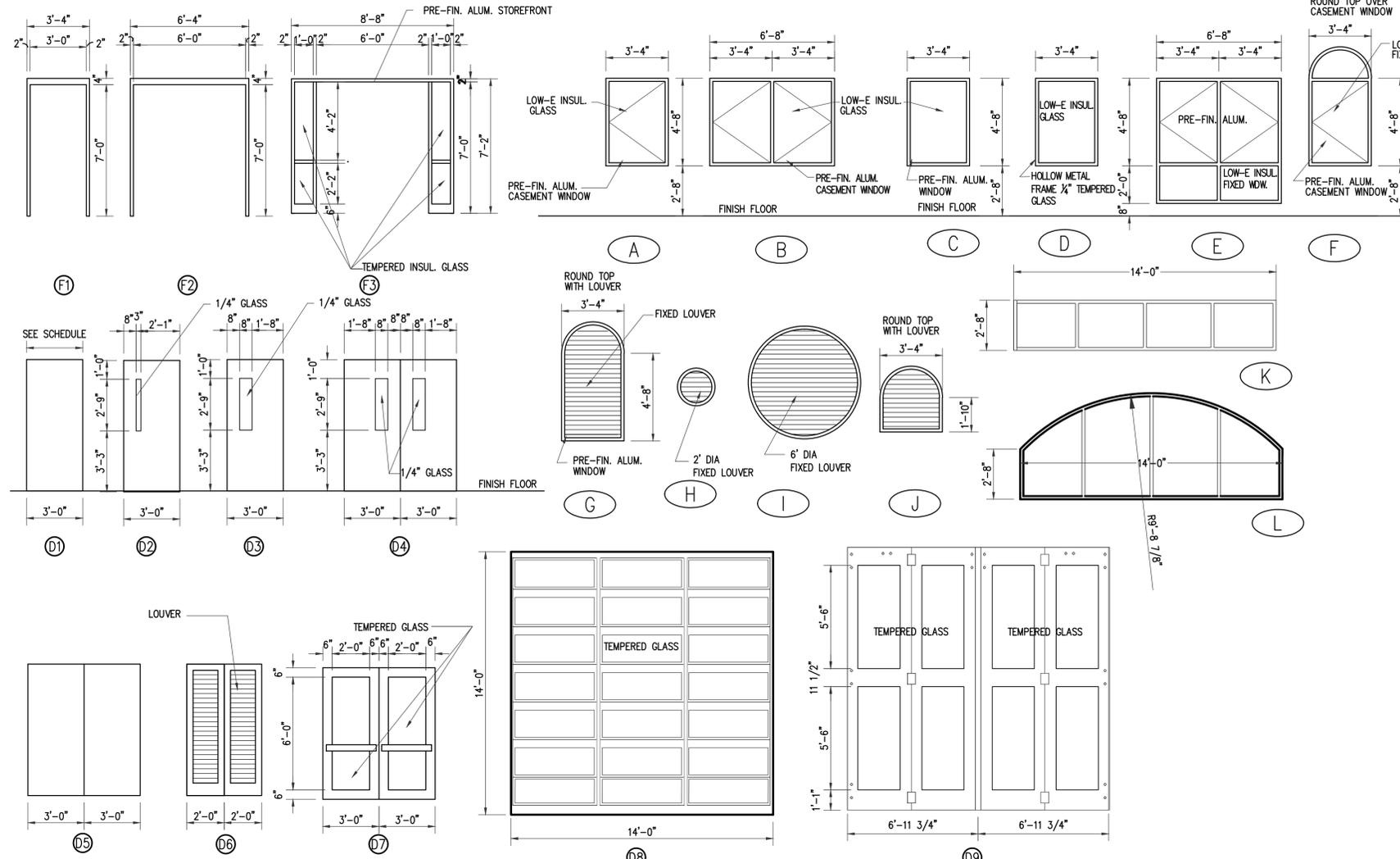
Fulton County Fire Department  
FIRE STATION No. 11  
4760 Fulton Industrial Blvd.  
Atlanta, Georgia 30336

ARCHITECTURAL  
**REFLECTED CEILING LOFT PLAN**

SHEET	24 OF 69
DWG NO.	<b>A3.2</b>
DATE	JULY 15, 2011
PROJ NO.	10ATL02-55

# DOOR AND FRAME SCHEDULE

MARK	DOOR			MATERIAL	EI	GLAZING	LOUVER			FRAME			FIRE RATING LABEL	HARDWARE		NOTES	MARK
	WD	HGT	THK				WD	HGT	MATERIAL	EL	HEAD	JAMB		SILL	SET NO		
107	3'-0"	7'-0"	1 3/4"	FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	107
110	3'-0"	7'-0"	1 3/4"	FRP	D2	3" X 33"	0	0	HM	F1	---	---	60 MIN.	---	---	---	110
111	3'-0"	7'-0"	1 3/4"	FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	111
112	3'-0"	7'-0"	1 3/4"	FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	112
113	3'-0"	7'-0"	1 3/4"	FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	113
114	3'-0"	7'-0"	1 3/4"	FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	114
115	3'-0"	7'-0"	1 3/4"	FRP	D2	3" X 33"	0	0	HM	F1	---	---	60 MIN.	---	---	---	115
116	3'-0"	7'-0"	1 3/4"	FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	116
117	3'-0"	7'-0"	1 3/4"	FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	117
118	3'-0"	7'-0"	1 3/4"	FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	118
119	3'-0"	7'-0"	1 3/4"	FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	119
121	3'-0"	7'-0"	1 3/4"	FRP	D3	8" X 33"	0	0	HM	F1	---	---	60 MIN.	---	---	---	121
122	3'-0"	7'-0"	1 3/4"	FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	122
123	3'-0"	7'-0"	1 3/4"	FRP	D3	8" X 33"	0	0	HM	F1	---	---	60 MIN.	---	---	---	123
124	3'-0"	7'-0"	1 3/4"	FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	124
125	3'-0"	7'-0"	1 3/4"	INSUL. FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	125
126	6'-0"	7'-0"	1 3/4"	FRP	D4	8" X 33"	0	0	HM	F2	---	---	60 MIN.	---	---	---	126
127	3'-0"	7'-0"	1 3/4"	FRP	D2	3" X 33"	0	0	HM	F1	---	---	60 MIN.	---	---	---	127
128	3'-0"	7'-0"	1 3/4"	FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	128
129	3'-0"	7'-0"	1 3/4"	FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	129
130	3'-0"	7'-0"	1 3/4"	FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	130
131	4'-0"	7'-0"	1 3/4"	FRP	D5	---	0	0	HM	F2	---	---	60 MIN.	---	---	---	131
132	2'-8"	7'-0"	1 3/4"	FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	132
151	6'-0"	7'-0"	1 3/4"	INSUL. FRP	D5	---	0	0	HM	F2	---	---	60 MIN.	---	---	---	151
1102	3'-0"	7'-0"	1 3/4"	FRP	D2	3" X 33"	0	0	HM	F1	---	---	60 MIN.	---	---	---	1102
1103	3'-0"	7'-0"	1 3/4"	INSUL. FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	1103
1201	14'-0"	14'-0"	1 3/4"	---	D9	---	0	0	---	---	---	---	---	---	---	---	1201
1202	14'-0"	14'-0"	1 3/4"	---	D9	TEMPERED	0	0	---	---	---	---	---	---	---	---	1202
1203	14'-0"	14'-0"	1 3/4"	---	D9	TEMPERED	0	0	---	---	---	---	---	---	---	---	1203
1204	14'-0"	14'-0"	1 3/4"	---	D8	TEMPERED	0	0	---	---	---	---	---	---	---	---	1204
1205	14'-0"	14'-0"	1 3/4"	---	D8	TEMPERED	0	0	---	---	---	---	---	---	---	---	1205
1206	14'-0"	14'-0"	1 3/4"	---	D8	TEMPERED	0	0	---	---	---	---	---	---	---	---	1206
1232	6'-0"	7'-0"	1 3/4"	ALUM. STOREFRONT	D7	SEE ELEV.	0	0	ALUM	F3	---	---	---	---	---	---	1232
1262	3'-0"	7'-0"	1 3/4"	INSUL. FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	1262
1263	3'-0"	7'-0"	1 3/4"	FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	1263
1272	3'-0"	7'-0"	1 3/4"	FRP	D2	3" X 33"	0	0	HM	F1	---	---	60 MIN.	---	---	---	1272
1273	3'-0"	7'-0"	1 3/4"	INSUL. FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	1273
1274	2'-8"	7'-0"	1 3/4"	FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	1274
1275	3'-0"	7'-0"	1 3/4"	FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	1275
1276	3'-0"	7'-0"	1 3/4"	INSUL. FRP	D1	---	0	0	HM	F1	---	---	60 MIN.	---	---	---	1276
202	6'-0"	7'-0"	1 3/4"	FRP	D5	---	0	0	HM	F2	---	---	60 MIN.	---	---	---	202
203	6'-0"	7'-0"	1 3/4"	FRP	D5	---	0	0	HM	F2	---	---	60 MIN.	---	---	---	203



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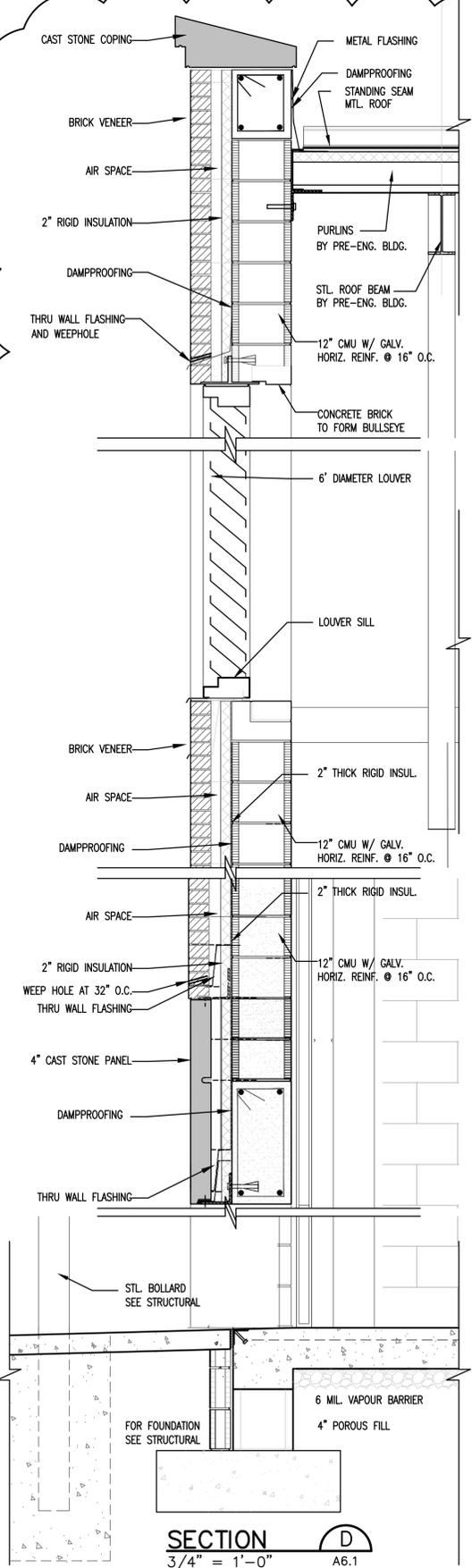
ARCHITECTURAL  
**DOOR SCHEDULE**  
SHEET 26 OF 69  
DWG NO. **A4.1**  
DATE JULY 15, 2011  
PROJ NO. 10ATL02-55



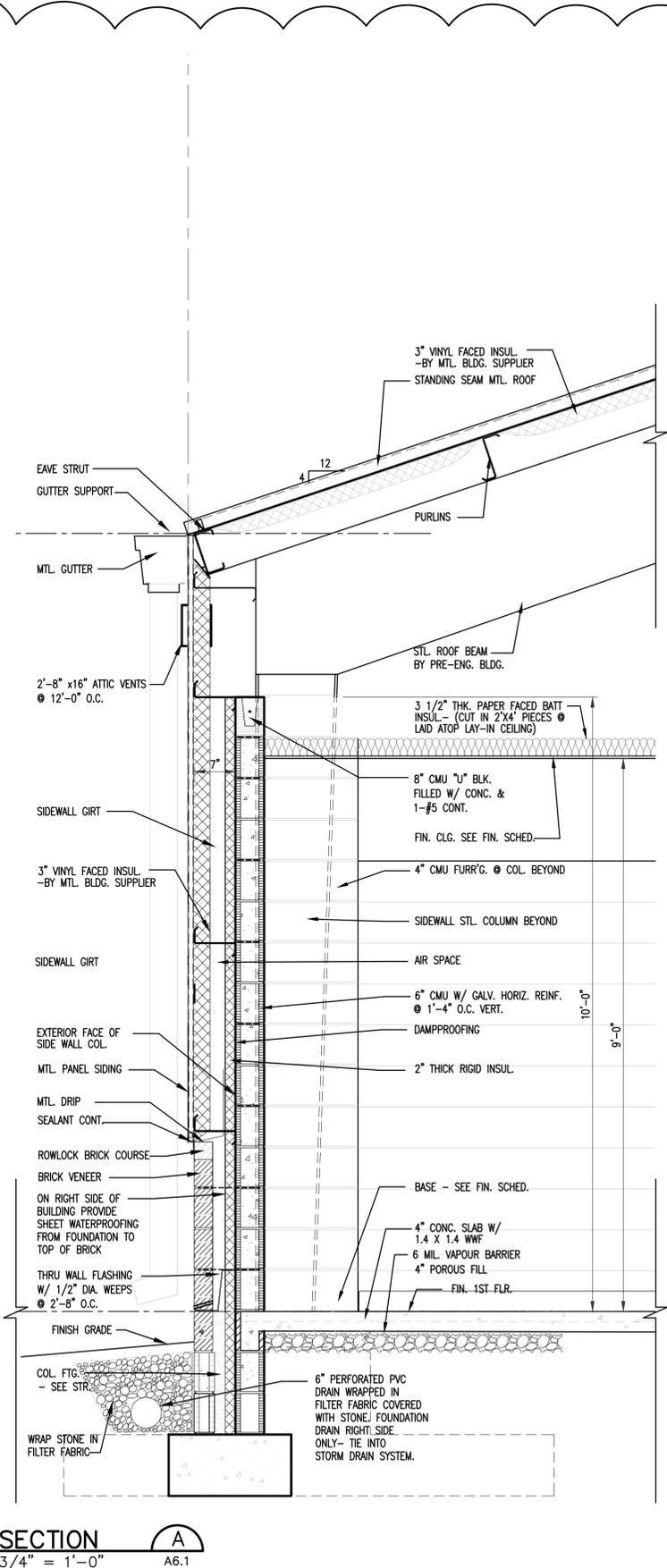
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RELEASED FOR BID

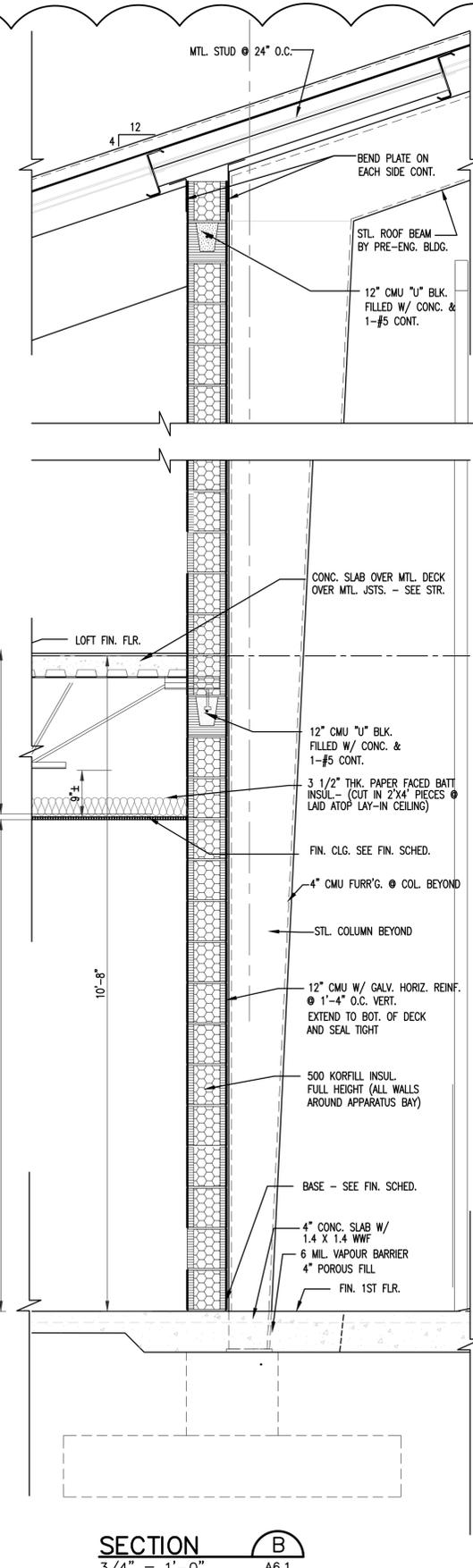
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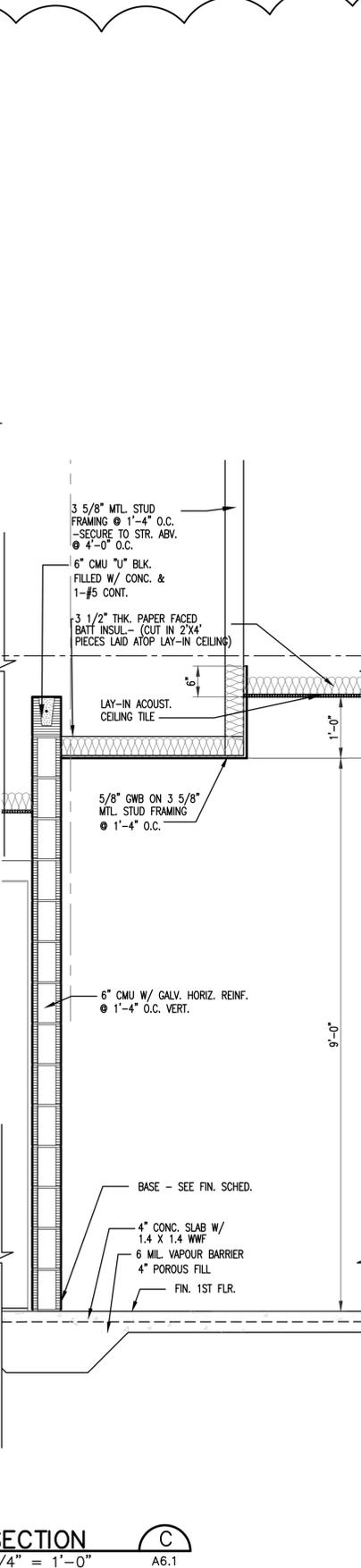
**SECTION D**  
3/4" = 1'-0"  
A6.1



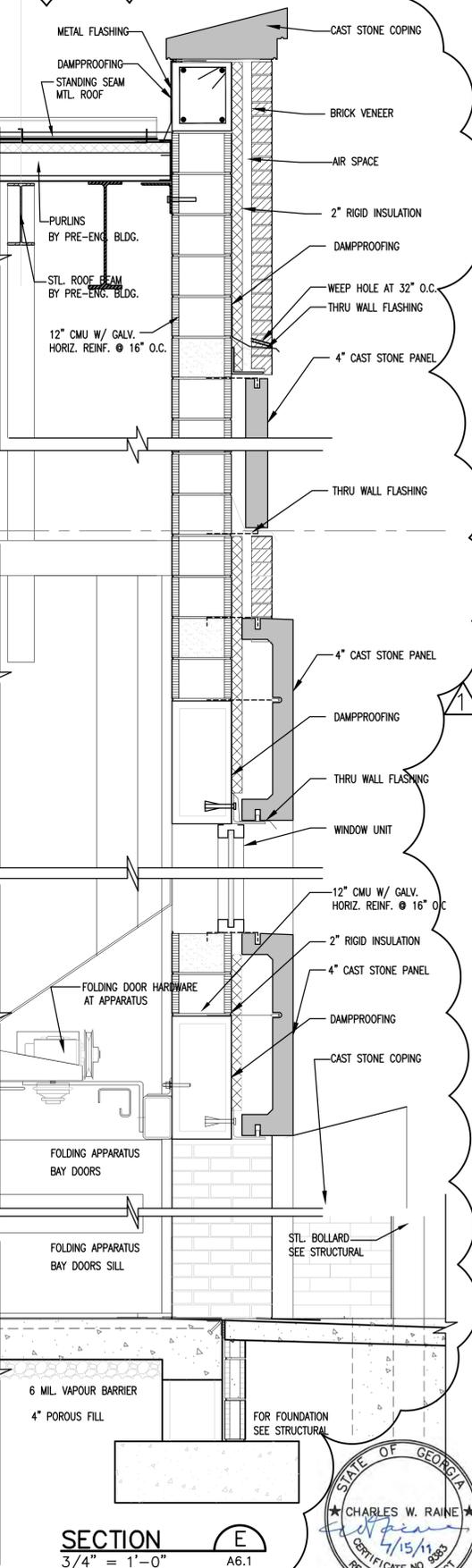
**SECTION A**  
3/4" = 1'-0"  
A6.1



**SECTION B**  
3/4" = 1'-0"  
A6.1



**SECTION C**  
3/4" = 1'-0"  
A6.1



**SECTION E**  
3/4" = 1'-0"  
A6.1

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DSGN	JTRY	9/9/11	ADDENDUM No. 2
DR	RDSS		
CHK	JTRY		
APVD	JTRY		

