

**The Enclosed Document Is Provided For Your Convenience.**

**Please Email ALL Questions:**

**[MailTo:ContractAdministration@TampaGov.net](mailto:ContractAdministration@TampaGov.net)**

**Please Let Us Know If You Plan To Bid**

City of Tampa  
Contract Administration Department  
306 E. Jackson St. #280A4N  
Tampa, FL 33602  
(813)274-8456

CITY OF  
TAMPA, FLORIDA

NOTICE TO BIDDERS, INSTRUCTIONS TO BIDDERS  
PROPOSAL, BID BOND, FORM OF NOTICE OF AWARD,  
AGREEMENT, PERFORMANCE BOND AND  
SPECIFICATIONS

FOR

**Contract 15-C-00031**

# **FT. BROOKE PARKING GARAGE - ELEVATOR IMPROVEMENTS**

City of Tampa  
CONTRACT ADMINISTRATION DEPARTMENT  
TAMPA MUNICIPAL OFFICE BUILDING  
306 E. JACKSON STREET - 4<sup>TH</sup> FLOOR NORTH  
TAMPA, FLORIDA 33602

MARCH 2015

CITY OF TAMPA  
CONTRACT ADMINISTRATION DEPARTMENT  
306 E. Jackson Street 280A4N  
Tampa, FL 33602

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**BID NOTICE MEMO**

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**Bids will be received no later than 1:30 p.m.** on the indicated Date(s) for the following Project(s):

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**CONTRACT NO.:** 15-C-00031; Ft. Brooke Parking Garage – Elevator Improvements

**BID DATE:** April 28, 2015 **ESTIMATE:** \$1,500,000 **SCOPE:** The project comprises replacement of portions of eight (8) elevators (4 in each north and south core), including traction machines, operation systems (installation of Owner purchased controllers and selectors), car finishes, ceilings and lighting, handrails, car and hoistway doors, signal equipment, wiring and cables, related electrical, etc.; also, related fire alarm system, including control unit (installation of Owner purchased unit) and printer, annunciator, signal initiation and notification devices, manual devices, wiring, etc., with all associated work required for a complete project in accordance with the Contract Documents. **PRE-BID CONFERENCE:** Tuesday, April 14, 2015, 2:00 p.m. Attendance is not mandatory, but recommended.

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Bids will be opened in the 4th Floor Conference Room, Tampa Municipal Office Building, 306 E. Jackson Street, Tampa, Florida 33602. Pre-Bid Conference is held at the same location unless otherwise indicated. Plans and Specifications and Addenda for this work may be examined at, and downloaded from, [www.demandstar.com](http://www.demandstar.com). Backup files are available at <http://www.tampagov.net/contract-administration/programs/construction-project-bidding>. Subcontracting opportunities may exist for City certified Small Local Business Enterprises (SLBEs). A copy of the current SLBE directory may be obtained at [www.Tampagov.net](http://www.Tampagov.net). Phone (813) 274-8456 for assistance. **Email Technical Questions to:** [contractadministration@tampagov.net](mailto:contractadministration@tampagov.net).

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Contract 15-C-00031; Ft. Brooke Parking Garage – Elevator Improvements

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NOTICE TO BIDDERS  
CITY OF TAMPA, FLORIDA  
Contract 15-C-00031; Ft. Brooke Parking Garage - Elevator Improvements

Sealed Proposals will be received by the City of Tampa no later than 1:30 P.M., April 28, 2015, in the 4<sup>th</sup> Floor Conference Room, Tampa Municipal Office Building, 306 E. Jackson Street, Tampa, Florida, there to be publicly opened and read aloud.

The proposed work is to include, but not be limited to, replacement of portions of eight (8) elevators (4 in each north and south core), including traction machines, operation systems (installation of Owner purchased controllers and selectors), car finishes, ceilings and lighting, handrails, car and hoistway doors, signal equipment, wiring and cables, related electrical, etc.; also, related fire alarm system, including control unit (installation of Owner purchased unit) and printer, annunciator, signal initiation and notification devices, manual devices, wiring, etc., with all associated work required for a complete project in accordance with the Contract Documents.

The Instructions to Bidders, Proposal, Form of Bid Bond, Agreement, Form of Public Construction Bond, Specifications, Plans and other Contract Documents are posted at DemandStar.com. Backup files may be downloaded from <http://www.tampagov.net/contract-administration/programs/construction-project-bidding>. One set may be available for reference at the office of the Contract Administration Department, Municipal Office Building, Fourth Floor North, City Hall Plaza, Tampa, Florida 33602.

Each Proposal must be submitted on the Proposal form included in the Specifications and must be accompanied by a certified check or cashier's check on a solvent bank or trust company in compliance with Section 255.051, Florida Statutes, made payable to the City of Tampa, in an amount of not less than five per cent of the total bid, or a Bid Bond, of like amount, on the form set forth in the Contract Documents, as a guarantee that, if the Proposal is accepted, the Bidder will execute the Proposed Contract and furnish a Public Construction Bond within twenty (20) days after receipt of Notice of Award of Contract.