NO.	DATE	REVISION	BY	APVD

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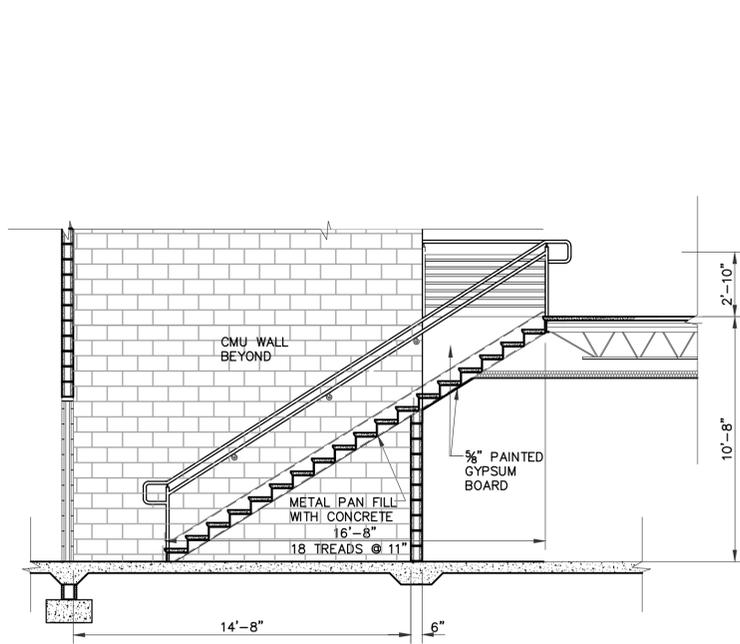
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FIRE STATION No. 11  
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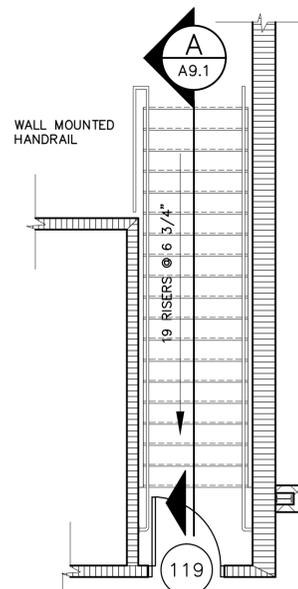
ARCHITECTURAL  
**WALL SECTIONS**



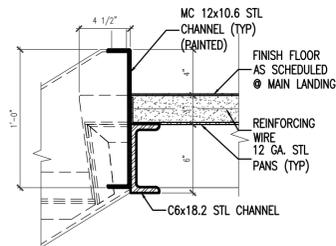
SHEET	31 OF 69
DWG NO.	<b>A7.1</b>
DATE	JULY 15, 2011
PROJ NO.	10ATL02-55



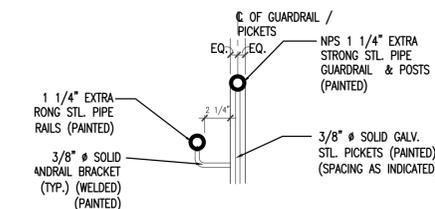
**STAIR SECTION A**  
1/4" = 1'-0"



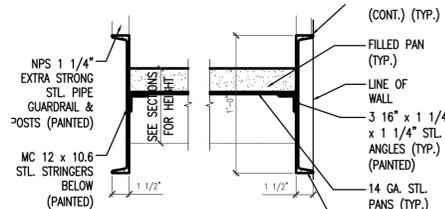
**ENLARGED STAIR PLAN 1**  
1/4" = 1'-0"



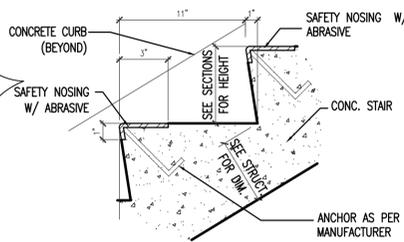
**TYPICAL INTERIOR STEEL STAIR / LANDING DETAIL 1**  
SCALE: 1 1/2" = 1'-0"



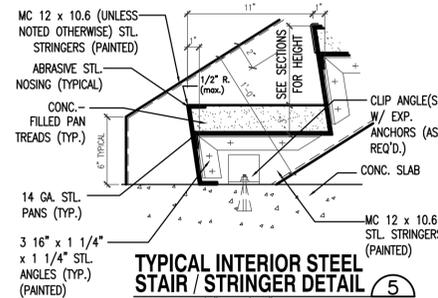
**TYPICAL HANDRAIL / GUARDRAIL DETAIL / SECTION 2**  
SCALE: 1 1/2" = 1'-0"



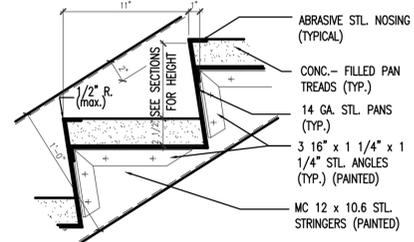
**TYPICAL INTERIOR STEEL STAIR / STRINGER DETAIL 3**  
SCALE: 1 1/2" = 1'-0"



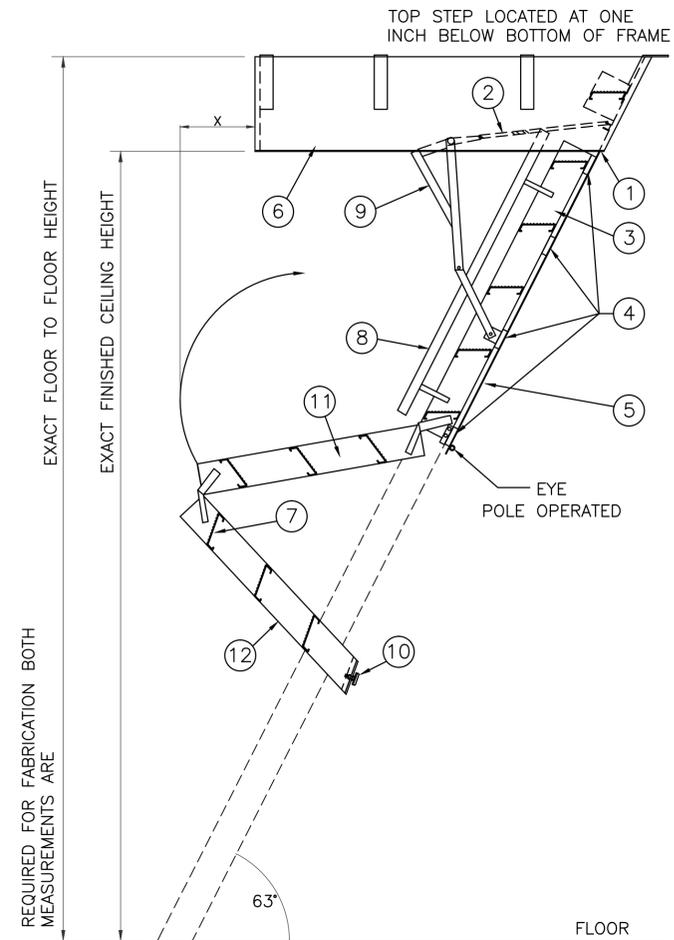
**TYPICAL CONC. STAIR/STEPS W/ NON-SLIP SAFETY NOSING DETAIL 4**  
SCALE: 1 1/2" = 1'-0"



**TYPICAL INTERIOR STEEL STAIR / STRINGER DETAIL 5**  
SCALE: 1 1/2" = 1'-0"



**TYPICAL INTERIOR STEEL STAIR / STRINGER DETAIL 6**  
SCALE: 1 1/2" = 1'-0"



**PULL-DOWN LADDER SECTION B**  
1" = 1'-0"

LOAD RATING - 500 LBS.

CEILING HEIGHT	X (CLEARANCE)
7'-1" to 8'-0"	13"
8'-1" to 8'-9"	14-1/2"
8'-10" to 9'-9"	22"

**LADDER LEGEND**

1. STEEL PIANO DOOR HINGE
2. DOUBLE SPRING ACTION
3. SIDE RUNNER 5" ALUM.
4. BATTEN 1/8" ALUM.
5. DOOR PANEL 1/8" ALUM.
6. STEEL ANGLE FRAME
7. TREAD (SERRATED ALUM.)
8. HANDRAIL RIGHT SIDE ONLY
9. EXTRA HEAVY OPERATING ARM
10. ADJUSTABLE FOOT
11. MIDDLE SECTION
12. BOTTOM SECTION

**PULL-DOWN LADDER SECTION B**  
1" = 1'-0"



S:\Engineer\10ATL02\_Fulton\_Co\_Stanby\_A&E\_Svc\Task\_55\_Drawings\Architectural\10ATL02-55A9.1\_Details.dwg September 09, 2011 4:59pm wanderson



DSGN	RKGA	9/9/11	ADDENDUM No. 2		
DR	RKGA				
CHK	JTRY				
APVD	CWRE	NO.	DATE	REVISION	BY

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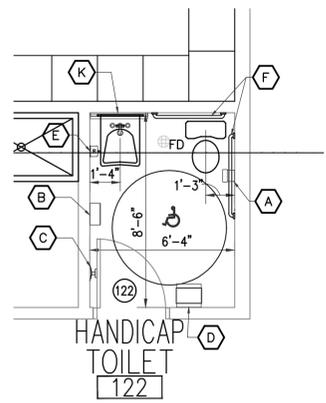
ARCHITECTURAL  
**DETAILS**

SHEET 33 OF 69  
DWG NO. **A9.1**  
DATE JULY 15, 2011  
PROJ NO. 10ATL02-55

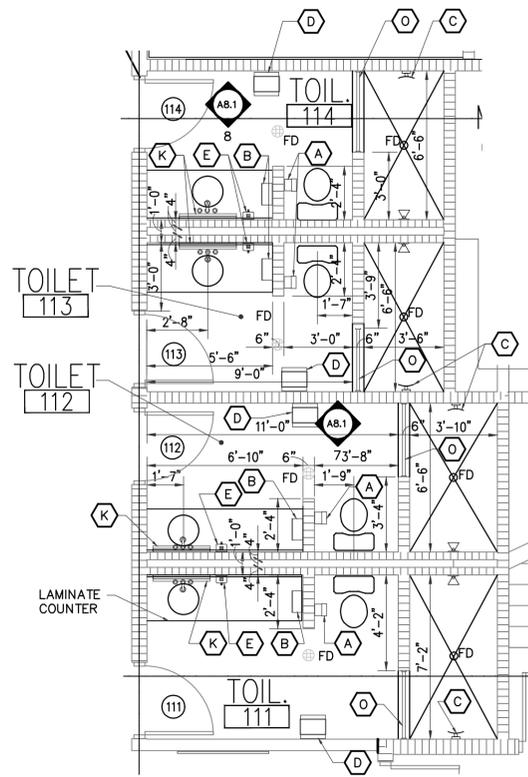
**TOILET ACCESSORY SCHEDULE**

SYMBOL	MARK	ACCESSORY
	A	AMERICAN SPECIALTIES - TOILET TISSUE DISPENSERS: MODEL NO. 9030 (DUAL ROLL)
	B	AMERICAN SPECIALTIES - PAPER TOWEL DISPENSER RECEPTACLE: MODEL NO. 0245-SS
	C	AMERICAN SPECIALTIES - HAT AND COAT HOOK: MODEL NO. 7385
	D	AMERICAN SPECIALTIES - STAINLESS STEEL FREE STANDING WASTE RECEPTACLE: MODEL NO. 0811
	E	AMERICAN SPECIALTIES - LIQUID SOAP DISPENSER SURFACED MOUNTED: MODEL NO. 20363
	F	AMERICAN SPECIALTIES - GRAB BARS CONCEALED MOUNTED: MODEL NO. 3000
	G	AMERICAN SPECIALTIES - SANITARY NAPKIN DISPOSAL: MODEL NO. 0862
	J	AMERICAN SPECIALTIES - SEAT COVER DISPENSER: MODEL NO. 0477-SM
	K	AMERICAN SPECIALTIES - MIRRORS: MODEL NO. 0620
	L	AMERICAN SPECIALTIES - MIRRORS: MODEL NO. 0535 - 18"x30"
	M	AMERICAN SPECIALTIES - UTILITY HOOK STRIP: MODEL NO. 1307-4
	N	AMERICAN DRYER - HAND DRYER: MODEL NO. DR20N
	O	AMERICAN SPECIALTIES - SHOWER CURTAIN ROD [EXTRA HEAVY DUTY]: MODEL NO. 1204 SHOWER CURTAIN HOOK: MODEL NO. 1200-SHU SHOWER CURTAIN [VINYL]: MODEL NO. 1200-V

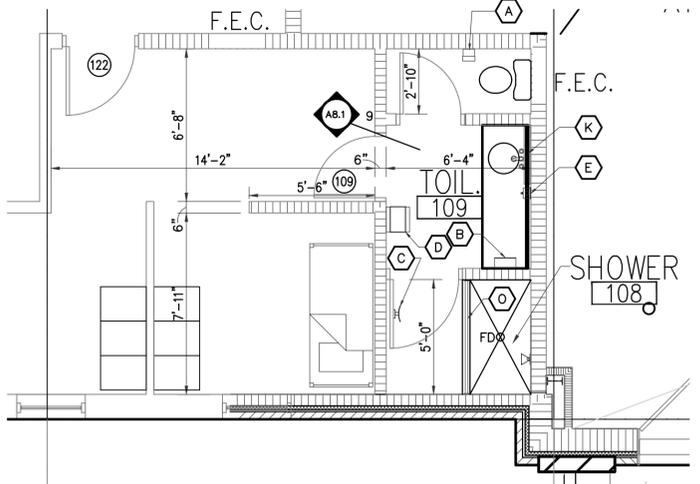
NOTES: THE MANUFACTURER'S NAME AND ITEM NUMBERS LISTED ARE FOR REFERENCE ONLY. THE SOLE PURPOSE IS TO ESTABLISH THE PHYSICAL PROPERTIES REQUIRED FOR THE MATERIALS LISTED.



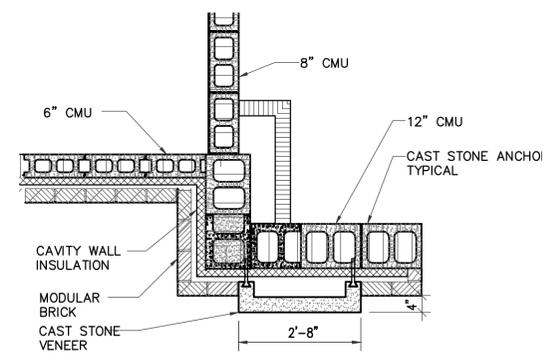
**ENLARGED PLAN 1**  
NORTH 1/4"=1'-0" A2.1



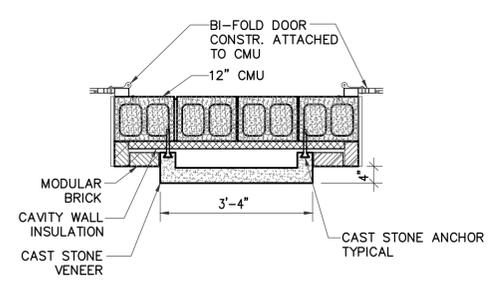
**ENLARGED PLAN 2**  
NORTH 1/4"=1'-0" A2.1



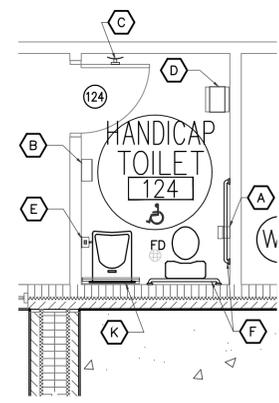
**ENLARGED PLAN 3**  
NORTH 1/4"=1'-0" A2.1



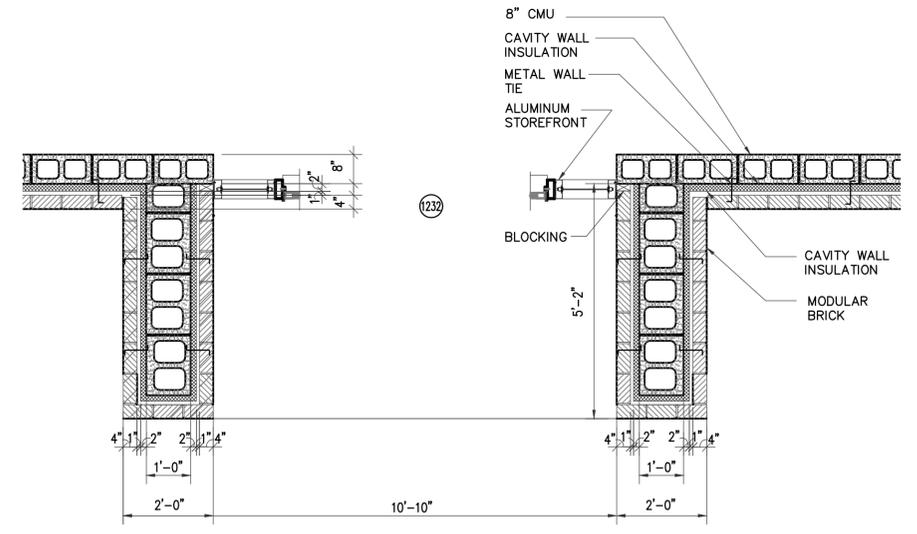
**ENLARGED PLAN 4**  
NORTH 1/2"=1'-0" A2.1



**ENLARGED PLAN 5**  
NORTH 1/2"=1'-0" A2.1



**ENLARGED PLAN 6**  
NORTH 1/4"=1'-0" A2.1



**ENLARGED PLAN 7**  
NORTH 1/2"=1'-0" A2.1



S:\Engineer\10ATL02\_Fulton\_Co\_Stanby\_A&E\_Svc\Task\_55\Drawings\Architectural\10ATL02-55A10.0\_Erta\_Plin.dwg September 09, 2011 4:59pm wanderson

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DR	WDAN						
CHK	JTRY						
APVD	CWRE	NO.	DATE	REVISION	BY	APVD	

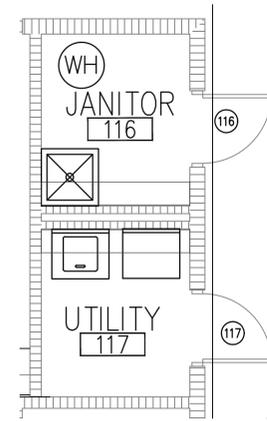
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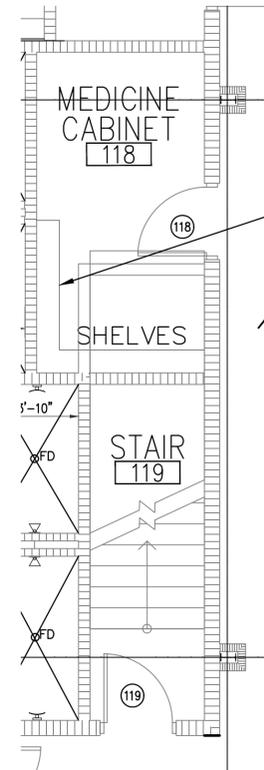


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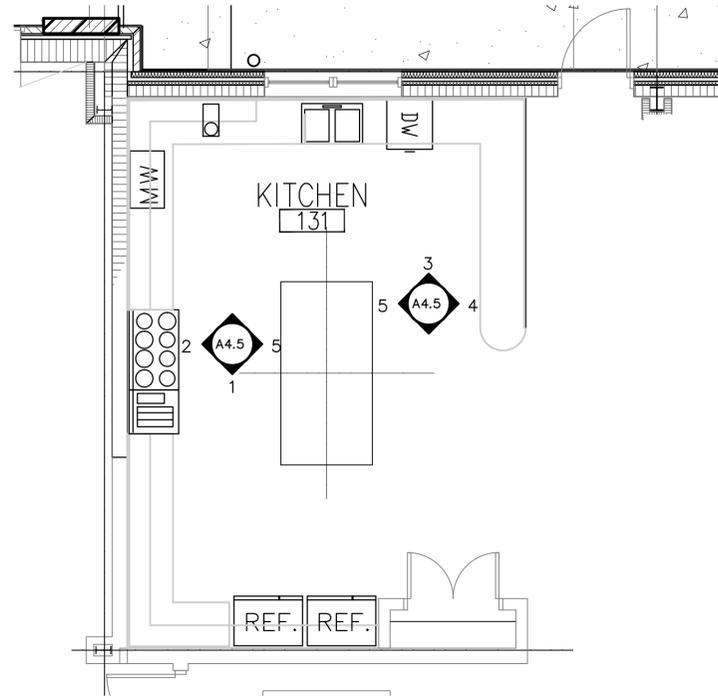
ARCHITECTURAL  
**ENLARGED PLANS**  
SHEET 35 OF 69  
DWG NO. **A10.1**  
DATE JULY 15, 2011  
PROJ NO. 10ATL02-55



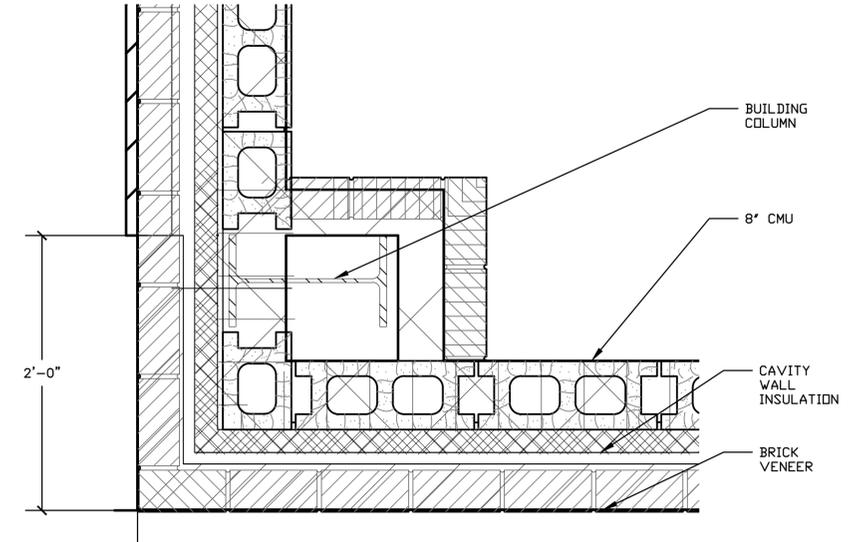
**ENLARGED PLAN 1**  
 NORTH 1/4"=1'-0" A2.1



**ENLARGED PLAN 2**  
 NORTH 1/4"=1'-0" A2.1

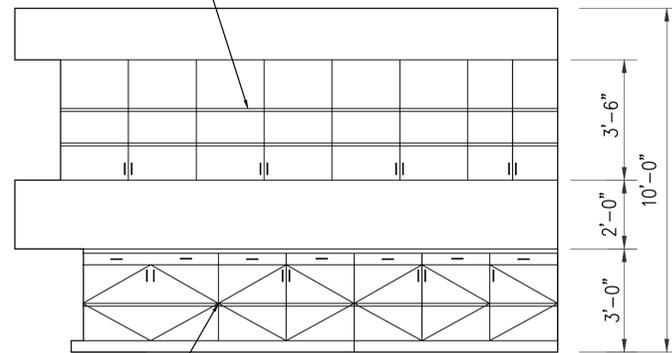


**ENLARGED PLAN 3**  
 NORTH 1/4"=1'-0" A2.1

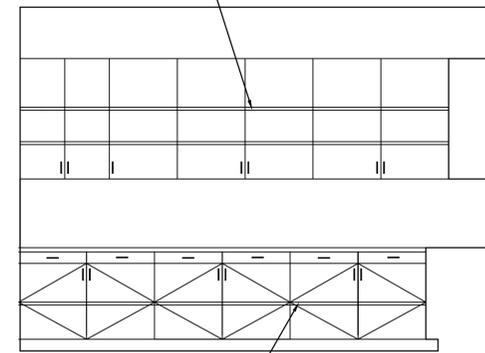


**DETAIL 4**  
 1 1/2" = 1'-0" A2.1

12" DEEP METAL WALL CABINETS WITH ADJUSTABLE SHELVES



12" DEEP METAL WALL CABINETS WITH ADJUSTABLE SHELVES



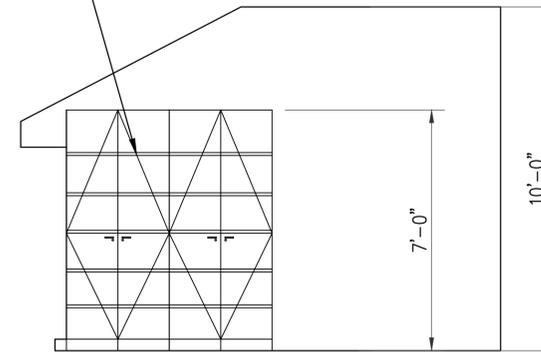
24" DEEP METAL BASE CABINETS WITH ADJUSTABLE SHELVES AND STAINLESS STEEL COUNTERTOP



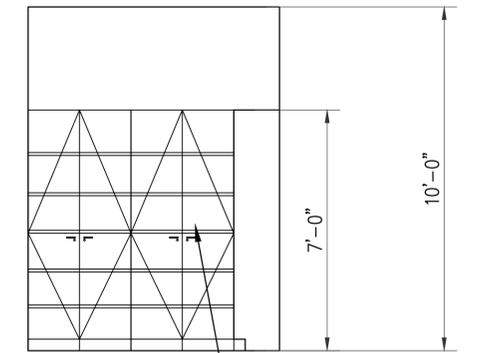
24" DEEP METAL BASE CABINETS WITH ADJUSTABLE SHELVES AND STAINLESS STEEL COUNTERTOP



16" DEEP X 36" WIDE METAL CABINETS WITH ADJUSTABLE SHELVES AND LOCKABLE DOORS



16" DEEP X 36" WIDE METAL CABINETS WITH ADJUSTABLE SHELVES AND LOCKABLE DOORS



**REPAIR WORKSHOP 115 4**  
 3/8"=1'-0" A2.1

**REPAIR WORKSHOP 115 5**  
 3/8"=1'-0" A2.1

**MEDICINE CABINET 118 6**  
 3/8"=1'-0" A2.1

**MEDICINE CABINET 118 7**  
 3/8"=1'-0" A2.1

S:\Engineer\10ATL02\_Fulton\_Co\_Stanley\_A&E\_Svc\Task\_55\Drawings\Architectural\10ATL02-55A10.0\_Erta\_Pins.dwg September 09, 2011 - 4:59pm wanderson



DSGN	JTRY	9/9/11	ADDENDUM No. 2		
DR	WDAN				
CHK	JTRY				
APVD	JTRY	NO.	DATE	REVISION	BY
					APVD

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**VERIFY SCALES**  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 0 1"  
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.



Fulton County Fire Department  
 FIRE STATION No. 11  
 4760 Fulton Industrial Blvd.  
 Atlanta, Georgia 30336

ARCHITECTURAL

**ENLARGED PLANS**



SHEET	36 OF 69
DWG NO.	<b>A10.2</b>
DATE	JULY 15, 2011
PROJ NO.	10ATL02-55



Fulton County, GA

# Department of Purchasing & Contract Compliance

*Cecil S. Moore, CPPO, CPPB, CPSM, C.P.M., A.P.P*  
**Director**

September 14, 2011

**Re: 11ITB79954K-JAJ**  
**Fire Station # 11 Construction Services**

Dear Bidders:

Attached is one (1) copy of Addendum 3, hereby made a part of the above referenced Invitation to Bid.

Except as provided herein, all terms and conditions in the Invitation to Bid referenced above remain unchanged and in full force and effect.

Sincerely,  
*James A. Jones*

**James A. Jones**  
**Assistant Purchasing Agent**

Winner 2000 - 2009 Achievement of Excellence in  
Procurement Award • National Purchasing Institute



**11ITB79554K-JAJ**  
**Fire Station # 11 Construction Services**  
**Addendum No. 3**  
**Page Two**

This Addendum forms a part of the contract documents and modifies the original Bid documents as noted below:

- 1. Question:** Storage Facility needs a roof detail.  
**Answer:** The roof edge condition will be similar to the edge condition for the main building.
- 2. Question:** Precast caps have no size/dimension.  
**Answer:** Precast is sized on Structural Drawings.
- 3. Question:** The structural drawing S1.8, #216" Masonry Column Enclosure", but provide no CMU size, the symbol looks 4" CMU on the architectural drawing.  
**Answer:** This is 6" CMU. The only 4' CMU is at the toilet chases.
- 4. Question:** Architectural drawing A2.2 show door # 203 at the loft. Why? ( No stairs at this door at col. Line # 3)  
**Answer:** This door is to provide access for loading/unloading by way of a lift.
- 5. Question:** S1.1- Foundation- The interior footings need to be marked with sections or type (H/S1.1 section on drawing S1.5 and J/S1.1 section on drawing S1.5.)  
**Answer:** The interior thickened wall footings are typical throughout the building interior as noted by the double hidden lines adjacent to the masonry walls. Section H is typical as noted on the plan and note # 6. Section J is for truck bay walls and 8" walls supporting both loft areas (see S1.2 for those walls)
- 6. Question:** The loft plans S1 shows a concrete topping, but it is not noted as lightweight. Also the architectural drawing calls for 3/4" plywood not cast in place concrete.  
**Answer:** Both loft areas have normal weight concrete slabs on metal decking. The reference to plywood should be ignored.
- 7. Question:** There is only a structural slab on grade section for Storage Facility (L/S1.1 on drawing S1.5).  
**Answer:** See T/S1.6 for roof truss detail. It should be attached to the CMU wall with L4x4x1/4 angles 6" long attached to the wall with (2)-1/2" diameter 6" long anchor bolts per angle.

- 8. Question:** Drawing A6.1, section A2.1 reference  $\frac{3}{4}$ " plywood between column lines 33 and # 5, but the structural drawings call for concrete on metal deck. Which is correct?  
**Answer:** Concrete slab on metal deck is correct. This is addressed in Addendum 2.
- 9. Question:** Please update the room schedule: a. #109 Toilet, b. #111 Toilet, c. #112 Toilet, c. #113 Toilet, d. #114 Toilet, e. #114 Toilet, f. #131 Kitchen, g. #132 Lavatory, h. #201 Loft, i. #202 Mechanical-Electrical Room, j. #203 Storage Room  
**Answer:** The schedule is updated in Addendum 2.
- 10. Question:** Finish Schedule is not complete-needs a complete review.  
**Answer:** See the updated schedule in Addendum # 2.
- 11. Question:** Storage facility needs a roof detail.  
**Answer:** See answer # 1 above.
- 12. Question:** Architectural drawing A2.2 show door #203 at the loft. Why? No stairs at this door at column line # 3  
**Answer:** See Answer # 4 above.
- 13. Question:** S1.1- Foundation- There are interior footings without notations with the H/S1.1 section on drawing S1.5 and J/S1.1 section on drawing S1.5. What's thicken slab and what walls have footings?  
**Answer:** The interior thickened wall footings are typical throughout the building interior as noted by the double hidden lines adjacent to the masonry walls. Section H is typical as noted on the plan and note # 6. Section J is for truck bay walls and 8" walls supporting both loft areas (see S1.2 for those walls).
- 14. Question:** The Loft Plans S1.2 shows a concrete topping, but it is not noted as lightweight. Also the architectural drawing calls for  $\frac{3}{4}$ " plywood in place of concrete.  
**Answer:** Concrete slab on metal deck is correct. This is addressed in addendum # 2.
- 15. Question:** The Loft Plans S1.2 shows no dimensions- It states see architectural drawings.  
**Answer:** The loft is dimensioned on the architectural drawings.
- 16. Question:** There is only a structural slab on grade section for the Storage Facility (L/S1.1 on drawing S1.5)  
**Answer:** See T/S1.6 for roof truss detail. It should be attached to the CMU wall with L4x4x1/4 angles 6" long attached to the wall with (2)-1/2" diameter 6" long anchor bolts per angle.
- 17. Question:** Drawing A6.1 section A2.1 reference  $\frac{3}{4}$ " plywood between column lines 33 and # 5, but the structural drawings call for concrete on metal deck. Which is correct?

**Answer:** Concrete slab on metal deck is correct. This is addressed in Addendum 2.

**18. Question:** We need updated information on the room finish schedule:

- a. # 109 Toilet- Need wall finish
- b. # 111 Toilet- Need wall finish
- c. # 112 Toilet- Need wall finish
- d. # 113 Toilet- Need wall finish
- e. # 114 Toilet- Need wall finish
- f. # 131 Kitchen- Need wall finish
- g. # 132 Lavatory- Need wall finish
- h. # 201 Loft- Need wall finish
- i. # 202 Mechanical/Electrical Room- Need wall finish
- j. # 203 Storage- Need wall finish and should floor be plywood

**Answer:** The schedule was updated in Addendum 2.

**19. Question:** The storage facility has no roof details.

**Answer:** The roof edge condition will be similar to the edge condition for the main building.

**20. Question:** Drawing A6.1, Section B/A2.1, does not show door # 203 at the loft. (Is there a stair needed at this door? (Ref. drawing. A2.2 along column line #3)

**Answer:** This door is to provide access for loading/unloading by way of a lift.

**21. Question:** Precast Caps has no size/dimensions.

**Answer:** Precast is sized on the Structural Drawings.

**22. Question:** Drawing S1.8, #216" Masonry Column Enclosure", provide no CMU size but looks like 4" CMU on the architectural drawings.

**Answer:** This is 6" CMU. The only 4" CMU is at the toilet chases.

**23. Question:** Finish schedule is not complete- needs a review.

**Answer:** The schedule was updated in Addendum 2.

**Corrections/Clarifications:** Section 00100 Instructions to Bidders, Required Bid Submittal Check List.

1. Delete reference to form F Declaration of Employee Number Categories. Form F is the Georgia Security and Immigration Contractor Affidavit. (must be submitted with bid)
2. Form G is the Georgia Security and Immigration Subcontractor Affidavit. (must be submitted with bid)
3. Office of Contract Compliance Requirements- Submit Exhibit H Fulton County First Source Jobs Program with the bid.
4. Delete reference to Contractor Warranty Form.
5. Delete reference to Installer Warranty Form.

ACKNOWLEDGEMENT OF ADDENDUM NO. 3

The undersigned proposer acknowledges receipt of this addendum by returning one (1) copy of this form with the proposal package to the Department of Purchasing & Contract Compliance, Fulton County Public Safety Building, 130 Peachtree Street, Suite 1168, Atlanta, Georgia 30303 by the Bid due date and time **September 22, 2011, 11:00 A.M.**

This is to acknowledge receipt of Addendum No. 3, \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

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

\_\_\_\_\_  
Signature of Authorized Representative

\_\_\_\_\_  
Title



Fulton County, GA

# Department of Purchasing & Contract Compliance

*Cecil S. Moore, CPPO, CPPB, CPSM, C.P.M., A.P.P  
Director*

**September 20, 2011**

**Re: 11ITB79954K-JAJ - Fire Station # 11 Construction Services**

Dear Bidders:

Attached is one (1) copy of Addendum 4, hereby made a part of the above referenced Invitation to Bid.

Except as provided herein, all terms and conditions in the Invitation to Bid referenced above remain unchanged and in full force and effect.

Sincerely,

*James A. Jones*

**James A. Jones  
Assistant Purchasing Agent**

Winner 2000 - 2009 Achievement of Excellence in  
Procurement Award • National Purchasing Institute



**11ITB79954K-JAJ**  
**Fire Station # 11 Construction Services**  
**Addendum No. 4**  
**Page Two**

This Addendum forms a part of the contract documents and **modifies** the original RFP documents as noted below:

**Project Manual:**

1. **Section 02821 - Chain-Link Fences And Gates:** Insert this section into the Project Manual.
2. **Section 03360 - Integrally Colored Ground And Polished Concrete:** Insert this section into the Project Manual.
3. **Section 13650 Metal Building Systems:** In Article 2, Products, insert the following:

**2.5 METAL ROOF PANELS**

**A.** Vertical-Rib, Standing-Seam Metal Roof Panels: Formed with vertical ribs at panel edges and intermediate stiffening ribs symmetrically spaced between ribs; designed for sequential installation by mechanically attaching panels to supports using concealed clips located under one side of panels and engaging opposite edge of adjacent panels.

1. Material: Aluminum-zinc alloy-coated steel sheet, 0.028-inch nominal thickness.

Exterior Finish: Fluoropolymer.

Color: As selected by Architect from manufacturer's full range.

2. Clips: Manufacturer's standard, floating type to accommodate thermal movement; fabricated from zinc-coated (galvanized) steel, aluminum-zinc alloy-coated steel or stainless-steel sheet.
3. Joint Type: Panels snapped together.
4. Joint Type: Mechanically seamed, double folded.
5. Panel Coverage: 16 inches.
6. Panel Height: 2 inches.
7. Uplift Rating: UL 90.

**B. Materials:**

1. Metallic-Coated Steel Sheet: Restricted-flatness steel sheet, metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755/A 755M.
  - a. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, G90 coating designation; structural quality.
  - b. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, Class AZ50 coating designation, Grade 40; structural quality.
  - c. Surface: Smooth, flat finish.

**C. Finishes:**

1. Exposed Coil-Coated Finish:
  - a. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

2. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil.

## **2.6 METAL WALL PANELS**

- A. Concealed-Fastener Metal Wall Panels: Formed with vertical panel edges and flush surface; with flush joint between panels; with 1-inch- wide flange for attaching interior finish; designed to be installed by lapping and interconnecting side edges of adjacent panels and mechanically attaching through panel to supports using concealed fasteners and factory-applied sealant in side laps.
  1. Material: Aluminum-zinc alloy-coated steel sheet, 0.028-inch nominal thickness.
    - a. Exterior Finish: Fluoropolymer.
    - b. Color: As selected by Architect from manufacturer's full range.
  2. Panel Coverage: 16 inches.
  3. Panel Height: 3 inches.
- B. **Materials:**
  1. Metallic-Coated Steel Sheet: Restricted-flatness steel sheet, metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755/A 755M.
    - a. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, G90 coating designation; structural quality.
    - b. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, Class AZ50 coating designation, Grade 40; structural quality.
    - c. Surface: Smooth, flat finish.
- C. **Finishes:**
  1. Exposed Coil-Coated Finish:
    - a. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
  2. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil.

## **2.7 METAL SOFFIT PANELS**

- A. Concealed-Fastener Metal Soffit Panels: Formed with vertical panel edges and flush surface; with flush joint between panels; with 1-inch- wide flange for attaching interior finish; designed to be installed by lapping and interconnecting side edges of adjacent panels and mechanically attaching through panel to supports using concealed fasteners and factory-applied sealant in side laps.
  1. Material: Aluminum-zinc alloy-coated steel sheet, 0.028-inch nominal thickness.
    - a. Exterior Finish: Fluoropolymer.
    - b. Color: As selected by Architect from manufacturer's full range.
  2. Panel Coverage: 16 inches.
  3. Panel Height: 1 inch.

## **3. Section 08174 - FRP Flush Doors: Insert this section into the Project Manual.**

**Drawings:**

1. Sheet C1.5 Utility Plan: this sheet is re-issued with this Addendum.

**Answers to Bidder Questions:**

1. **Question:** The room finishes schedule calls for seal concrete and polish concrete but cannot find a spec for product and/or materials.  
**Answer:** Dyed and sealed concrete shall comply with the attached section 03360 - Integrally Colored Ground and Polished Concrete.
2. **Question:** Sheet A5.1 - Front Elevation - shows "standing seam metal roof over 2" [poly]isocyanurate Insulation board over moisture barrier over metal decking" and on drawing A7.1 - Section A/6.1 shows "3" vinyl faced insulation - by Metal Bldg. Supplier - standing seam metal roof." Please provide the correction for the design you would like to have. Also, your wall section is shown as 7", this should be 8".  
**Answer:** for the standing seam roof, see item #2, Project Manual, above. The vinyl faced insulation may be supplied by the metal building supplier or the General Contractor under Section 07210 - Thermal Insulation. The referenced note on Sheet A5.1 was corrected in Addendum 2. The 7" dimension is correct.
3. **Question:** Civil drawings C1.2, C1.3 & C1.5 do not match the Architectural Drawings A1.1 & A2.1 for area that is to be paved with concrete and asphalt. Please clarify.  
**Answer:** The areas shown on the civil plans for concrete and asphalt paving are to be used.
4. **Question:** There is no site fence detail or specifications, please provide.  
**Answer:** See the attached specification.
5. **Question:** What underground has been already installed?  
**Answer:** Existing underground utilities are to be demolished. All underground services (water, fire, power, sewer, gas, etc.) are to have new service connections made at the mains.
6. **Question:** Under specification 13650 Metal Building Systems, it does not address the roof or wall panels. Provide missing specifications.  
**Answer:** see item #2, Project Manual, above. These items are to be provided by the metal building supplier.
7. **Question:** Section on A7.1 shows metal building girts to face of block wall, this detail will not work. Was it intended to attach to furring strips? This would mean a 16" girt above masonry which is not available. Please clarify.  
**Answer:** The girt above the masonry should be 12" not 16.
8. **Question:** Please provide the spec for all the windows and aluminum doors and hardware (not in spec. file pdf)  
**Answer:** the windows are specified in section 08511 - Aluminum Windows.
9. **Question:** Please note where window L & K are located and what type of window and glass is to be supplied (more details) (looks like above front entrance D9 doors)  
**Answer:** Yes, on the front of the building, window K is over the 2 outside doors (Door 120 and Door 1203), and window L is over the center Door (Door 1202).
10. **Question:** What is above the center door at D8, the rear entrance, not noted? (Does a window go there?)  
**Answer:** Yes, see the answer to number 9 above.
11. **Question:** We have failed to find any Landscape Plan in the specifications

**Answer:** Landscaping, other than replanting disturbed areas is not included in this project. See “Landscape and Tree Protection Notes” on Sheet C0.1

12. **Question:** The “Door Schedule” shows “FRP” type doors, yet I could not find a spec for them. Are these doors really FRP, or intended to be Hollow Metal?

**Answer:** Yes, they are FRP. See attached Specification Section 08174 - FRP Flush Doors

13. **Question:** Plan page E2.0 indicates several “W2” fixture types. This is not shown on the fixture schedule; please advise as to type.

**Answer:** The fixture schedule has been updated.

14. **Question:** Plan page E2.0 indicates what appears to be a vanity style fixture in the toilet rooms 111, 112, 113, and 114. There is no type indicated; please advise.

**Answer:** The fixture schedule has been updated.

15. **Question:** Plan page E8.0 shows a type “F” and “F1” fixture with no other information given other than the lamps on “F”. What is the basis of design or desired model number?

**Answer:** The fixture schedule has been updated.

16. **Question:** Plan page E8.0 indicates an alternate for solar powered “P” and “PD”. There is no description given; please advise.

**Answer:** This fixture has been deleted.

17. **Question:** Plan page E4.0 shows type “F” fixtures and also has type “S” in the same room. Please confirm that the fans (F) should have light kit as no other switch is shown.

**Answer:** Switching has been revised. There should be no light kits on the fans.

18. **Question:** Please confirm that emergency ballasts are still required even though generator runs entire load.

**Answer:** Requirement for battery packs should be removed.

19. **Question:** Plan page E3.0 shows “Ceiling mounted hose reels”. There is no detail shown; please provide rough-in requirements for this equipment.

**Answer:** Hose reel note has been added.

20. **Question:** Plan page E3.0 shows a panel marked “FM” near the front entrance. What is this? Should it be the annunciator for the fire alarm system? Please advise.

**Answer:** This is the fire alarm annunciator.

21. **Question:** Please confirm the phone, data, TV, paging, etc. wiring is by others. There only appears to be conduit systems on the plans.

**Answer:** Contractor to provide conduit, boxes, and pullstring. Vendors will provide low voltage systems and wiring. GC should also contract out to low voltage vendors (TV, Phone, data, security, fire alarm).

22. **Question:** Provide specifications for generator and transfer switch, none included in specification manual.

**Answer:** Specifications for the generator and ATS are attached.

23. **Question:** Is the generator and transfer switch supplied and installed by Owner?

**Answer:** The generator and ATS is supplied by the contractor. Specifications for the generator and ATS are attached.

24. **Question:** Please revise the Light Fixture Schedule and Notes on sheet E8.0 to reflect the lights fixtures shown on sheets E1.0, E2.0 and E4.0 of the Fulton County Fire Department - Fire Station No. 11 construction plans. Some fixtures are shown as two (2) types and some fixture types are not shown at all.

**Answer:** The schedule has been revised. See attachment.

**Attachments:**

1. Utility Plan
2. Chain Link Fences
3. Integrally Colored and Polished Concrete
4. Emergency/ Standby Power Systems
5. Automatic Transfer Systems Revised
6. FRP Flushed Doors
7. Electrical Addendum Drawings

The date for receipt of bids is hereby extended to October 3, 2011 at 11:00 A.M. The last day for questions is September 26 at 4:00 p.m. The location for receipt of bids is the Department of Purchasing and Contract Compliance, 130 Peachtree Street S. W. Suite 1168, Atlanta, Georgia 30303.

ACKNOWLEDGEMENT OF ADDENDUM NO. 4

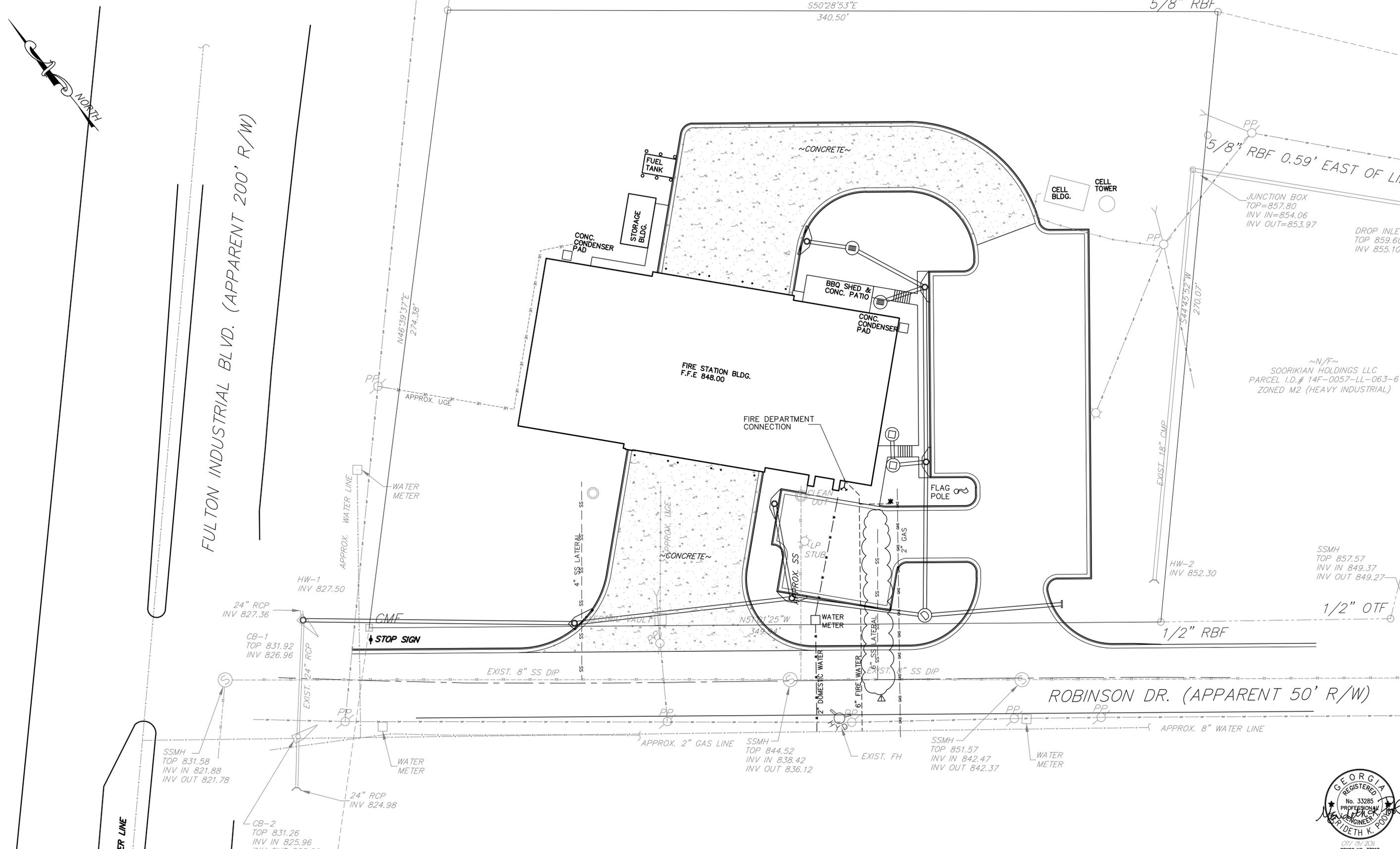
The undersigned proposer acknowledges receipt of this addendum by returning one (1) copy of this form with the proposal package to the Department of Purchasing & Contract Compliance, Fulton County Public Safety Building, 130 Peachtree Street, Suite 1168, Atlanta, Georgia 30303 by the ITB due date and time **Monday, October 3, 2011, 11:00 A.M.**

This is to acknowledge receipt of Addendum No.4, \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

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

\_\_\_\_\_  
Signature of Authorized Representative

\_\_\_\_\_  
Title



~N/F~  
 SOORIKIAN HOLDINGS LLC  
 PARCEL I.D.# 14F-0057-LL-063-6  
 ZONED M2 (HEAVY INDUSTRIAL)

SSMH  
 TOP 857.57  
 INV IN 849.37  
 INV OUT 849.27

**KHAFRA**  
 ENGINEERING CONSULTANTS, INC.  
 225 PEACHTREE STREET, SUITE 1600  
 ATLANTA, GEORGIA 30303  
 404-525-2120 FAX 404-522-7941

DSGN	MKPL				
DR	MKPL				
CHK	KEFR	1	9/15/11	ADD 6" SS CONNECTION	MKPL VTBS
APVD	VTBS	NO.	DATE	REVISION	BY

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**VERIFY SCALES**  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 0" = 1"  
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

Fulton County Fire Department  
 FIRE STATION No. 11  
 4760 Fulton Industrial Blvd.  
 Atlanta, Georgia 30336

CIVIL  
**UTILITY PLAN**

REGISTERED  
 No. 33285  
 PROFESSIONAL ENGINEER  
 DEETH K. POOL  
 07/15/2011  
 GSWCC NO. 37897

SHEET	9 OF 69
DWG NO.	<b>C1.5</b>
DATE	JULY 15, 2011
PROJ NO.	10ATL02-55

\\AI-primary\khafra.com\common\Engineer\10ATL02 Fulton Co. Stoney A&E Svc\Task 55\Drawings\Civil\10ATL02-5501.5 UTILITY PLAN.dwg September 16, 2011 - 11:49am mpool

RELEASED FOR BID

## SECTION 02821 - CHAIN-LINK FENCES AND GATES

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

## A. Section Includes:

1. Chain-link fences.
2. Gates: swing.

## B. Related Sections:

1. Division 3 Section "Cast-in-Place Concrete" for cast-in-place concrete post footings.
2. Division 16 Sections for electrical service and connections for motor operators, controls, limit and disconnect switches, and safety features and for system disconnect switches.

## 1.3 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Design chain-link fences and gates, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- B. Structural Performance: Chain-link fence and gate framework shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated according to ASCE/SEI 7:
  1. Minimum Post Size: Determine according to ASTM F 1043 for framework up to 12 feet high, and post spacing not to exceed 10 feet for Steel.
- C. Lightning Protection System: Maximum grounding-resistance value of 25 ohms under normal dry conditions.

## 1.4 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for chain-link fences and gates.
  1. Fence and gate posts, rails, and fittings.
  2. Chain-link fabric, reinforcements, and attachments.
  3. Accessories: Barbed wire.

**ADDENDUM**

4. Gates and hardware.
  - B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work. Show accessories, hardware, gate operation, and operational clearances.
  - C. Samples for Initial Selection: For components with factory-applied color finishes.
  - D. Samples for Verification: Prepared on Samples of size indicated below:
    1. Polymer-Coated Components: In 6-inch lengths for components and on full-sized units for accessories.
  - E. Delegated-Design Submittal: For chain-link fences and gate framework indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
  - F. Qualification Data: For qualified factory-authorized service representative.
  - G. Product Certificates: For each type of chain-link fence and gate, from manufacturer.
  - H. Product Test Reports: For framing strength according to ASTM F 1043.
  - I. Field quality-control reports.
  - J. Operation and Maintenance Data: For the following to include in emergency, operation, and maintenance manuals:
    1. Polymer finishes.
    2. Gate hardware.
  - K. Warranty: Sample of special warranty.

**1.5 QUALITY ASSURANCE**

- A. Preinstallation Conference: Conduct conference at Project site.

**1.6 PROJECT CONDITIONS**

- A. Field Measurements: Verify layout information for chain-link fences and gates shown on Drawings in relation to property survey and existing structures. Verify dimensions by field measurements.

**PART 2 - PRODUCTS****2.1 CHAIN-LINK FENCE FABRIC**

- A. General: Provide fabric in one-piece heights measured between top and bottom of outer edge of selvage knuckle or twist. Comply with CLFMI Product Manual and with requirements indicated below:

**ADDENDUM**

1. Fabric Height: Seven foot.
2. Steel Wire Fabric: Wire with a diameter of 0.148 inch.
  - a. Mesh Size: 2 inches.
  - b. Zinc-Coated Fabric: ASTM A 392, Type II, Class 1, 1.2 oz./sq. ft. with zinc coating applied before weaving.
  - c. Coat selvage ends of fabric that is metallic coated before the weaving process with manufacturer's standard clear protective coating.

**2.2 FENCE FRAMING**

- A. Posts and Rails: Comply with ASTM F 1043 for framing, including rails, braces, and line; terminal; and corner posts. Provide members with minimum dimensions and wall thickness according to ASTM F 1043[ or ASTM F 1083] based on the following:
  1. Fence Height: 96 inches.
  2. Light Industrial Strength: Material Group IC-L, round steel pipe, electric-resistance-welded pipe.
    - a. Line Post: 2.375 inches in diameter.
    - b. End, Corner and Pull Post: 2.875 inches.
  3. Horizontal Framework Members: Top and bottom rails complying with ASTM F 1043.
    - a. Top Rail: 1.66 inches in diameter.
  4. Metallic Coating for Steel Framing:
    - a. Type A, consisting of not less than minimum 2.0-oz./sq. ft. average zinc coating per ASTM A 123/A 123M or 4.0-oz./sq. ft. zinc coating per ASTM A 653/A 653M.
    - b. Type B, zinc with organic overcoat, consisting of a minimum of 0.9 oz./sq. ft. of zinc after welding, a chromate conversion coating, and a clear, verifiable polymer film.
    - c. External, Type B, zinc with organic overcoat, consisting of a minimum of 0.9 oz./sq. ft. of zinc after welding, a chromate conversion coating, and a clear, verifiable polymer film. Internal, Type D, consisting of 81 percent, not less than 0.3-mil- thick, zinc-pigmented coating.
    - d. Type C, Zn-5-Al-MM alloy, consisting of not less than 1.8-oz./sq. ft. coating.
    - e. Coatings: Any coating above.

**2.3 SWING GATES**

- A. General: Comply with ASTM F 900 for gate posts and double swing gate types.
  1. Gate Leaf Width: 16 feet.
  2. Gate Fabric Height: More than 72 inches.
- B. Pipe and Tubing:

**ADDENDUM**

1. Zinc-Coated Steel: Comply with ASTM F 1043 and ASTM F 1083; manufacturer's standard protective coating and finish.
2. Gate Posts: Round tubular steel.
3. Gate Frames and Bracing: Round tubular steel.

C. Frame Corner Construction: Welded or assembled with corner fittings.

D. Hardware:

1. Hinges: 180-degree outward swing.
2. Latches permitting operation from both sides of gate with provision for padlocking accessible from both sides of gate.
3. Closer: Manufacturer's standard.

## 2.4 FITTINGS

A. General: Comply with ASTM F 626.

## 2.5 BARBED WIRE

A. Steel Barbed Wire: Comply with ASTM A 121, for two-strand barbed wire, 0.099-inch-diameter line wire with 0.080-inch-diameter, four-point round barbs spaced not more than 5 inches o.c.

1. Aluminum Coating: Type A.
2. Zinc Coating: Type Z, Class 3.

## 2.6 GROUT AND ANCHORING CEMENT

A. Nonshrink, Nonmetallic Grout: Premixed, factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout, recommended in writing by manufacturer, for exterior applications.

B. Erosion-Resistant Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with potable water at Project site to create pourable anchoring, patching, and grouting compound. Provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and that is recommended in writing by manufacturer, for exterior applications.

## 2.7 FENCE GROUNDING

A. Conductors: Bare, solid wire for No. 6 AWG and smaller; stranded wire for No. 4 AWG and larger.

1. Material above Finished Grade: Aluminum.
2. Material on or below Finished Grade: Copper.
3. Bonding Jumpers: Braided copper tape, 1 inch wide, woven of No. 30 AWG bare copper wire, terminated with copper ferrules.

**ADDENDUM**

- B. Connectors and Grounding Rods: Comply with UL 467.
  - 1. Grounding Rods: Copper-clad steel, 5/8 by 96 inches.

**PART 3 - EXECUTION****3.1 EXAMINATION**

- A. Examine areas and conditions, with Installer present, for compliance with requirements for a verified survey of property lines and legal boundaries, site clearing, earthwork, pavement work, and other conditions affecting performance of the Work.
  - 1. Do not begin installation before final grading is completed unless otherwise permitted by Architect.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

**3.2 PREPARATION**

- A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

**3.3 INSTALLATION, GENERAL**

- A. Install chain-link fencing to comply with ASTM F 567 and more stringent requirements indicated.
  - 1. Install fencing on established boundary lines inside property line.

**3.4 CHAIN-LINK FENCE INSTALLATION**

- A. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacings indicated, in firm, undisturbed soil.
- B. Post Setting: Set posts in concrete at indicated spacing into firm, undisturbed soil.
  - 1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.
  - 2. Concrete Fill: Place concrete around posts to dimensions indicated and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.
    - a. Exposed Concrete: Extend 2 inches above grade; shape and smooth to shed water.
- C. Terminal Posts: Locate terminal end, corner, and gate posts per ASTM F 567 and terminal pull posts at changes in horizontal or vertical alignment of 15 degrees or more.
- D. Line Posts: Space line posts uniformly at 10 feet o.c.

**ADDENDUM**

- E. Post Bracing and Intermediate Rails: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Diagonally brace terminal posts to adjacent line posts with truss rods and turnbuckles. Install braces at end and gate posts and at both sides of corner and pull posts.
  - 1. Locate horizontal braces at midheight of fabric 72 inches or higher, on fences with top rail and at two-third fabric height on fences without top rail. Install so posts are plumb when diagonal rod is under proper tension.
- F. Top Rail: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Run rail continuously through line post caps, bending to radius for curved runs and terminating into rail end attached to posts or post caps fabricated to receive rail at terminal posts. Provide expansion couplings as recommended in writing by fencing manufacturer.
- G. Intermediate and Bottom Rails: Install and secure to posts with fittings.
- H. Chain-Link Fabric: Apply fabric to outside of enclosing framework. Leave 2 inches between finish grade or surface and bottom selvage unless otherwise indicated. Pull fabric taut and tie to posts, rails, and tension wires. Anchor to framework so fabric remains under tension after pulling force is released.
- I. Tension or Stretcher Bars: Thread through fabric and secure to end, corner, pull, and gate posts with tension bands spaced not more than 15 inches o.c.
- J. Tie Wires: Use wire of proper length to firmly secure fabric to line posts and rails. Attach wire at one 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. Bend ends of wire to minimize hazard to individuals and clothing.
  - 1. Maximum Spacing: Tie fabric to line posts at 12 inches o.c. and to braces at 24 inches o.c.
- K. Fasteners: Install nuts for tension bands and carriage bolts on the side of the fence opposite the fabric side. Peen ends of bolts or score threads to prevent removal of nuts.
- L. Barbed Wire: Install barbed wire uniformly spaced, angled toward security side of fence. Pull wire taut, install securely to extension arms, and secure to end post or terminal arms.

**3.5 GATE INSTALLATION**

- A. Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach fabric as for fencing. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

**3.6 GROUNDING AND BONDING**

- A. Fence Grounding: Install at maximum intervals of [1500 feet (450 m)] <Insert a lesser distance if grounding resistance is high> except as follows:

**ADDENDUM**

1. Fences within 100 Feet (30 m) of Buildings, Structures, Walkways, and Roadways: Ground at maximum intervals of [750 feet (225 m)] <Insert a lesser distance if grounding resistance is high>
    - a. Gates and Other Fence Openings: Ground fence on each side of opening.
      - 1) Bond metal gates to gate posts.
      - 2) Bond across openings, with and without gates, except openings indicated as intentional fence discontinuities. Use No. 2 AWG wire and bury it at least 18 inches (460 mm) below finished grade.
    - B. Protection at Crossings of Overhead Electrical Power Lines: Ground fence at location of crossing and at a maximum distance of 150 feet (45 m) on each side of crossing.
    - C. Fences Enclosing Electrical Power Distribution Equipment: Ground as required by IEEE C2 unless otherwise indicated.
    - D. Grounding Method: At each grounding location, drive a grounding rod vertically until the top is 6 inches (150 mm) below finished grade. Connect rod to fence with No. 6 AWG conductor. Connect conductor to each fence component at the grounding location, including the following:
      1. Make grounding connections to each barbed wire strand with wire-to-wire connectors designed for this purpose.
      2. Make grounding connections to each barbed tape coil with connectors designed for this purpose.
    - E. Bonding Method for Gates: Connect bonding jumper between gate post and gate frame.
    - F. Connections: Make connections to minimize possibility of galvanic action or electrolysis. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact will be galvanically compatible.
      1. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer in order of galvanic series.
      2. Make connections with clean, bare metal at points of contact.
      3. Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps.
      4. Make aluminum-to-galvanized-steel connections with tin-plated copper jumpers and mechanical clamps.
      5. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.
    - G. Bonding to Lightning Protection System: If fence terminates at lightning-protected building or structure, ground the fence and bond the fence grounding conductor to lightning protection down conductor or lightning protection grounding conductor complying with NFPA 780.
- 3.7 FIELD QUALITY CONTROL
- A. Grounding-Resistance Testing: [Owner will engage] [Engage] a qualified testing agency to perform tests and inspections.

**ADDENDUM**

1. Grounding-Resistance Tests: Subject completed grounding system to a megger test at each grounding location. Measure grounding resistance no fewer than two full days after last trace of precipitation, without soil having been moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural grounding resistance. Perform tests by two-point method according to IEEE 81.
2. Excessive Grounding Resistance: If resistance to grounding exceeds specified value, notify Architect promptly. Include recommendations for reducing grounding resistance and a proposal to accomplish recommended work.
3. Report: Prepare test reports certified by a testing agency of grounding resistance at each test location. Include observations of weather and other phenomena that may affect test results.

**3.8 ADJUSTING**

- A. Gates: Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.
- B. Lubricate hardware and other moving parts.

**3.9 DEMONSTRATION**

- A. Engage a factory-authorized service representative to train Owner's personnel to adjust, operate, and maintain chain-link fences and gates.

END OF SECTION 02821

## SECTION 03360 - INTEGRALLY COLORED GROUND AND POLISHED CONCRETE

## PART 1 – GENERAL

## 1.1 SUMMARY

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to Work of this Section.
- B. Section Includes:
  - 1. Integrally colored concrete slabs-on-grade, and interior floor slabs.
  - 2. Curing of integrally colored concrete.
- C. Related Sections:
  - 1. Division 3 Section —“Cast-In-Place Concrete” for general applications of concrete and coordination of sample submittal and color selection.
  - 2. Division 7 Section —“Joint Sealants” for colored sealant for joints.

## 1.2 REFERENCES

- A. American Concrete Institute (ACI):
  - 1. ACI 301 —“Specification for Structural Concrete for Buildings.”
  - 2. ACI 302 IR —“Recommended Practice for Concrete Floor and Slab Construction.”
  - 3. ACI 303.1 —“Standard Specification for Cast-In-Place Architectural Concrete.”
  - 4. ACI 304 —“Recommended Practice for Measuring, Mixing, Transporting and Placing of Concrete.”
  - 5. ACI 305R —“Recommended Practice for Hot Weather Concreting.”
  - 6. ACI 306R —“Recommended Practice for Cold Weather Concreting.”
- B. American Society for Testing and Materials (ASTM):
  - 1. ASTM C309 —“Liquid Membrane-Forming Compounds for Curing Concrete.”
  - 2. ASTM C494 —“Standard Specification for Chemical Admixtures for Concrete.”
  - 3. ASTM C979 —“Standard Specification for Pigments for Integrally Colored Concrete.”
- C. American Association of State Highway and Transportation Officials (AASHTO):
  - 1. AASHTO M194 —“Chemical Admixtures.”

## 1.3 SUBMITTALS

- A. Product Data: Submit manufacturer’s complete technical data sheets for the following:
  - 1. Colored admixture.
  - 2. Curing compound.
- B. Design Mixes: For each type of integrally colored concrete.
- C. Samples for Initial Selection: Manufacturer's color charts showing full range of colors available.
- D. Qualification Data: For firms indicated in —“Quality Assurance” Article, including list of completed projects.
- E. Submit the following in accordance with Division 1 Section —“Submittal Procedures.”

**ADDENDUM**

- F. Product data for each grinding machine, including all types of grinding heads, dust extraction system, joint filler, concrete densifying impregnator, penetrating sealer, and any other chemicals used in the process.
- G. Applicators qualification data.
- H. Polished concrete samples: Size 3" x 3", for each Polished Concrete finish required.

**1.4 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Manufacturer with 10-years experience in the production of specified products.
- B. Installer Qualifications: An installer with 5 years' experience with work of similar scope and quality.
- C. Comply with the requirements of ACI 301.
- D. Obtain each specified material from same source and maintain high degree of consistency in workmanship throughout Project.
- E. Notification of manufacturer's authorized representative shall be given at least 1-week before start of Work.
- G. Pre-installation Conference: Conduct conference at project site to comply with requirements in Division 1, Section —Project Management and Coordination.”
- H. Provide project names, addresses, contact names, phone numbers of at least three (3) projects of similar scope completed by the installer.
- I. Installer/Applicator shall be certified by concrete finish equipment and chemical manufacturer and shall provide adequate number of skilled workmen who are thoroughly trained and experienced in the necessary craft.
- J. Manufacturer's Certification: Provide a letter of certification from both the equipment and chemical manufacturer stating that the installer is a certified applicator and is familiar with proper procedures and installation requirements recommended by the manufacturer.
- K. Integrally Colored Ground and Polished Concrete Mockups:
  - 1. Provide under provisions of Division 1.
  - 2. At location on Project selected by Architect, place and finish 10 feet by 10 feet (3 by 3 m) area.
  - 3. For accurate color, the quantity of concrete mixed to produce the sample should not be less than 3 cubic yards (or not less than 1/3 the capacity of the mixing drum on the ready-mix truck) and should always be in full cubic yard increments. Excess material shall be discarded according to local regulations.
  - 4. Construct mockup using processes and techniques intended for use on permanent work, including curing procedures. Include samples of control, construction, and expansion joints in sample panels. Mockup shall be produced by the individual workers who will perform the work for the Project.
  - 5. Retain samples of cements, sands, aggregates and color additives used in mockup for comparison with materials used in remaining work.
  - 6. Aggregate selected must be tested to ensure it will accept polish.
  - 7. Select from Part 4 – Schedules cut and shine level and finish coat.
  - 8. Edges should be included in mockup.
  - 9. Accepted mockup provides visual standard for work of Section.

**ADDENDUM**

10. Mockup shall remain through completion of work for use as a quality standard for finished work.

11. Remove mockup when directed.

L. Environmental Limitations:

1. Comply with manufacturer's written instructions for substrate temperature and moisture content, ambient temperature and humidity, ventilation and other conditions affecting chemical performance.

2. Flatness and levelness

a. Finish concrete shall have a minimum Floor Flatness rating of at least 50.

b. Finish concrete shall have a minimum Floor Levelness rating of at least 30.

c. Finish concrete shall be cured a minimum of 28 days or at which point equipment can be put on the slab and does not displace aggregate.

3. Application of finish system shall take place a minimum of 21 days prior to fixture and trim installation and/or substantial completion.

4. Finish concrete area shall be closed to traffic during finish floor application and after application for the time as recommended by the manufacturer.

1.5 DELIVERY, STORAGE AND HANDLING

A. Colored Admixture: Comply with manufacturer's instructions. Deliver colored admixtures in original, unopened packaging. Store in dry conditions.

1.6 PROJECT CONDITIONS

A. Integrally Colored Concrete Environmental Requirements:

1. Schedule placement to minimize exposure to wind and hot sun before curing materials are applied.

2. Avoid placing concrete if rain, snow, or frost is forecast within 24-hours. Protect fresh concrete from moisture and freezing.

3. Comply with professional practices described in ACI 305R and ACI 306R.

B. Schedule delivery of concrete to provide consistent mix times from batching until discharge. Mix times shall meet manufacturer's written recommendations.

1.7 PRE-JOB CONFERENCE

A. One week prior to placement of integrally colored concrete a meeting will be held to discuss the Project and application materials.

B. It is suggested that the Architect, Engineer, General Contractor, Subcontractor, Ready-Mix Concrete Representative, and a Manufacturer's Representative be present.

PART 2 – PRODUCTS

2.1 ACCEPTABLE MANUFACTURER

A. L.M. SCOFIELD COMPANY, Douglasville, Georgia and Los Angeles, California (800) 800-9900 or the appropriate local contact: Eastern Division – 201-672-9050; Western Division – 714-568-1870; Central Division Office – 630-377-5959.

B. Approved equal.

2.2 MATERIALS

**ADDENDUM**

- A. Colored Admixture for Integrally Colored Concrete: CHROMIX P<sup>®</sup> Admixture and CHROMIX ML<sup>®</sup>; L.M. SCOFIELD COMPANY.
1. Admixture shall be a colored, water-reducing, admixture containing no calcium chloride with coloring agents that are limeproof and ultra-violet resistant.
  2. Colored admixture shall conform to the requirements of ACI 303.1, ASTM C979, ASTM C494 and ASSHTO M194.
- B. Curing Compound for Integrally Colored Concrete: Curing compound shall comply with ASTM C309 and be of same manufacturer as colored admixture, for use with integrally colored concrete.
1. Interior Integrally Colored Concrete: COLORCURE<sup>®</sup> (Pigmented) or CEMENTONE<sup>®</sup> (Clear); L.M. SCOFIELD COMPANY. Use to cure interior flatwork that will receive regular maintenance.
- D. Chemical Hardener/Densifiers Manufactured by L.M. SCOFIELD COMPANY:
1. Materials:
    - a. SCOFIELD<sup>®</sup> Formula One<sup>™</sup>-LD is a high performing hardening and dust proofing compound that is chemically reactive and permanently bonds to concrete formulated to be used in conjunction with integrally colored concrete. (No substitutes)
    - b. SCOFIELD<sup>®</sup> Finish Coat
  2. 3 head or 4 head counter rotating variable speed floor grinding machine with at least 600 pounds down pressure.
  3. Dust extraction system, pre-separator, and squeegee attachments with minimum flow rating of 322 cubic feet per minute.
  4. Grinding heads:
    - a. Metal bonded 16, 25, 40, 60, 80, 150 and 300 grits.
    - b. Resin bonded, phenolic diamonds, 100, 200, 400, 800, 1500 and 3000 grits.
  5. Grinding pads for edges:
    - a. 40, 60, 100 and 120 grits.
    - b. 200, 400, 800, 1500 and 3000 grits.
  6. Hand grinder with dust extraction equipment and pads.
- E. Curing Compound for Polished, Hardened Concrete: LITHOCHROME<sup>®</sup> COLORWAX<sup>™</sup>; L.M. SCOFIELD COMPANY. Use to cure in the same color as the concrete directly after finishing process.
- F. SUBSTITUTIONS: The use of products other than those specified will be considered providing that the Contractor requests its use in writing within 14-days prior to bid date. This request shall be accompanied by the following:
1. A certificate of compliance from material manufacturer stating that proposed products meet or exceed requirements of this Section, including standards ACI 303.1, ASTM C979, ASTM C494 and AASHTO M194.
  2. Documented proof that proposed materials have a 10-year proven record of performance, confirmed by at least 5 local projects that Architect can examine.

**2.3 COLORS**

- A. Concrete Colors:
1. Cement: Color shall be gray.
  2. Sand: Color shall be locally available natural sand.
  3. Aggregate: Concrete producer's standard aggregate complying with specifications.
  4. Colored Admixture: As selected by Architect from Scofield Color Chart A-312.

**ADDENDUM**

- C. Curing Compound: Color to match integrally colored concrete.

**2.4 CONCRETE MIX DESIGN**

- A. Minimum Cement Content: 5 sacks per cubic yard of concrete.
- B. Slump of concrete shall be consistent throughout Project at 4-inches or less. At no time shall slump exceed 5-inches.
- C. Do not add calcium chloride to mix as it causes mottling and surface discoloration.
- D. Supplemental admixtures shall not be used unless approved by manufacturer.
- E. Do not add water to the mix in the field.
- F. Add colored admixture to concrete mix according to manufacturer's written instructions.

**PART 3 – EXECUTION****3.1 INSTALLATION**

- A. Install concrete according to requirements of Division 3 Section —Cast-In-Place Concrete.”
- B. Do not add water to concrete mix in the field.
- C. Surfaces shall be finished uniformly with the following finish:
  - 2. Ground and Polished Concrete Surface: Precautions should be taken to insure the surface is in tolerances to perform this function.

**3.1.1 POLISHED CONCRETE APPLICATION**

- A. Applicator shall examine the areas and conditions under which work of this section will be provided and the General Contractor shall correct conditions detrimental to the timely and proper completion of the work and the Applicator shall not proceed until unsatisfactory conditions are resolved.
- B. Grind the concrete floor to within 2 – 3 inches of walls with 16, 25, 40, 60, 80 and/or 150 grit removing construction debris, floor slab imperfections and until there is a uniform scratch pattern and desired concrete aggregate exposure.
- C. Apply material approved by architect for color effects in accordance with the architectural drawings and the manufacturer's recommended guidelines.
- D. Fill construction joints and cracks with filler products as specified in accordance with manufacturer's instructions colored to match (or contrast) with concrete color as specified by architect.
- E. Apply densifying impregnator undiluted at approximately 200 square feet per gallon using a stiff, long bristled broom. Cover the entire area liberally. Using a broom, work the densifier into the substrate for 30 minutes. During this 30-minute period, continually keep the substrate wet with densifier. Squeegee excess material off the floor. Allow 12 to 24 hours for full cure.
- F. Grind the floor to within 2 – 3 inches of walls with metal bonded diamond grits of 150 and 300—grinding 90 degrees from each previous grind and removing all the scratches from the previous grit. Vacuum the floor thoroughly after each grind using a squeegee vacuum attachment.

**ADDENDUM**

- G. (If specified) Grind the edges with 40, 60, 120 and 220 grit grinding pads removing all of the scratches from the previous grit. Vacuum the floor thoroughly after each grind using a squeegee vacuum attachment.
- H. Polish the floor, to desired sheen level, with phenolic resin bonded diamond grits of 100, 400, 800, 1500 and 3000—first polishing the edges (if specified) with pads of the same grit and then the field of the floor removing all scratches from the previous grit. After each polish, clean the floor thoroughly using clean water and an auto scrubber or a mop and a wet vacuum.
- I. After the floor has dried, apply densifier at a rate of 300 square feet per gallon. Using a broom, work the material into the floor for a minimum of 10 minutes. Tight squeegee the remaining material from the floor without leaving squeegee marks or puddles. Allow to cure for 12 – 24 hours.
- J. Using a high speed (2000 – 3000 rpm) burnishing machine and hogs hair burnishing pad, buff the surface to a high shine.
- K. Upon completion, the work shall be ready for final inspection and acceptance by the customer.

**3.2 CURING**

- A. Integrally Colored Concrete: Apply curing compound for integrally colored concrete according to manufacturer's instructions using manufacturer's recommended application techniques. Apply curing compound at consistent time for each pour to maintain close color consistency.
- B. Curing compound shall be same color as the colored concrete and supplied by same manufacturer of the colored admixture.
- C. Precautions shall be taken in hot weather to prevent plastic cracking resulting from excessively rapid drying at surface as described in CIP 5 *Plastic Shrinkage Cracking* published by the National Ready Mixed Concrete Association.
- D. Do not cover concrete with plastic sheeting.

**3.3 TOLERANCES**

- A. Minor variations in appearance of integrally colored concrete, which are similar to natural variations in color and appearance of uncolored concrete, are acceptable.

**3.7 CLEANING**

- A. The work area shall be kept clean and free of debris at all times.
- B. Remove slurry and dust from adjoining surfaces as necessary.
- C. Dispose of material containers in accordance with local regulations.
- D. Protect finished work until fully cured per manufacturer's recommendations.

**3.8 APPLICATORS**

- A. For a list of qualified contractors, contact your local Scofield representative or the appropriate Division Office: Eastern Division – 201-672-9050; Western Division – 714-568-1870; Central Division Office – 630-377-5959.

**PART 4 – SCHEDULES**

**ADDENDUM**

## 4.1 CUT AND SHINE LEVELS

- A. Cut Level (Depth of cut)
  - 1. Grade 1 – cream finish
  - 2. Grade 2 – light exposure of course aggregate
  - 3. Grade 3 – heavy exposure of course aggregate
- B. Shine Level
  - 1. Class 1 – 400 grit polish
  - 2. Class 2 – 800 grit polish
  - 3. Class 3 – 1500 grit polish
- C. Polished concrete finish coat
  - 1. At a distance of 100 feet, the floor will reflect images from side lighting.
  - 2. Apply two applications of SCOFIELD® Finish Coat.
- D. Specified for project
  - Grade: cream finish
  - Class: 1500 grit polish
  - Finish Coat applications: Apply two applications of SCOFIELD® Finish Coat

END OF SECTION 03360

**FULTON COUNTY FIRE STATION #11****16200-1****KHAFRA 10ATL02-55****EMERGENCY/STANDBY POWER SYSTEMS****ADDENDUM****SECTION 16200 - EMERGENCY/STANDBY POWER SYSTEMS DIESEL  
GENERATOR SETS WITH GENERATOR CONTROLS (35-1500 KW)****PART 1. GENERAL:****1.1 SCOPE:**

- A. All work specified in this section shall comply with Sections 16010, 16020 and 16030.
- B. This specification defines requirements for an emergency standby engine/generator system to be installed as per plans and specifications. System shall provide for completely automatic unattended operation, for the duration of any loss of normal utility power.
- C. Provide complete factory assembled generator set equipment with digital electronic controls.
- D. Provide factory test, startup by a supplier authorized by the manufacturer, and on-site testing of the system.
- E. The generator set manufacturer shall warrant all equipment provided under this section, whether or not is manufactured by the generator set manufacturer, so that there is one source for warranty and product service. Warranty to be furnished for a period of two (2) years from date of Owner's acceptance of equipment. Warranty shall consist of repair and/or replacement of all parts judged defective due to faulty material or workmanship, at no charge to the Owner. Technicians specifically trained and certified by the manufacturer to support the product and employed by the generator set supplier shall service the generator sets.
- F. Unit shall be equipped for outdoor installation as shown on drawings.

**1.2 CODES AND STANDARDS:**

- A. The generator set and its installation and on-site testing shall conform to the requirements of the following codes and standards:
  - 1. CSA C22.2, No. 14 – M91 Industrial Control Equipment.
  - 2. CSA 282, 2009 Emergency Electrical Power Supply for Buildings
  - 3. EN50082-2, Electromagnetic Compatibility – Generic Immunity Requirements, Part 2: Industrial.
  - 4. EN55011, Limits and Methods of Measurement of Radio Interference Characteristics of Industrial, Scientific and Medical Equipment.
  - 5. FCC Part 15, Subpart B.
  - 6. IEC8528 part 4. Control Systems for Generator Sets
  - 7. IEC Std 801.2, 801.3, and 801.5 for susceptibility, conducted, and radiated electromagnetic emissions.

8. IEEE446 – Recommended Practice for Emergency and Standby Power Systems for Commercial and Industrial Applications
  9. IEEE587 for voltage surge resistance.
  10. Mil Std 461D –1993. Military Standard, Electromagnetic Interference Characteristics.
  11. Mil Std 462D - 1999. Military Standard, Measurement of Electromagnetic Interference Characteristics.
  12. NEMA ICS10-2010 – AC Generator sets
  13. NFPA70 – National Electric Code. Equipment shall be suitable for use in systems in compliance to Article 700, 701 & 702.
  14. NFPA110 – Emergency and Standby Power Systems. The generator set shall meet all requirements for Level 1 systems. Level 1 prototype tests required by this standard shall have been performed on a complete and functional unit, component level type tests will not substitute for this requirement.
  15. UL508. The entire control system of the generator set shall be UL508 listed and labeled.
  16. UL2200. The genset shall be listed to UL2200 or submit to an independent third party certification process to verify compliance as installed.
- B. The generator set manufacturer shall be certified to ISO 9001 International Quality Standard and shall have third party certification verifying quality assurance in design/development, production, installation, and service, in accordance with ISO 9001.

**PART 2. PRODUCTS:**

**2.1 ACCEPTABLE MANUFACTURERS**

- A. Qualification of Vendor: Vendor shall have produced such equipment for ten years, and services available on a 24-hour basis and shall substantiate to the Owner that he is qualified to fulfill these specifications prior to acceptance. Vendor shall have and maintain a fully qualified and factory trained maintenance and repair service staff available to the owner and located within a radius of 100 miles from the job site.

**2.2 EQUIPMENT:**

**A. GENERATOR SET:**

1. Ratings:
  - a. The generator set shall operate at 1800 rpm and at a voltage of 208 volts AC, 3-phase, 4-wire, 60 hertz.
  - b. The generator set shall be rated at 150kW, 187.5 kVA at 0.8 PF, based on site conditions of : Altitude 1000ft. (304.8 meters), ambient temperatures up to 122 degrees F (50 degrees C).
  - c. The generator set rating shall be based on emergency/standby service.
2. Performance:
  - a. Voltage regulation shall be plus or minus 1.0 percent for any constant load between no load and rated load for both parallel and non-parallel applications. Random

- voltage variation with any steady load from no load to full load shall not exceed plus or minus 0.5 percent.
- b. Frequency regulation shall be isochronous from steady state no load to steady state rated load. Random frequency variation with any steady load from no load to full load shall not exceed plus or minus 0.25%.
  - c. The diesel 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.
  - d. Motor starting capability shall be a minimum of 45 kVA. The generator set shall be capable of sustaining a minimum of 90% of rated no load voltage with the specified kVA load at near zero power factor applied to the generator set.
  - e. The alternator shall produce a clean AC voltage waveform, with not more than 5% total harmonic distortion at full linear load, when measured from line to neutral, and with not more than 3% in any single harmonic. Telephone influence factor shall be less than 40.
3. Construction:
- a. The engine-generator set shall be mounted on a heavy-duty steel base to maintain alignment between components. The base shall incorporate a battery tray with hold-down clamps within the rails.
  - b. All switches, lamps, and meters in the control system shall be oil-tight and dust-tight, and the enclosure door shall be gasketed. There shall be no exposed points in the control (with the door open) that operate in excess of 50 volts.
4. Connections:
- a. The generator set load connections shall be composed of silver or tin plated copper bus bars, drilled to accept mechanical or compression terminations of the number and type as shown on the drawings. Sufficient lug space shall be provided for use with cables of the number and size as shown on the drawings.
  - b. Power connections to auxiliary devices shall be made at the devices, with protection located at a wall-mounted common distribution panel. All devices requiring A.C. service (battery charger, water jacket heater, battery heaters, etc.) connected to an A.C. service panel installed inside the enclosure. This common distribution panel shall be mounted in an accessible location equipped with branch breakers as required.
  - c. Generator set control interfaces to other system components shall be made on a common, permanently labeled terminal block assembly.

**B. ENGINE AND ENGINE EQUIPMENT:**

1. The engine shall be diesel, 4 cycle, radiator and fan cooled. Minimum displacement shall be 543 cubic inches, with 6 cylinders. The horsepower rating of the engine at its minimum tolerance level shall be sufficient to drive the alternator and all connected accessories. Two cycle engines are not acceptable. Engine accessories and features shall include:
2. An electronic governor system shall provide automatic isochronous frequency regulation. The governing system dynamic capabilities shall be controlled as a function of engine coolant temperature to provide fast, stable operation at varying engine operating temperature conditions. The control system shall actively control the fuel rate and

- excitation as appropriate to the state of the generator set. Fuel rate shall be regulated as a function of starting, accelerating to start disconnect speed, accelerating to rated speed, and operating in various isochronous or parallel states.
3. Skid-mounted radiator and cooling system rated for full load operation in 122 degrees F (50 degrees C) ambient as measured at the generator air inlet, based on 0.5 in H<sub>2</sub>O external static head. Radiator shall be sized based on a core temperature which is 20F higher than the rated operation temperature, or prototype tested to verify cooling performance of the engine/radiator/fan operation in a controlled environment. Radiator shall be provided with a duct adapter flange. The cooling system shall be filled with a 50/50-ethylene glycol/water mixture by the equipment manufacturer. Rotating parts shall be guarded against accidental contact.
  4. Electric starter(s) capable of three complete cranking cycles without overheating.
  5. Positive displacement, mechanical, full pressure, lubrication oil pump.
  6. Full flow lubrication oil filters with replaceable spin-on canister elements and dipstick oil level indicator.
  7. An engine driven, mechanical, positive displacement fuel pump. Fuel filter with replaceable spin-on canister element. Fuel cooler, suitable for operation of the generator set at full rated load in the ambient temperature specified shall be provided if required for operation due to the design of the engine and the installation.
  8. Replaceable dry element air cleaner with restriction indicator.
  9. Flexible supply and return fuel lines.
  10. Engine mounted battery charging alternator, 40-ampere minimum, and solid-state voltage regulator.
  11. Coolant heater
    - a. Engine mounted, thermostatically controlled, coolant heater(s) for each engine. Heater voltage shall be as shown on the project drawings. The coolant heater shall be UL499 listed and labeled.
    - b. The coolant heater shall be installed on the engine with silicone hose connections. Steel tubing shall be used for connections into the engine coolant system wherever the length of pipe run exceeds 12 inches. The coolant heater installation shall be specifically designed to provide proper venting of the system. The coolant heaters shall be installed using quick disconnect couplers to isolate the heater for replacement of the heater element. The quick disconnect/automatic sealing couplers shall allow the heater element to be replaced without draining the engine cooling system or significant coolant loss.
    - c. The coolant heater shall be provided with a 24VDC thermostat, installed at the engine thermostat housing. An AC power connection box shall be provided for a single AC power connection to the coolant heater system.
    - d. The coolant heater(s) shall be sized as recommended by the engine manufacturer to warm the engine to a minimum of 100F (40C) in a 40F ambient, in compliance with NFPA110 requirements, or the temperature required for starting and load pickup requirements of this specification.
  12. Provide vibration isolators, spring/rubber pad type, quantity as recommended by the generator set manufacturer. Isolators shall include seismic restraints if required by site location.

13. Starting and Control Batteries shall be calcium/lead antimony type, 24 volt DC, sized as recommended by the engine manufacturer, complete with battery cables and connectors. Battery heater pads shall be furnished on outdoor installations.
14. Provide exhaust silencer(s) for each engine of size and type as recommended by the generator set manufacturer and approved by the engine manufacturer. The mufflers shall be critical grade. Exhaust system shall be installed according to the engine manufacturer's recommendations and applicable codes and standards.
15. A UL listed/CSA certified 10 amp voltage regulated battery charger shall be provided for each engine-generator set. The charger may be located in an automatic transfer switch, or may be wall mounted, at the discretion of the installer. Input AC voltage and DC output voltage shall be as required. Chargers shall be equipped with float, taper and equalize charge settings. Operational monitors shall provide visual output along with individual form C contacts rated at 4 amps, 120 VAC, 30VDC for remote indication of:
  - a. Loss of AC power – red light
  - b. Low battery voltage – red light
  - c. Power ON – green light (no relay contact)
  - d. Charger shall include an Analog DC voltmeter and ammeter, 12 hour equalize charge timer, and AC and DC fuses.
16. *Provide a dual wall sub-base fuel storage tank with 900 gallons capacity. The tank shall be constructed of corrosion resistant steel and shall be UL listed. The equipment, as installed, shall meet all local and regional requirements for above ground tanks.*

C. AC GENERATOR:

1. The AC generator shall be; synchronous, four pole, 2/3 pitch, revolving field, drip-proof construction, single prelubricated sealed bearing, air cooled by a direct drive centrifugal blower fan, and directly connected to the engine with flexible drive disc. All insulation system components shall meet NEMA MG1 temperature limits for Class H insulation system. Actual temperature rise measured by resistance method at full load shall not exceed 125 degrees Centigrade.
2. The generator shall be capable of delivering rated output (kVA) at rated frequency and power factor, at any voltage not more than 5 percent above or below rated voltage.
3. A permanent magnet generator (PMG) shall be included to provide a reliable source of excitation power for optimum motor starting and short circuit performance. The PMG and controls shall be capable of sustaining and regulating current supplied to a 1-phase or 3-phase fault at approximately 300% of rated current for not more than 10 seconds.
4. The subtransient reactance of the alternator shall not exceed 12 percent, based on the standby rating of the generator set.

C. GENERATOR SET CONTROL:

1. The generator set shall be provided with a microprocessor-based control system that is designed to provide automatic starting, monitoring, and control functions for the generator set. The control system shall also be designed to allow local monitoring and control of the generator set, and remote monitoring and control as described in this specification.
2. The control shall be mounted on the generator set. The control shall be vibration isolated and prototype tested to verify the durability of all components in the system under the vibration conditions encountered.
3. The generator set mounted control shall include the following features and functions:
4. CONTROL SWITCHES:
  - a. Mode Select Switch. The mode select switch shall initiate the following control modes. When in the RUN mode or Manual position the generator set shall start, and accelerate to rated speed and voltage as directed by the operator. In the OFF position the generator set shall immediately stop, bypassing all time delays. In the AUTO position, the generator set shall be ready to accept a signal from a remote device to start and accelerate to rated speed and voltage.
  - b. EMERGENCY STOP switch. Switch shall be Red “mushroom-head” push-button. Depressing the emergency stop switch shall cause the generator set to immediately shut down, and be locked out from automatic restarting.
  - c. RESET switch. The RESET switch shall be used to clear a fault and allow restarting the generator set after it has shut down for any fault condition.
  - d. PANEL LAMP switch. Depressing the panel lamp switch shall cause the entire panel to be lighting with DC control power. The panel lamps shall automatically be switched off 10 minutes after the switch is depressed a second time.
5. Generator set AC output metering. The generator set shall be provided with a metering set including the following features and functions:
  - a. Analog voltmeter, ammeter, frequency meter, and kilowatt (kW) meter. Voltmeter and ammeter shall display all 3 phases. Ammeter and kW meter scales shall be color coded in the following fashion: readings from 0-90% of generator set standby rating: green; readings from 90-100% of standby rating: amber; readings in excess of 100%: red.
  - b. Digital metering set, 0.5% accuracy, to indicate generator RMS voltage and current, frequency, output current, output kW, kW-hours, and power factor. Generator output voltage shall be available in line-to-line and line-to-neutral voltages, and shall display all 3 phase voltages (line-to-neutral or line-to-line) simultaneously.
  - c. Both analog and digital metering are required. The analog and digital metering equipment shall be driven by a single microprocessor, to provide consistent readings and performance.
6. Generator set alarm and status display:
  - a. The generator set shall be provided with alarm and status indicating lamps to indicate non-automatic generator status, and existing warning and shutdown conditions. The lamps shall be high-intensity LED type. The lamp condition shall be clearly apparent under bright room lighting conditions. The generator set control shall indicate the existence of the following alarm and shutdown conditions on an alphanumeric digital display panel:
    - 1) Low oil pressure (alarm)
    - 2) Low oil pressure (shutdown)

- 3) Oil pressure sender failure (alarm)
  - 4) Low coolant temperature (alarm)
  - 5) High coolant temperature (alarm)
  - 6) High coolant temperature (shutdown)
  - 7) Engine temperature sender failure (alarm)
  - 8) Low coolant level (alarm or shutdown – selectable)
  - 9) Fail to crank (shutdown)
  - 10) Fail to start/overcrank (shutdown)
  - 11) Overspeed (Shutdown)
  - 12) Low DC voltage (alarm)
  - 13) High DC voltage (alarm)
  - 14) Weak battery (alarm)
  - 15) Low fuel-daytank (alarm)
  - 16) High AC voltage (shutdown)
  - 17) Low AC voltage (shutdown)
  - 18) Under frequency (shutdown)
  - 19) Over current (warning)
  - 20) Over current (shutdown)
  - 21) Short circuit (shutdown)
  - 22) Ground fault (alarm) – (option)
  - 23) Over load (alarm)
  - 24) Emergency stop (shutdown)
- b. Provisions shall be made for indication of four customer-specified alarm or shutdown conditions. Labeling of the customer-specified alarm or shutdown conditions shall be of the same type and quality as the above specified conditions. The non-automatic indicating lamp shall be red, and shall flash to indicate that the generator set is not able to automatically respond to a command to start from a remote location.
7. Engine status monitoring
    - a. The following information shall be available from a digital status panel on the generator set control:
      - 1) Engine oil pressure (PSI or kPA)
      - 2) Engine coolant temperature (degrees F or C)
      - 3) Engine oil temperature (degrees F or C)
      - 4) Engine speed (RPM)
      - 5) # of hours of operation (hours)
      - 6) # of start attempts (#)
      - 7) Battery voltage (DC volts)
    - b. The control system shall also incorporate a data logging and display provision to allow logging of the last 10 warning or shutdown indications on the generator set, as well as total time of operation at various loads, as a % of the standby rating of the generator set.
  8. Engine control functions
    - a. The control system provided shall include a cycle cranking system, which allows for user selected crank time, rest time, and # of cycles. Initial settings shall be for 3

- cranking periods of 15 seconds each, with 15-second rest period between cranking periods.
- b. The control system shall include an idle mode control, which allows the engine to run in idle mode in the RUN position only. In this mode, the alternator excitation system shall be disabled.
  - c. The control system shall include an engine governor control, which functions to provide steady-state frequency regulation as noted elsewhere in this specification. The governor control shall include adjustments for gain, damping, and a ramping function to control engine speed and limit exhaust smoke while the unit is starting. The governor control shall be suitable for use in paralleling applications without component changes.
  - d. The control system shall include time delay start (adjustable 0-300 seconds) and time delay stop (adjustable 0-600 seconds) functions.
  - e. The control system shall include sender failure monitoring logic for speed sensing, oil pressure, and engine temperature which is capable of discriminating between failed sender or wiring components, and an actual failure conditions.
  - f. (Optional – for paralleling) The control system shall include all interfaces necessary for proper operation with the paralleling equipment provided under this contract. The generator set supplier shall be responsible for complete compliance to all specification requirements for both the generator set and the paralleling equipment.
9. Alternator Control Functions
- a. The generator set shall include an automatic digital voltage regulation system that is matched and prototype tested by the engine manufacturer with the governing system provided. It shall be immune from misoperation due to load-induced voltage waveform distortion and provide a pulse width modulated output to the alternator exciter. The voltage regulation system shall be equipped with three-phase RMS sensing and shall control buildup of AC generator voltage to provide a linear rise and limit overshoot. The system shall include a torque-matching characteristic, which shall reduce output voltage in proportion to frequency below a threshold of [58-59] HZ. The voltage regulator shall include adjustments for gain, damping, and frequency roll-off. Adjustments shall be broad range, and made via digital raise-lower switches, with an alphanumeric LED readout to indicate setting level. Rotary potentiometers for system adjustments are not acceptable.
  - b. Controls shall be provided to monitor the output current of the generator set and initiate an alarm (over current warning) when load current exceeds 110% of the rated current of the generator set on any phase for more than 60 seconds. The controls shall shut down and lock out the generator set when output current level approaches the thermal damage point of the alternator (over current shutdown). The protective functions provided shall be in compliance to the requirements of NFPA70 article 445.
  - c. Controls shall be provided to individually monitor all three phases of the output current for short circuit conditions. The control/protection system shall monitor the current level and voltage. The controls shall shut down and lock out the generator set when output current level approaches the thermal damage point of the alternator (short circuit shutdown). The protective functions provided shall be in compliance to the requirements of NFPA70 article 445.

- d. Controls shall be provided to monitor the KW load on the generator set, and initiate an alarm condition (over load) when total load on the generator set exceeds the generator set rating for in excess of 5 seconds. Controls shall include a load shed control, to operate a set of dry contacts (for use in shedding customer load devices) when the generator set is overloaded.
  - e. An AC over/under voltage monitoring system that responds only to true RMS voltage conditions shall be provided. The system shall initiate shutdown of the generator set when alternator output voltage exceeds 110% of the operator-set voltage level for more than 10 seconds, or with no intentional delay when voltage exceeds 130%. Under voltage shutdown shall occur when the output voltage of the alternator is less than 85% for more than 10 seconds.
  - f. A battery monitoring system shall be provided which initiates alarms when the DC control and starting voltage is less than 25VDC or more than 32 VDC. During engine cranking (starter engaged), the low voltage limit shall be disabled, and if DC voltage drops to less than 14.4 volts for more than two seconds a "weak battery" alarm shall be initiated.
10. Provide and install a 20-light LED type remote alarm annunciator with horn, located as shown on the drawings or in a location that can be conveniently monitored by facility personnel. The remote annunciator shall provide all the audible and visual alarms called for by NFPA Standard 110 for level 1 systems; and in addition shall provide indications for high battery voltage, low battery voltage, loss of normal power to the charger. Spare lamps shall be provided to allow future addition of other alarm and status functions to the annunciator. Provisions for labeling of the annunciator in a fashion consistent with the specified functions shall be provided. Alarm silence and lamp test switch(es) shall be provided. LED lamps shall be replaceable, and indicating lamp color shall be capable of changes needed for specific application requirements. Alarm horn shall be switchable for all annunciation points. Alarm horn (when switched on) shall sound for first fault, and all subsequent faults, regardless of whether first fault has been cleared, in compliance with NFPA110 3-5.6.2.
  11. The generator set shall be provided with a mounted main line circuit breaker, sized to carry the rated output current of the generator set on a continuous basis. The circuit breaker shall incorporate an electronic trip unit that operates to protect the alternator under all overcurrent conditions, or a thermal-magnetic trip with other overcurrent protection devices that positively protect the alternator under overcurrent conditions. The supplier shall submit time overcurrent characteristic curves and thermal damage curve for the alternator, demonstrating the effectiveness of the protection provided.
- D. Outdoor Weather-Protective Sound Attenuated Housing
1. The generator set shall be provided with a sound-attenuated housing which allows the generator set to operate at full rated load in the ambient conditions previously specified. The enclosure shall reduce the sound level of the generator set while operating at full rated load to a maximum of \_\_\_\_ dBA at any location 7 meters from the generator set in a free field environment. Housing configuration and materials used may be of any suitable design which meets application needs, except that acoustical materials used shall be oil and water resistant. No foam materials shall be used unless they can be demonstrated to have the same durability and life as fiberglass.

2. The enclosure shall include hinged doors for access to both sides of the engine and alternator, and the control equipment. Key-locking and padlockable door latches shall be provided for all doors. Door hinges shall be stainless steel.
3. The enclosure shall be provided with an exhaust silencer which is mounted inside of the enclosure, and allows the generator set package to meet specified sound level requirements. Silencer and exhaust shall include a raincap and rainshield.
4. All sheetmetal shall be primed for corrosion protection and finish painted with the manufacturers standard color. All surfaces of all metal parts shall be primed and painted.
5. Painting of hoses, clamps, wiring harnesses, and other non-metallic service parts shall not be acceptable. Fasteners used shall be corrosion resistant, and designed to minimize marring of the painted surface when removed for normal installation or service work.
6. Lighting shall be provided within weatherproof housing.

**PART 3. OPERATION:**

**3.1 SEQUENCE OF OPERATION:**

- A. Generator set shall start on receipt of a start signal from remote equipment. The start signal shall be via hardwired connection to the generator set control and a redundant signal over the required network connection.
- B. The generator set shall complete a time delay start period as programmed into the control.
- C. The generator set control shall initiate the starting sequence for the generator set. The starting sequence shall include the following functions:
  1. The control system shall verify that the engine is rotating when the starter is signaled to operate. If the engine does not rotate after two attempts, the control system shall shut down and lock out the generator set, and indicate "fail to crank" shutdown.
  2. The engine shall fire and accelerate as quickly as practical to start disconnect speed. If the engine does not start, it shall complete a cycle cranking process as described elsewhere in this specification. If the engine has not started by the completion of the cycle cranking sequence, it shall be shut down and locked out, and the control system shall indicate "fail to start".
  3. The engine shall accelerate to rated speed and the alternator to rated voltage. Excitation shall be disabled until the engine has exceeded programmed idle speed, and regulated to prevent over voltage conditions and oscillation as the engine accelerates and the alternator builds to rated voltage.
- D. On reaching rated speed and voltage, the generator set shall operate as dictated by the control system in isochronous, synchronize, load share, load demand, or load govern state.

- E. When all start signals have been removed from the generator set, it shall complete a time delay stop sequence. The duration of the time delay stop period shall be adjustable by the operator.
- F. On completion of the time delay stop period, the generator set control shall switch off the excitation system and shall shut down.
  - 1. Any start signal received after the time stop sequence has begun shall immediately terminate the stopping sequence and return the generator set to isochronous operation.

**PART 4. OTHER REQUIREMENTS:**

- 4.1 Submittals should comply with section 16010. The following information is also to be provided:
  - A. Manufacturer's product literature and performance data, sufficient to verify compliance to specification requirements.
  - B. A paragraph by paragraph specification compliance statement, describing the differences between the specified and the proposed equipment.
  - C. Manufacturer's certification of prototype testing.
  - D. Manufacturer's published warranty documents.
  - E. Shop drawings showing plan and elevation views with certified overall dimensions, as well as wiring interconnection details.
  - F. Interconnection wiring diagrams showing all external connections required; with field wiring terminals marked in a consistent point-to-point manner.
  - G. Manufacturer's installation instructions.
- 4.2 FACTORY TESTING:
  - A. The generator set manufacturer shall perform a complete operational test on the generator set prior to shipping from the factory. A certified test report shall be provided. Equipment supplied shall be fully tested at the factory for function and performance.
  - B. Factory testing may be witnessed by the owner and consulting engineer. Costs for travel expenses will be the responsibility of the owner and consulting engineer. Supplier is responsible to provide two weeks notice for testing.
  - C. Generator set factory tests on the equipment shall be performed at rated load and rated power factor. Generator sets that have not been factory tested at rated power factor will not be acceptable. Tests shall include: run at full load, maximum power, voltage regulation, transient and steady-state governing, single step load pickup, and function of safety shutdowns.

4.3 INSTALLATION:

- A. Provide the services of a factory trained engineer for periodic job site visits during installation to insure that the system is being installed in accordance with manufacturer's recommendations.
- B. Installation shall comply with applicable state and local codes as required by the authority having jurisdiction. Install equipment in accordance with manufacturer's instructions and instructions included in the listing or labeling of UL listed products.
- C. Installation of equipment shall include furnishing and installing all interconnecting wiring between all major equipment provided for the on-site power system. The contractor shall also perform interconnecting wiring between equipment sections (when required), under the supervision of the equipment supplier.
- D. Equipment shall be installed on concrete housekeeping pads. Equipment shall be permanently fastened to the pad in accordance with manufacturer's instructions and seismic requirements of the site.
- E. Equipment shall be initially started and operated by representatives of the manufacturer.
- F. All equipment shall be physically inspected for damage. Scratches and other installation damage shall be repaired prior to final system testing. Equipment shall be thoroughly cleaned to remove all dirt and construction debris prior to initial operation and final testing of the system.

4.4 ON-SITE ACCEPTANCE TEST:

- A. The complete installation shall be tested for compliance with the specification following completion of all site work. Testing shall be conducted by representatives of the manufacturer, with required fuel supplied by Contractor. The Engineer shall be notified in advance and shall have the option to witness the tests.
- B. Installation acceptance tests to be conducted on-site shall include a "cold start" test, a two hour full load test, and a one step rated load pickup test in accordance with NFPA 110. Provide a resistive load bank and make temporary connections for full load test, if necessary.
- C. Perform a power failure test on the entire installed system. This test shall be conducted by opening the power supply from the utility service, and observing proper operation of the system for at least 2 hours. Coordinate timing and obtain approval for start of test with site personnel.
- D. Following testing and acceptance of system by Owner, contractor to fill tank to its capacity.

4.5 TRAINING:

- A. After owner acceptance, Contractor and/or vendor shall provide training for the facility operating personnel covering operation and maintenance of the equipment provided. The training program shall be not less than 4 hours in duration and the class size shall be limited to 5 persons. Training date shall be coordinated with the facility owner.

4.6 SERVICE AND SUPPORT:

- A. The manufacturer of the generator set shall maintain service parts inventory which is accessible to the service location 24 hours per day, 365 days per year.
- B. The generator set shall be serviced by a local service organization that is trained and factory certified in generator set service. The supplier shall maintain an inventory of critical replacement parts at the local service organization, and in service vehicles. The service organization shall be on call 24 hours per day, 365 days per year.
- C. The manufacturer shall maintain model and serial number records of each generator set provided for at least 10 years.

4.7 WARRANTY:

- A. The generator set and associated equipment shall be warranted for a period of not less than 2 years from the date of commissioning against defects in materials and workmanship.
- B. The warranty shall be comprehensive. No deductibles shall be allowed for travel time, service hours, repair parts cost, etc.

END OF SECTION 16200

**FULTON COUNTY FIRE STATION #11**  
**KHAFRA 10ATL02-55**  
**ADDENDUM**

**16210-1**  
**AUTOMATIC TRANSFER SWITCHES**

SECTION 16210 - AUTOMATIC TRANSFER SWITCHES

PART 1 - GENERAL:

1.1 WORK DESCRIPTION:

- A. Furnish and install automatic transfer switch(es) with the number of poles, amperage, and voltage and withstand ratings as shown on the Drawings, and in accordance to the following specifications.
- B. Provisions shall be provided in the automatic transfer switches to allow emergency power to be supplied to the loads on a priority basis as determined by the central emergency power system.

- 1.2 The complete system shall be built, tested and shipped by a manufacturer who had provided such equipment for 10 years and who maintains a full parts stock within 120 miles of the project site.

PART 2 - PRODUCTS:

2.1 SWITCHES:

- A. Each automatic transfer switch shall consist of a power transfer module and a control module, interconnected to provide complete automatic operation.
- B. The automatic transfer switch shall be mechanically held and electrically operated by a single-solenoid mechanism energized from the source to which the load is to be transferred.
- C. The switch shall be rated for continuous duty and be inherently double throw with normal and emergency contacts moving simultaneously. The switch shall be mechanically interlocked to ensure only one of two possible positions: Normal and Emergency. Transfer switches with programmed neutral positions are not acceptable.
- D. The automatic transfer switch shall be suitable for use with emergency sources such as an engine or turbine driven generator source or another utility source.
- E. All main contacts shall be of silver composition. They shall be protected by arching contacts in sizes 400 amperes and over. They shall be of the blow-on configuration and have segmented or brush construction in ratings of 600 amperes and over. The operating transfer time in either direction shall not exceed one-sixth (1/6) of a second.

**ADDENDUM**

- F. The operating speed of the by-pass switch contacts shall be the same as the automatic transfer switch and independent of the speed of operation of the by-pass handle.
- G. All contacts, coils, springs and control elements shall be conveniently removable from the front of the transfer switch without major disassembly or disconnection of power conductors.
- H. Automatic transfer switches utilizing components of molded-case circuit breakers, contactors, or parts thereof which have not been intended for continuous duty of repetitive load transfer switching are NOT acceptable.
- I. The automatic transfer switch shall conform to the requirements of NEMA Standard ICS 2-447 and Underwriters Laboratories UL-1008 and shall be UL listed as follows:
  - 1. For use in emergency systems in accordance with Articles 517 and 700 of the National Electrical Code.
  - 2. Rated in amperes for total system transfer including control of motors, electric-discharge lamps, electric-heating and tungsten-filament lamp loads as referred to in Paragraph 30.9 of UL-1008.
- J. The control module shall be supplied with a protective cover and be mounted separately from the transfer switch for ease of maintenance. Sensing and control logic shall be solid-state and mounted on plug-in printed circuit boards. Printed circuit boards shall be keyed to prevent incorrect installation. Interfacing relays shall be industrial control grade plug-in type with dust covers. Neutral contacts shall be of the "overlapping neutral type". The following shall be provided:
  - 1. All phases of the normal shall be monitored line-to-line. Close differential voltage sensing of all phases shall be provided. The pickup voltage shall be adjustable from 85% to 100% of nominal and the dropout voltage shall be adjustable from 75% to 95% of the pickup value. The transfer of
  - 2. emergency will be initiated upon reduction of normal source to 95% of nominal voltage and re-transfer to normal shall occur when normal source restores to 95% of nominal.
  - 3. A time delay to override momentary normal source to delay all transfer switch and engine starting signals. The time delay shall be field adjustable from 0.5 to 6 seconds and factory set at 1 second.
  - 4. A time delay on re-transfer to normal source. The time delay shall be automatically bypassed if the emergency source fails and normal source is available. The time delay shall be field adjustable from 0 to 30 minutes and factory set at 30 minutes.
  - 5. An unloaded running time delay for emergency generator cool-down. The time delay

shall be field adjustable from 0 to 5 minutes and factory set at 5 minutes.

6. Independent single-phase voltage and frequency sensing of emergency source. The pickup voltage shall be adjustable from 85% to 100% of nominal. Pickup frequency shall be adjustable from 90% to 100% of nominal. Transfer to emergency upon normal source failure when emergency source voltage is 90% or more of nominal and frequency is 95% or more of nominal.
7. A contact that closes when normal source fails for initiating engine starting, rated 10 amps, 32 VDC. Contacts to be gold-plated for low voltage service.
8. A contact that opens when normal source fails for initiating engine starting, rated 10 amps, 32 VDC. Contacts to be gold-plated for low voltage service.
9. A white signal light to indicate when the automatic transfer switch is connected to the normal source. A yellow signal light to indicate when the automatic transfer switch is connected to the emergency source.
10. One auxiliary contact that is closed when the automatic transfer switch is connected to normal and one auxiliary contact that is closed when the automatic switch is connected to emergency. Rated 10 amps, 480 volts, 60 Hz, AC.
11. A test switch to momentarily simulate normal source failure. (Test switch will simulate peak demand signal on peak shaving switch.)
12. Harnessing between transfer switch and control panel shall have built-in disconnect for routine maintenance.
13. Manual operator for purposes of maintenance only.
14. Additional control circuit on switches connected to:
  - a. Provide capability to inhibit transfer to emergency until remote signal from emergency power system initiates transfer.
  - b. Load shed to dead "normal" circuitry.
  - c. Any additional circuitry required for the transfer switches to operate as described in Sections 2 and 3 below.
15. To avoid excessive motor in-rush currents, an integrally-mounted variable window in-phase monitor shall inhibit transfer-retransfer until the relative phase angle between the two live sources is plus or minus 10 electrical degrees with a frequency difference range of plus or minus 1 Hertz. Monitor shall be completely contained within the transfer switch, not require any control wiring to generator governor, and shall be bypassed if load carrying source fails and the alternative source is not available. This feature shall be provided on all transfer switches serving motors of 40 HP and above.

- K. The automatic transfer switch shall be mounted in a NEMA 1 non-ventilated wall-mounted enclosure.

2.2 EMERGENCY OPERATIONS:

- A. When normal source voltage on any phase drops to 85% of nominal voltage for one (1) second at the transfer switch, the engine start controls shall be initiated. When the emergency source is on line, the switch shall transfer to the emergency source feed. Transfer to emergency shall require less than 10 seconds.
- B. Where emergency loads are prioritized, loads shall be transferred to the emergency source in order of priority. If loads must be shed due to emergency power system malfunction or overloading, lower priority loads shall be shed first.
- C. Prioritized transfer switches shall transfer to the emergency position only when given proper signal from the central controller, located in a remote area.
- D. Upon restoration of normal power to 90% or more of nominal for an adjustable period of 0-30 minutes at the transfer switch, the load shall be retransferred to the normal source and engine start signals disconnected from the emergency power system. All controls shall automatically reset for the next operation.

PART 3 - EXECUTION:

3.1 TESTS:

- A. Certified independent laboratory tests data on a switch of the same design and rating shall be provided by the automatic switch manufacturer to confirm the following switching abilities:
  1. Overload and endurance at 480 volts AC per Tables 21.2 and 23.2 of UL-1008 when enclosed according to Paragraph 1.6.
  2. Temperature rise test after the overload and endurance tests to confirm the ability of the transfer switches to carry their rated current within the allowable temperature limits of the insulation in contact with current-carrying parts.
  3. Withstand current tests per Paragraph 25 of UL-1008 for 40,000 amperes RMS symmetrical, at 480 volts and an X/R Ratio of 6.6.
  4. No welding of contacts. Transfer switch must be operable by the normal means after the withstand current tests.

5. Dielectric tests at 1960 volts, RMS, minimum after the withstand current test.
- B. All production units should be subjected to the following factory tests:
1. The complete automatic transfer switch shall be tested to ensure proper operation of the individual components and correct overall sequence of operation and to ensure that the operating transfer time, voltage, frequency, and time delay settings are in compliance with the specification requirements.
  2. The complete automatic transfer switch shall be subjected to a dielectric strength test per NEMA Standard ICS 1-109.05.
- C. The control panel shall meet or exceed the voltage surge withstand capability in accordance with IEEE Standard 472-1974 (ANSI C37.90a-1974) and the impulse withstand voltage test in accordance with the proposed NEMA Standard ICS 1-109.
- 3.2 CERTIFICATION: The manufacturer shall provide a notarized letter certifying compliance with all requirements of this specification. The certification shall identify, by serial number(s), the equipment involved. No exceptions to the specifications, other than those stipulated at the time of submittal, shall be included in the certification. Manufacturer shall provide start-up service to place system in operation.
- 3.3 OPERATOR'S MANUAL: Each transfer switch shall be furnished with an operator's manual providing installation and operating instructions.
- 3.4 INSTALLATION:
- A. Install transfer as indicated on the drawings.
  - B. All free standing switches to be on 4" reinforced concrete pad.

END OF SECTION

**ADDENDUM**

## SECTION 08174 - FRP FLUSH DOORS

## PART 1 - GENERAL

## 1.1 SECTION INCLUDES

- A. Fiberglass reinforced polyester (FRP) flush doors with aluminum frames.

## 1.2 RELATED SECTIONS

- A. Section 08710- Door Hardware.

## 1.3 REFERENCES

- A. AAMA 1503-98 - Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections.
- B. ANSI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors and Hardware Reinforcings.
- C. ASTM B 117 - Operating Salt Spray (Fog) Apparatus.
- D. ASTM B 209 - Aluminum and Aluminum-Alloy Sheet and Plate.
- E. ASTM B 221 - Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- F. ASTM D 256 - Determining the Pendulum Impact Resistance of Notched Specimens of Plastics.
- G. ASTM D 543 - Evaluating the Resistance of Plastics to Chemical Reagents.
- H. ASTM D 570 - Water Absorption of Plastics.
- I. ASTM D 638 - Tensile Properties of Plastics.
- J. ASTM D 790 - Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- K. ASTM D 1308 - Effect of Household Chemicals on Clear and Pigmented Organic Finishes.
- L. ASTM D 1621 - Compressive Properties of Rigid Cellular Plastics.
- M. ASTM D 1623 - Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics.
- N. ASTM D 2126 - Response of Rigid Cellular Plastics to Thermal and Humid Aging.
- O. ASTM D 2583 - Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.

**ADDENDUM**

- P. ASTM D 5420 – Impact Resistance of Flat Rigid Plastic Specimens by Means of a Falling Weight.
- Q. ASTM D 6670-01 - Standard Practice for Full-Scale Chamber Determination of Volatile Organic Emissions from Indoor Materials/Products.
- R. ASTM E 84 - Surface Burning Characteristics of Building Materials.
- S. ASTM E 90 - Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions.
- T. ASTM E 283 - Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
- U. ASTM E 330 - Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
- V. ASTM E 331 - Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
- W. ASTM F 476 - Security of Swinging Door Assemblies.
- X. ASTM F 1642-04 – Standard Test Method for Glazing Systems Subject to Air blast Loading.
- Y. NWWDA T.M. 7-90 – Cycle Slam Test Method
- Z. SFBC PA 201 - Impact Test Procedures.
- AA. SFBC PA 203 - Criteria for Testing Products Subject to Cyclic Wind Pressure Loading.
- AB. SFBC 3603.2 (b)(5) - Forced Entry Resistance Test.

**1.4 PERFORMANCE REQUIREMENTS**

- A. General: Provide door assemblies that have been designed and fabricated to comply with specified performance requirements, as demonstrated by testing manufacturer's corresponding standard systems.
- B. Air Infiltration: For a single door 3'-0" x 7'-0", test specimen shall be tested in accordance with ASTM E 283 at pressure differential of 6.24 psf. Door shall not exceed 0.90 cfm per linear foot of perimeter crack.
- C. Water Resistance: For a single door 3'-0" x 7'-0", test specimen shall be tested in accordance with ASTM E 331 at pressure differential of 7.50 psf. Door shall not have water leakage.

**ADDENDUM**

- D. Indoor air quality testing per ASTM D 6670-01: GREENGUARD Environmental Institute Certified including GREENGUARD for Children and Schools Certification.
- E. Blast Test, Doors and Frames, ASTM F 1642-04, 6 psi / 41 psi-msec: Minimal Hazard.
- F. Swinging Door Cycle Test, Doors and Frames, ANSI A250.4: Minimum of 25,000,000 cycles.
- G. Cycle Slam Test Method, NWWDA T.M. 7-90: Minimum 5,000,000 Cycles.
- H. Swinging Security Door Assembly, Doors and Frames, ASTM F 476: Grade 40.
- I. Salt Spray, Exterior Doors and Frames, ASTM B 117: Minimum of 500 hours.
- j. Sound Transmission, Exterior Doors, STC, ASTM E 90: Minimum of 25.
- K. Thermal Transmission, Exterior Doors, U-Value, AAMA 1503-98: Maximum of 0.29 BTU/hr x sf x degrees F. Minimum of 55 CRF value.
- L. Surface Burning Characteristics, FRP Doors and Panels, ASTM E 84:
  - 1. Flame Spread: Maximum of 200, Class C.
  - 2. Smoke Developed: Maximum of 450, Class C.
- M. Surface Burning Characteristics, Class A Option On Interior Faces of FRP Exterior Panels and Both Faces of FRP Interior Panels, ASTM E 84:
  - 1. Flame Spread: Maximum of 25.
  - 2. Smoke Developed: Maximum of 450.
- N. Impact Strength, FRP Doors and Panels, Nominal Value, ASTM D 256: 15.0 foot-pounds per inch of notch.
- O. Tensile Strength, FRP Doors and Panels, Nominal Value, ASTM D 638: 14,000 psi.
- P. Flexural Strength, FRP Doors and Panels, Nominal Value, ASTM D 790: 21,000 psi.
- Q. Water Absorption, FRP Doors and Panels, Nominal Value, ASTM D 570: 0.20 percent after 24 hours.
- R. Indentation Hardness, FRP Doors and Panels, Nominal Value, ASTM D 2583: 55.
- S. Gardner Impact Strength, FRP Doors and Panels, Nominal Value, ASTM D 5420: 120 in-lb.
- T. Abrasion Resistance, Face Sheet, Taber Abrasion Test, 25 Cycles at 1,000 Gram Weight with CS-17 Wheel: Maximum of 0.029 average weight loss percentage.

**ADDENDUM**

- U. Stain Resistance, ASTM D 1308: Face sheet unaffected after exposure to red cabbage, tea, and tomato acid. Stain removed easily with mild abrasive or FRP cleaner when exposed to crayon and crankcase oil.
  - V. Chemical Resistance, ASTM D 543. Excellent rating.
    - 1. Acetic acid, Concentrated.
    - 2. Ammonium Hydroxide, Concentrated.
    - 3. Citric Acid, 10%.
    - 4. Formaldehyde.
    - 5. Hydrochloric Acid, 10%
    - 6. Sodium hypochlorite, 4 to 6 percent solution.
  - W. Compressive Strength, Foam Core, Nominal Value, ASTM D 1621: 79.9 psi.
  - X. Compressive Modulus, Foam Core, Nominal Value, ASTM D 1621: 370 psi.
  - Y. Tensile Adhesion, Foam Core, Nominal Value, ASTM D 1623: 45.3 psi.
  - Z. Thermal and Humid Aging, Foam Core, Nominal Value, 158 Degrees F and 100 Percent Humidity for 14 Days, ASTM D 2126: Minus 5.14 percent volume change.
- 1.5 SUBMITTALS
- A. Comply with Section 01330 (01 33 00) - Submittal Procedures.
  - B. Product Data: Submit manufacturer's product data, including description of materials, components, fabrication, finishes, and installation.
  - C. Shop Drawings: Submit manufacturer's shop drawings, including elevations, sections, and details, indicating dimensions, tolerances, materials, fabrication, doors, panels, framing, hardware schedule, and finish.
  - D. Samples:
    - 1. Door: Submit manufacturer's sample of door showing face sheets, core, framing, and finish.
    - 2. Color: Submit manufacturer's samples of standard colors of doors.
  - E. Test Reports: Submit certified test reports from qualified independent testing agency indicating doors comply with specified performance requirements.
  - F. Manufacturer's Project References: Submit list of successfully completed projects including project name and location, name of architect, and type and quantity of doors manufactured.
  - G. Maintenance Manual: Submit manufacturer's maintenance and cleaning instructions for doors, including maintenance and operating instructions for hardware.
  - H. Warranty: Submit manufacturer's standard warranty.

**ADDENDUM**

## 1.6 QUALITY ASSURANCE

- A. Manufacturer's Qualifications:
  - 1. Continuously engaged in manufacturing of doors of similar type to that specified, with a minimum of 25 years successful experience.
  - 2. Evidence of a compliant documented quality management system.

## 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying opening door mark and manufacturer.
- B. Storage: Store materials in clean, dry area indoors in accordance with manufacturer's instructions.
- C. Handling: Protect materials and finish from damage during handling and installation.

## 1.8 WARRANTY

- A. Warrant doors, frames, and factory hardware against failure in materials and workmanship, including excessive deflection, faulty operation, defects in hardware installation, and deterioration of finish or construction in excess of normal weathering.
- B. Warranty Period: Ten years starting on date of shipment. In addition, a limited lifetime (while the door is in its specified application in its original installation) warranty covering: failure of corner joinery, core deterioration, delamination or bubbling of door skin.

## PART 2 - PRODUCTS

## 2.1 MANUFACTURER

- A. Special-Lite
- B. Oldcastle/Vistawall
- C. United States Aluminum
- D. Tubelite

## 2.2 FRP FLUSH DOORS

- A. Model: SL-17 Flush Doors with SpecLite3 fiberglass reinforced polyester (FRP) face sheets.
- B. Door Opening Size: As indicated on the Drawings.
- C. Construction:
  - 1. Door Thickness: 1-3/4 inches.
  - 2. Stiles and Rails: Aluminum extrusions made from prime-equivalent billet that is produced from 100% reprocessed 6063-T5 alloy recovered from industrial

**ADDENDUM**

- processes, minimum of 2-5/16-inch depth.
  3. Corners: Mitered.
  4. Provide joinery of 3/8-inch diameter full-width tie rods through extruded splines top and bottom integral to standard tubular shaped stiles and rails reinforced to accept hardware as specified.
  5. Securing Internal Door Extrusions: 3/16-inch angle blocks and locking hex nuts for joinery. Welds, glue, or other methods are not acceptable.
  6. Furnish extruded stiles and rails with integral reglets to accept face sheets. Lock face sheets into place to permit flush appearance.
  7. Rail caps or other face sheet capture methods are not acceptable.
  8. Extrude top and bottom rail legs for interlocking continuous weather bar.
  9. Meeting Stiles: Pile brush weatherseals. Extrude meeting stile to include integral pocket to accept pile brush weatherseals.
  10. Bottom of Door: Install bottom weather bar with nylon brush weatherstripping into extruded interlocking edge of bottom rail.
  11. Glue: Use of glue to bond sheet to core or extrusions is not acceptable.
- D. Face Sheet:
1. Material: SpecLite3 FRP, 0.120-inch thickness, finish color throughout.
  2. Protective coating: Abuse-resistant engineered surface. Provide FRP with SpecLite3 protective coating, or equal.
  3. Texture: Pebble.
  4. Color: As chosen by Architect from manufacturers standard colors.
  5. Adhesion: The use of glue to bond face sheet to foam core is prohibited.
- E. Core:
1. Material: Poured-in-place polyurethane foam.
  2. Density: Minimum of 5 pounds per cubic foot.
  3. R-Value: Minimum of 9.
- F. Cutouts:
1. Manufacture doors with cutouts for required vision lites, louvers, and panels.
  2. Factory install vision lites, louvers, and panels.
- G. Hardware:
1. Premachine doors in accordance with templates from specified hardware manufacturers and hardware schedule.
  2. Factory install hinges and exit device hardware.
- ## 2.3 MATERIALS
- A. Aluminum Members:
1. Aluminum extrusions made from prime-equivalent billet that is produced from 100% reprocessed 6063-T5 alloy recovered from industrial processes: ASTM B 221.
  2. Sheet and Plate: ASTM B 209.
  3. Alloy and Temper: As required by manufacturer for strength, corrosion resistance, application of required finish, and control of color.

**ADDENDUM**

- C. Fasteners:
  - 1. Material: Aluminum, 18-8 stainless steel, or other noncorrosive metal.
  - 2. Compatibility: Compatible with items to be fastened.
  - 3. Exposed Fasteners: Screws with finish matching items to be fastened.

**2.4 FABRICATION**

- A. Sizes and Profiles: Required sizes for doors shall be as indicated on the Drawings.
- B. Coordination of Fabrication: Field measure before fabrication and show recorded measurements on shop drawings.
- C. Assembly:
  - 1. Complete cutting, fitting, forming, drilling, and grinding of metal before assembly.
  - 2. Remove burrs from cut edges.
- D. Welding: Welding of doors is not acceptable.
- E. Fit:
  - 1. Maintain continuity of line and accurate relation of planes and angles.
  - 2. Secure attachments and support at mechanical joints with hairline fit at contacting members.

**2.5 HARDWARE**

- A. Premachine doors in accordance with templates from specified hardware manufacturers and hardware schedule.
- B. Factory install hinges and exit device hardware.
- C. Hardware Schedule: As specified in Section 08710

**2.6 VISION LITES**

- A. Factory Glazing: 1-inch glass insulating units.
- B. Lites in Exterior Doors: Allow for thermal expansion.
- C. Rectangular Lites:
  - 1. As indicated on the Drawings.
  - 2. Factory glazed with screw-applied aluminum stops anodized to match perimeter door rails.

**2.7 ALUMINUM FINISHES**

- A. Painted: As chosen by Architect to match windows.

**PART 3 - EXECUTION**

**3.1 EXAMINATION**

- A. Examine areas to receive doors. Notify Architect of conditions that would adversely affect installation or subsequent use. Do not proceed with installation until unsatisfactory conditions are corrected.

**3.2 PREPARATION**

- A. Ensure openings to receive frames are plumb, level, square, and in tolerance.

**3.3 INSTALLATION**

- A. Install doors in accordance with manufacturer's instructions.
- B. Install doors plumb, level, square, true to line, and without warp or rack.
- C. Separate aluminum from other metal surfaces with bituminous coatings or other means approved by Architect.
- D. Set thresholds in bed of mastic and backseal.
- E. Install exterior doors to be weathertight in closed position.
- F. Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Architect.
- G. Remove and replace damaged components that cannot be successfully repaired as determined by Architect.

**3.4 FIELD QUALITY CONTROL**

- A. Manufacturer's Field Services: Manufacturer's representative shall provide technical assistance and guidance for installation of doors.

**3.5 ADJUSTING**

- A. Adjust doors, hinges, and locksets for smooth operation without binding.

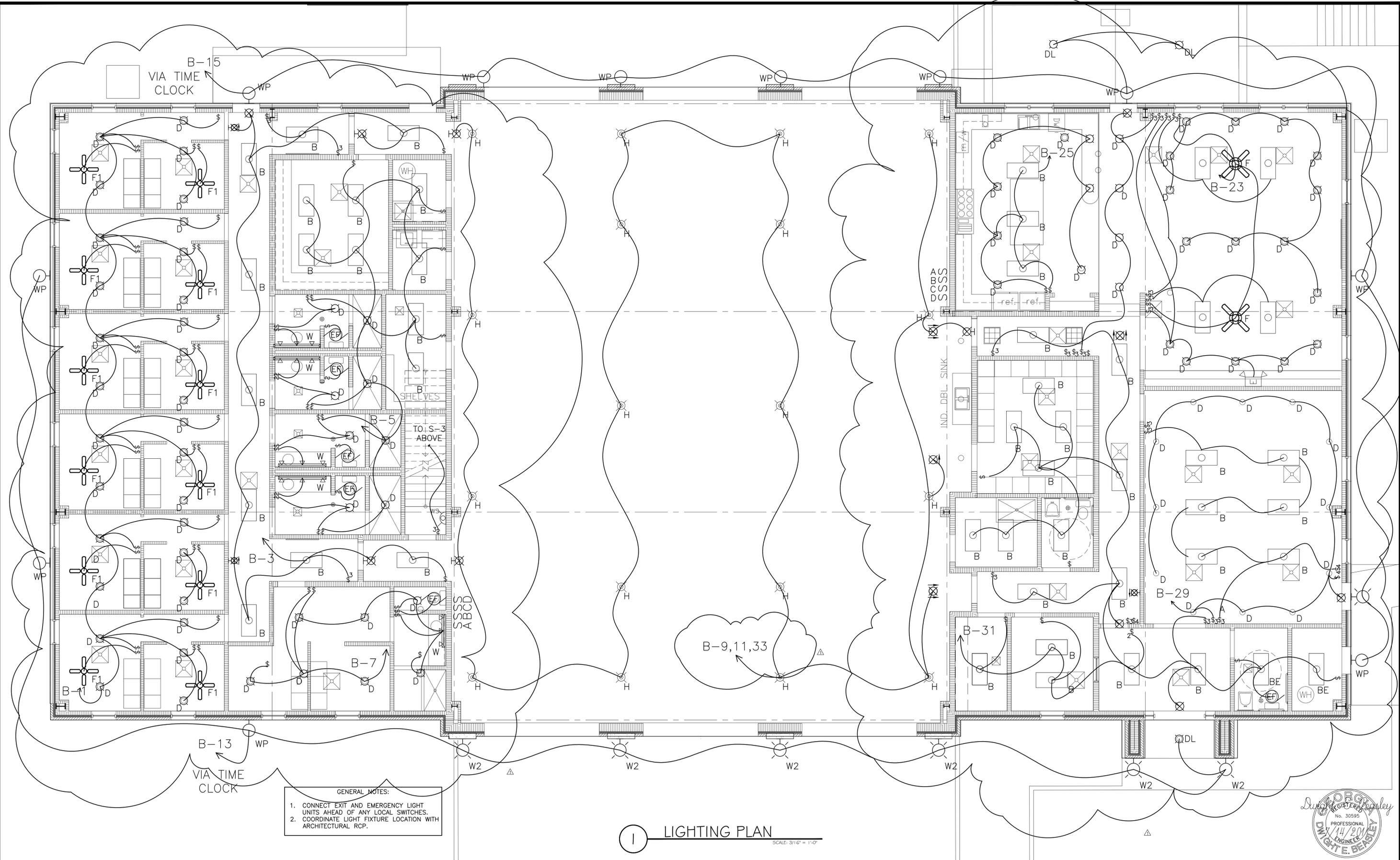
**3.6 CLEANING**

- A. Clean doors promptly after installation in accordance with manufacturer's instructions.
- B. Do not use harsh cleaning materials or methods that would damage finish.

END OF SECTION 08174



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**GENERAL NOTES:**  
 1. CONNECT EXIT AND EMERGENCY LIGHT UNITS AHEAD OF ANY LOCAL SWITCHES.  
 2. COORDINATE LIGHT FIXTURE LOCATION WITH ARCHITECTURAL RCP.

**1 LIGHTING PLAN**  
 SCALE: 3/16" = 1'-0"



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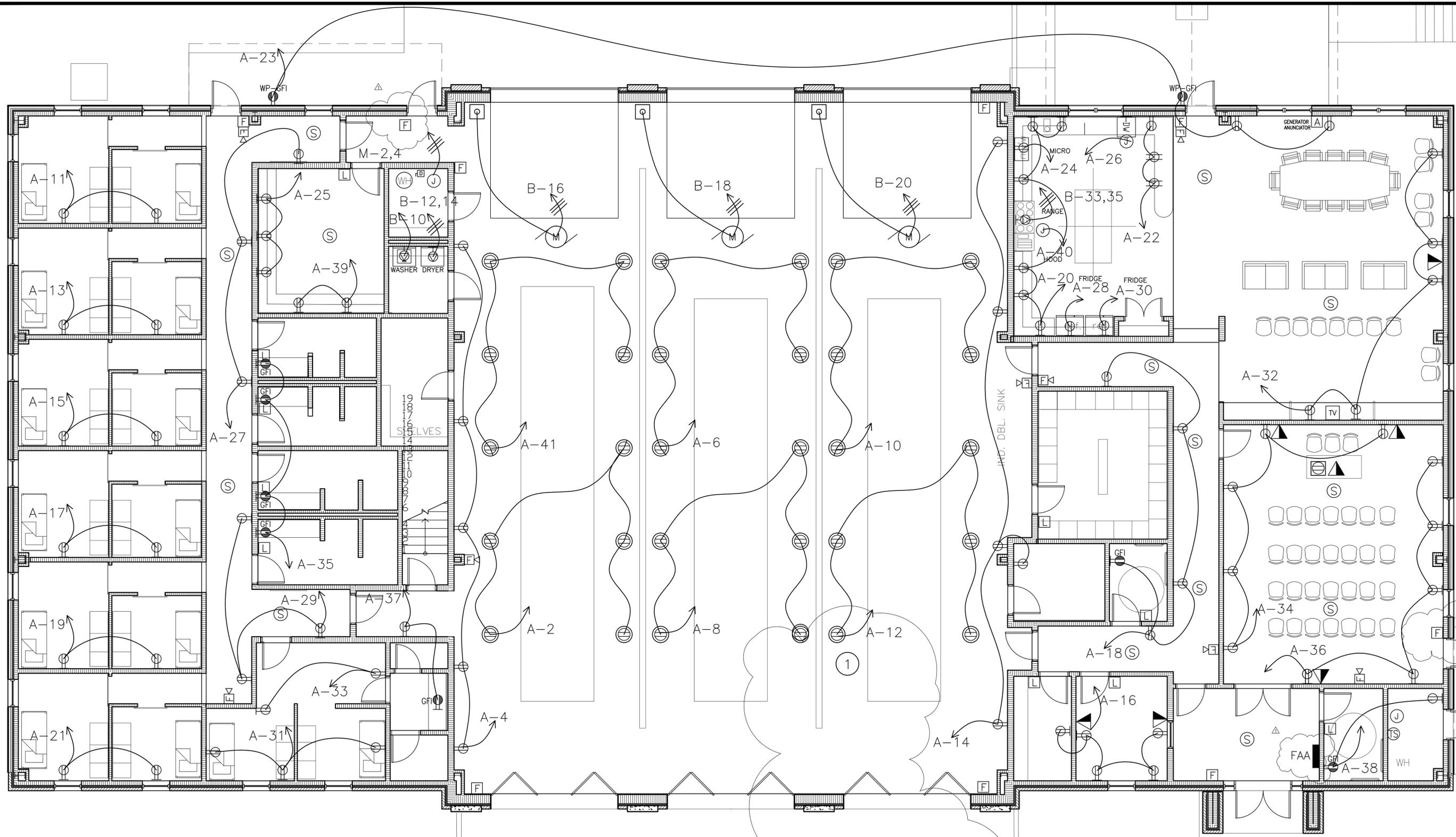
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ELECTRICAL		SHEET 63 OF 69
LIGHTING PLAN		DWG NO. E2.0
		DATE JULY 15, 2011
		PROJ NO. 10ATL02-55

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**POWER PLAN**  
3/16" = 1'-0"

**KEY NOTES:**  
1. PROVIDE CEILING MOUNTED, MEDIUM DUTY, ELECTRIC HOSE REEL, W/20 AMP, 120 V DUPLEX PLUG @ END OF 35 FT. LONG #12 AWG CABLE. MOUNT ASSEMBLY TO CEILING VIA BOLTS TO STRUCTURE. PER VENDOR INSTALLATION INSTRUCTION



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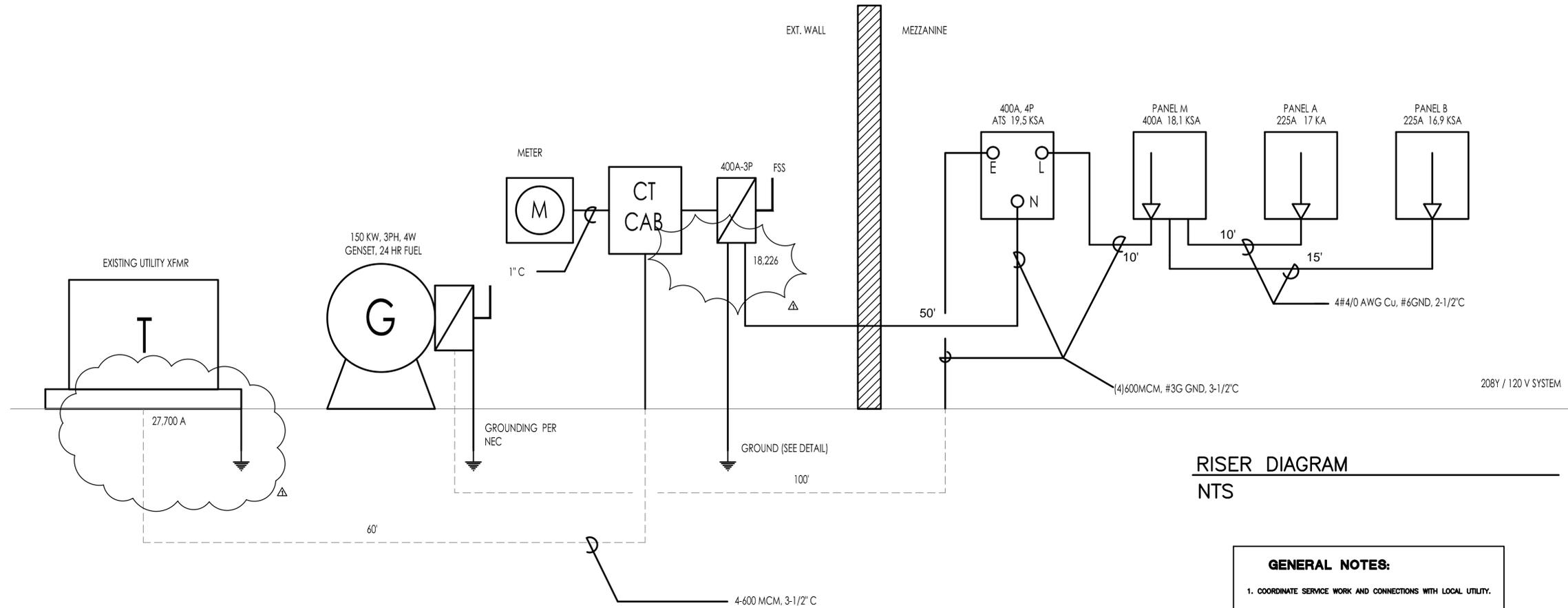
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**POWER PLAN**

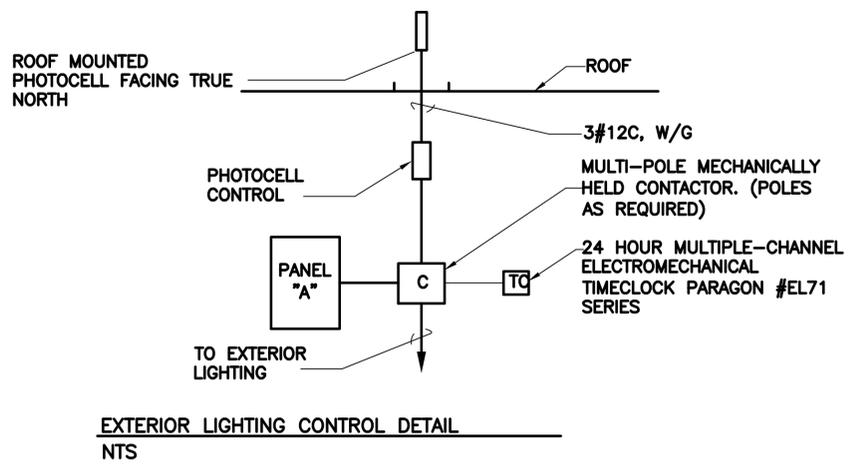
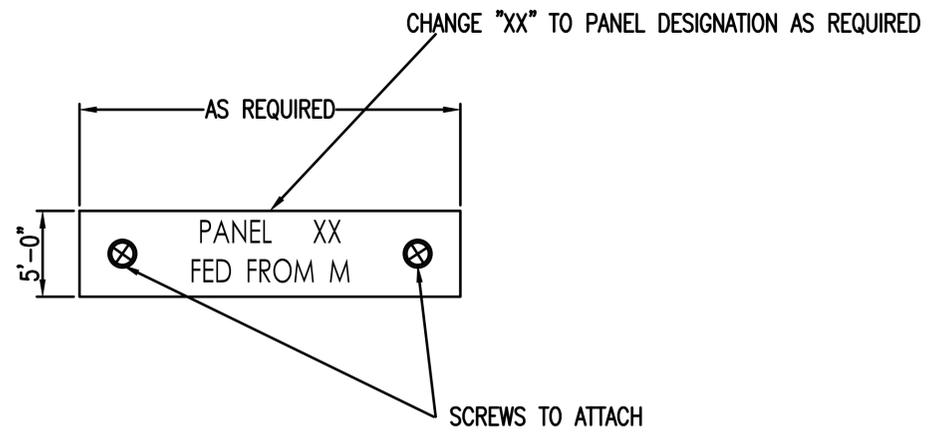
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**GENERAL NOTES:**  
1. COORDINATE SERVICE WORK AND CONNECTIONS WITH LOCAL UTILITY.



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ELECTRICAL

**RISER DIAGRAM AND DETAILS**

SHEET	68 OF 69
DWG NO.	E7.0
DATE	JULY 15, 2011
PROJ NO.	10ATL02-55

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MAIN: 200 MLO		VOLTAGE: 208/120		WIRE: 4		MOUNTING: SURFACE					
BUS: 225 A		PHASE: 3		AIC: 22 kA		ENCLOSURE: NEMA 1					
CKT #	TRIP POLE	LOAD TYPE	DESCRIPTION	CONNECTED LOAD KVA			DESCRIPTION	LOAD TYPE	TRIP POLE	CKT #	
				KVA	PH A	PH B					PH C
1	20/1	B	RECEPTACLES, ELECT. MEZZ	0.2	1.0		0.8	RECEPTACLES, BAY DROP	B	20/1	2
3	20/1	B	TELEPHONE BOARD	0.4		1.2	0.8	RECEPTACLES, BAY DROP	B	20/1	4
5	20/1	B	RECEPTACLES, EXERCISE	0.4		1.2	0.8	RECEPTACLES, BAY DROP	B	20/1	6
7	20/1	B	RECEPTACLES, EXERCISE	0.4	1.2		0.8	RECEPTACLES, BAY DROP	B	20/1	8
9	20/1	B	RECEPTACLES, ELECT. MEZZ	0.4		1.2	0.8	RECEPTACLES, BAY DROP	B	20/1	10
11	20/1	B	RECEPTACLES, BUNK RM	0.4		1.2	0.8	RECEPTACLES, BAY DROP	B	20/1	12
13	20/1	B	RECEPTACLES, BUNK RM	0.4	1.2		0.8	RECEPTACLES, BAY	B	20/1	14
15	20/1	B	RECEPTACLES, BUNK RM	0.4		1.0	0.6	RECEPTACLES, CAPT OFFICE	B	20/1	16
17	20/1	B	RECEPTACLES, BUNK RM	0.4		1.6	1.2	RECEPTACLES, LVNG RM CORR	B	20/1	18
19	20/1	B	RECEPTACLES, BUNK RM	0.4	1.0		0.6	RECEPTACLES, KITCHEN	B	20/1	20
21	20/1	B	RECEPTACLES, BUNK RM	0.4		1.0	0.6	RECEPTACLES, KITCHEN	B	20/1	22
23	20/1	B	RECEPTACLES, EXT REAR	0.8		1.4	0.6	RECEPTACLES, KITCHEN	B	20/1	24
25	20/1	B	RECEPTACLES, REPAIR SHOP	0.4	1.6		1.2	RECEPTACLES, DW/DISP	B	20/1	26
27	20/1	B	RECEPTACLES, BUNK CORR	0.6		1.0	0.4	REFRIGERATOR	E	20/1	28
29	20/1	B	RECEPTACLES, BUNK CORR	0.6		1.0	0.4	REFRIGERATOR	E	20/1	30
31	20/1	B	RECEPTACLES, CAPT SUITE	0.6	1.6		1.0	RECEPTACLES, LIVING RM	B	20/1	32
33	20/1	B	RECEPTACLES, CAPT SUITE	0.4		1.4	1.0	RECEPTACLES, TRAINING	B	20/1	34
35	20/1	B	RECEPTACLES, BUNK TOILET	0.8		2.0	1.2	RECEPTACLES, TRAINING	B	20/1	36
37	20/1	B	RECEPTACLES, CAPT TOILET	0.4	0.8		0.4	RECEPTACLES, MECH RM	B	20/1	38
39	20/1	B	RECEPTACLES, REPAIR SHOP	0.4		0.9	0.5	RECEPTACLES, RANGE HOOD	B	20/1	40
41	20/1	B	RECEPTACLES, BAY DROP	0.8		2.0	1.2	RECEPTACLES, MICROWAVE	B	20/1	42

Load Type	Description	Conn. KVA	Demand KVA	2008 NEC Reference
A	Lighting			Per NEC Table 220.42
B	Receptacles	25.7	17.9	Per NEC Table 220.44
C	Air-Conditioning			Per NEC Article 440.4
D	Heating			Per NEC Article 220.51

Phase	Connected Load	Demand	Total Connected Load	Total Demand Load
Phase A	8.4			
Phase B	7.7		26.5 KVA	
Phase C	10.4			18.7 KVA

MAIN: 200 MLO		VOLTAGE: 208/120		WIRE: 4		MOUNTING: SURFACE					
BUS: 225 A		PHASE: 3		AIC: 10 kA		ENCLOSURE: NEMA 1					
CKT #	TRIP POLE	LOAD TYPE	DESCRIPTION	CONNECTED LOAD KVA			DESCRIPTION	LOAD TYPE	TRIP POLE	CKT #	
				KVA	PH A	PH B					PH C
1	20/1	A	LIGHTING, BUNK	1.6	2.4		0.8	GENERATOR JACKET HEATER	D	20	2
3	20/1	A	LIGHTING, BUNK TOILETS	1.5		2.3	0.8				4
5	20/1	A	LIGHTING, BUNK TOILETS	1.3			2.1	GENERATOR OIL HEATER	D	20/1	6
7	20/1	A	LIGHTING, CAPT SUITE	0.8	1.0		0.2	TIMECLOCK	G	20/1	8
9	20/1	A	LIGHTING, BAY	1.6		2.6	1.0	WASHER	G	20/1	10
11	20/1	A	LIGHTING, BAY	1.6		1.6	1.6	DRYER	G	50	12
13	20/1	A	LIGHTING, EXT WP	1.0	3.5		2.5				14
15	20/1	A	LIGHTING, EXT WP	1.0		2.5	1.5	DOOR OPENER	F	20/1	16
17	20/1	A	LIGHTING, SITE	0.8		2.3	1.5	DOOR OPENER	F	20/1	18
19	20/1	A	LIGHTING, SITE	0.8	2.3		1.5	DOOR OPENER	F	20/1	20
21	20/1	A	LIGHTING, S STORAGE BLDG	0.3		1.8	1.5	AIR COMPRESSOR	F	30	22
23	20/1	A	LIGHTING, LVNG PENDT/FAN	0.5		2.0	1.5				24
25	20/1	A	LIGHTING, LR/KITCHEN	0.8	2.3		1.5	DOOR OPENER	F	20/1	26
27	20/1	A	LIGHTING, LR CORR	1.3		2.8	1.5	DOOR OPENER	F	20/1	28
29	20/1	A	LIGHTING, TRAINING RM	1.0		2.5	1.5	DOOR OPENER	F	20/1	30
31	20/1	A	LIGHTING, CAPT OFFICE	0.8	0.8			SPARE		20/1	32
33	50	E	RANGE	4.5		4.5		SPARE		20/1	34
35	20/1	E		4.5		4.5		SPARE		20/1	36
37	20/1	B	TRAINING ROOM PROJECTOR	0.4	0.4			SPARE		20/1	38
39	20/1	A	LIGHTING BAR	1.6				SPARE		20/1	40
41	20/1	A						SPARE		20/1	42

Load Type	Description	Conn. KVA	Demand KVA	2008 NEC Reference
A	Lighting	16.7	20.9	Per NEC Table 220.42
B	Receptacles	0.4	0.4	Per NEC Table 220.44
C	Air-Conditioning			Per NEC Article 440.4
D	Heating	2.4	2.8	Per NEC Article 220.51

Phase	Connected Load	Demand	Total Connected Load	Total Demand Load
Phase A	12.7			
Phase B	16.5		46.7 KVA	
Phase C	17.5			52.0 KVA

MAIN: 400 MLO		VOLTAGE: 208/120		WIRE: 4		MOUNTING: SURFACE					
BUS: 400 A		PHASE: 3		AIC: 22 kA		ENCLOSURE: NEMA 1					
CKT #	TRIP POLE	LOAD TYPE	DESCRIPTION	CONNECTED LOAD KVA			DESCRIPTION	LOAD TYPE	TRIP POLE	CKT #	
				KVA	PH A	PH B					PH C
1	175	H	PANEL A	6.2	11.2		5.0	AHU-1	C	70	2
3		H		6.2		11.2	5.0		C		4
5		H		6.2			11.2	5.0	C		6
7	175	H	PANEL B	15.7	20.7		5.0	AHU-2	C	70	8
9		H		15.7		20.7	5.0		C		10
11		H		15.7			20.7	5.0	C		12
13	20	F	EF-6	0.3	0.3			SPARE		60	14
15		F		0.3		0.3					16
17		F		0.3		0.3					18
19	20	F	EF-7	0.3	3.3		3.0	CU-1	F	40	20
21		F		0.3		3.3	3.0		F		22
23		F		0.3		3.3	3.0		F		24
25	20/1	G	IH-1,2,3	1.7	7.0		5.3	CU-2	F	70	26
27	20/1	G	IH-4,5,6	1.7		7.0	5.3		F		28
29	20	G	UH-1	1.7		7.0	5.3		F		30
31		G		1.7	2.0		0.3	EF-4	F	20	32
33	20/1	F	EF-3/SF-1	1.8		2.1	0.3		F		34
35	20/1		SHUNT			0.3	0.3		F		36
37	20/1				0.3		0.3	EF-5	F	20	38
39	20/1				0.3		0.3		F		40
41	20/1				0.3		0.3		F		42

Load Type	Description	Conn. KVA	Demand KVA	2005 NEC Reference
A	Lighting			Per NEC Table 220.42
B	Receptacles			Per NEC Table 220.44
C	Air-Conditioning	30.0	33.8	Per NEC Article 440.4
D	Heating			Per NEC Article 220.51

Load Type	Description	Conn. KVA	Demand KVA	2005 NEC Reference
E	Kitchen Equipment			Per NEC Table 220.56
F	Motor	30.4	34.4	Per NEC Table 430.22
G	Other	6.7	6.7	
H	Subpanels	65.8	65.8	

Phase	Connected Load	Demand	Total Connected Load	Total Demand Load
Phase A	44.8			
Phase B	45.0		32.9 KVA	
Phase C	43.1			140.6 KVA

UNIT NUMBER	UNIT LOCATION	ELEC CHARACTERISTICS				PANEL/CIRCUIT DESIGNATION	CIRCUIT DESCRIPTION	STARTER	DISCONNECT SWITCH SIZE/TYPE/PH	NOTES
		KW	HP	FLA	VOLTS PH					
AHU-1	SEE FLOOR PLANS	15.00		6.00	208 3	PANEL M	4#4, #8G, 1-1/4"C		100/1/3	2
AHU-2	SEE FLOOR PLANS	15.00		6.00	208 3	PANEL M	4#4, #8G, 1-1/4"C		100/1/3	2
CU-1	SEE FLOOR PLANS			25.00	208 3	PANEL M	3#8, #10G, 1"C		60/3R/3	2
CU-2	SEE FLOOR PLANS			43.20	208 3	PANEL M	4#4, #8G, 1-1/4"C		100/3R/3	2
EF-1	SEE FLOOR PLANS	0.25		2.10	120 1	PANEL M	2#12, #12G, 3/4"C		W/UNIT	2
EF-2	SEE FLOOR PLANS	0.25		2.10	120 1	PANEL M	2#12, #12G, 3/4"C		W/UNIT	2
EF-3	SEE FLOOR PLANS	0.25		2.10	120 1	PANEL M	2#12, #12G, 3/4"C		W/UNIT	2
EF-4	SEE FLOOR PLANS	0.75		2.10	208 3	PANEL M	3#12, #12G, 3/4"C		W/UNIT	2
EF-5	SEE FLOOR PLANS	0.75		2.10	208 3	PANEL M	3#12, #12G, 3/4"C		W/UNIT	2
EF-6	SEE FLOOR PLANS	0.75		2.10	208 3	PANEL M	3#12, #12G, 3/4"C		W/UNIT	2
EF-7	SEE FLOOR PLANS	0.75		2.10	208 3	PANEL M	3#12, #12G, 3/4"C		W/UNIT	2
IH-1	SEE FLOOR PLANS			4.80	120 1	PANEL M	2#12, #12G, 3/4"C		20/1/1	2
IH-2	SEE FLOOR PLANS			4.80	120 1	PANEL M	2#12, #12G, 3/4"C		20/1/1	2
IH-3	SEE FLOOR PLANS			4.80	120 1	PANEL M	2#12, #12G, 3/4"C		20/1/1	2
IH-4	SEE FLOOR PLANS			4.80	120 1	PANEL M	2#12, #12G, 3/4"C		20/1/1	2
IH-5	SEE FLOOR PLANS			4.80	120 1	PANEL M	2#12, #12G, 3/4"C		20/1/1	2
IH-6	SEE FLOOR PLANS			4.80	120 1	PANEL M	2#12, #12G, 3/4"C		20/1/1	2
UH-1	SEE FLOOR PLANS			15.90	208 1	PANEL M	2#12, #12G, 3/4"C		20/1/1	2
KITCHEN FANS										
EF-3	SEE FLOOR PLANS			120		PANEL M	2#12, #12G, 3/4"C		20/1/1	2
SF-1	SEE FLOOR PLANS			120		PANEL M	2#12, #12G, 3/4"C		20/1/1	2

TYPE	DESCRIPTION	LAMPS		MANUFAC.	CATALOG NUMBER	RECESSED SURFACE SUSPENDED WALL			REMARKS
		NO	TYPE			X	X	X	
B	RECESSED 2'x4' FLUORESCENT 3-LAMP TROFFER W/ELECTRONIC BALLAST, ACRYLIC LENS	3	F32T8/SPX35	LITHONIA	2GT8 G 3 32 A12125 MVOLT GEB10IS	X			
F	54" FAN			HUNTER	MODEL # 28415			X	COORDINATE COLOR W/OWNER/ARCH.
F1	36" FAN			HUNTER	MODEL # 28420		X		
H	HI BAY METAL HALIDE FIXURE	1	M250	LITHONIA	TX A30 SERIES W/QUARTZ BACKUP		X		
D	6" DOWNLIGHT, FLUORESCENT	2	F28DTT/SPX35	LITHONIA	LF6-2/28DTT-F802PR-MVOLT-GEB10	X			
DL	CANOPY, FLUORESCENT	2	F28DTT/SPX35	LITHONIA	VGR1-42TRT-120-DBBT-LPI	X			
W5	COMMERCIAL WALL BRACKET	2	F32T8/SPX35	LITHONIA	WP-232-MVOLT-GE10IS				
W2	ARCHITECTURAL WALL LIGHT	1	MH250	LITHONIA	WSR-ISOM-MD-MVOLT-LPI-DBBT				
W	CONTEMPORARY WALL LIGHT	2	F32T8/Slx35	LITHONIA	KFL2-100M-BP-277-THK-LPO-DOB				
K	EXTERIOR FLOOD LIGHT	1	100MH	LITHONIA	W-232-MVOLT-GEB10IS-LPI				PROVIDE BASE PER MANUFACTURER RECOMMENDATIONS
S	4FT STRIP W/SINGLE ELECTRONIC BALLAST	1	F32T8/SPX35	LITHONIA	2UN-232-MVOLT-GEB10IS		X		
WP	EXTERIOR WALL PACK	1	F32T8/SPX35	LITHONIA	WP-232-MVOLT-GEB10IS-EL			X	
X	EXIT LIGHT LED LAMPS	-	INC	LITHONIA	LRP-BZ-1-GW-120-ELN			X	PROVIDE CHEVRONS AND FACES AS SHOWN

NOTE: COORDINATE SUBMITTALS WITH LIGHTING DESIGNER/ARCHITECT/OWNER. ALL FIXTURE SELECTIONS ARE REPRESENTATIVE OF THE SHAPE, COLOR, AND SUBJECTIVE CHOICE OF THE ENGINEER. EQUAL SELECTIONS TO MATCH ARE ALLOWED. PROVIDE ALTERNATE PRICE FOR SOLAR POWERED SITE LIGHT "P" AND "PD" AS A SEPARATE LINE ITEM. SEE "P" DESCRIPTION.



NA CURRENT PROJECTS \Dwight-Emest\FIREHOUSE\_1\ISSUE\FIREHOUSE\_ELECT-1-IFC-ISSUE\_ADDENDA.dwg September 19, 2011 - 8:00pm Administrator

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