The City of Tampa reserves the right to reject any or all Bids and to waive any informalities in the Bid and/or Bid Bond. Acceptance or rejection of Proposals will be made as soon as practicable after the Proposals are received, but the City reserves the right to hold Proposals for ninety (90) days from the date of Opening.

Bid Protest Procedures: Unless subsequently indicated otherwise, in a revised posting on the Department's web page for Construction Project Bidding, the City of Tampa intends to award the referenced project to the lowest bidder listed in the tabulation posted on or about the date of Bid Opening. A bidder aggrieved by this decision may file a protest not later than 4:30 P.M., five (5) business days from the first posting thereof, pursuant to City of Tampa Code Chapter 2, Article V, Division 3, Section 2-282, Procurement Protest Procedures. Protests not conforming therewith shall not be reviewed.

**Communication with City Staff**

Pursuant to City of Tampa Ordinance 2010-92, during the solicitation period, including any protest and/or appeal, NO CONTACT initiated by bidders or responders with City officers or employees, other than the individuals specified below is permitted:

Director of Contract Administration, David Vaughn

Contracts Management Supervisor, Jim Greiner

Contract Officer, Jody Gray

The City's Legal Department staff

The City's Contract Administration Department staff.

Technical Questions and Requests For Information should be directed to the Department via

[ContractAdministration@tampagov.net](mailto:ContractAdministration@tampagov.net)

"A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list." Refer to Section 287.133 Florida Statutes.

In accordance with the City of Tampa's Equal Business Opportunity Ordinance, a Goal may have been established for subcontracting with Small Local Business Enterprises, SLBEs, certified by the City. Links to further information and a list of SLBEs are on the Department's Construction Project Bidding Web page. A link to the current complete directory of SLBEs is on the Minority Business Development Office Website.

INSTRUCTIONS TO BIDDERS  
SECTION 1 - SPECIAL INSTRUCTIONS

I-1.01 GENERAL:

The proposed work is the Ft. Brooke Parking Garage - Elevator Improvements in the City of Tampa, as required for a complete project, as shown on the plans and detailed in the specifications. The work is located on land owned or controlled by the City of Tampa.

I-1.02 FORM PREPARATION AND PRESENTATION OF PROPOSALS: Replace the second sentence with the following: Submission of the entire specification book is not required.

I-1.03 ADDENDA – Section I-2.03 is replaced with the following: No interpretation of the meaning of the Plans, Specifications, or other Contract Documents will be made to any Bidder orally.

Every request for such interpretation must be in writing, addressed to the City of Tampa, Contract Administration Department, 306 E. Jackson St., 4th Floor, Tampa, Florida 33602 and then emailed to [ContractAdministration@tampagov.net](mailto:ContractAdministration@tampagov.net). To be given consideration, such request must be received at least seven (7) days prior to the date fixed for the opening of the Proposals. Any and all such interpretations and any supplemental instructions will be in the form of written addenda which, if issued, will be posted on DemandStar.Com and on the Department's web page, with notice given to all prospective bidders at the respective fax numbers or e-mail addresses furnished, for such purposes. Failure of any Bidder to receive any such addenda shall not relieve said Bidder from any obligation under his Proposal as submitted. All addenda so issued shall become part of the Contract Documents.

I-1.04 SIGNATURE OF BIDDERS: Section I-2.07 is replaced with the following:

Proposals must be signed in ink by the Bidder with signature in full. When firm is a Bidder, the Proposal shall be signed in the name of the firm by one or more partners. When a corporation is a bidder the officer signing shall set out the corporate name in full beneath which he shall sign his name and give the title of his office. The Proposal shall also bear the seal of the corporation attested by its secretary.

If the bidder referred to in Section I-2.07 is a corporation, it must submit; upon request, a copy of its filed Articles of Incorporation. In addition, if the bidder was incorporated in another state, it must establish that it is authorized to do business in the State of Florida. If the bidder is using a fictitious name, it must submit upon request, proof of registration of such name with the Clerk of the Circuit Court of the Country where its principal place of business is. Failure to submit what is required is grounds to reject the bid of that bidder.

I-1.05 TIME FOR COMPLETION:

The work shall be arranged to be completed in accordance with a progress schedule approved by the Construction Engineer.

The time for completion of this project, referred in Article 4.01 of the Agreement, shall be 300 consecutive calendar days (Base Bid: 150 calendar days). The period for performance shall start from the date indicated in the Notice To Proceed.

I-1.06 LIQUIDATED DAMAGES:

The amount of liquidated damages, referred to in Article 4.06 of the Agreement, for completion of this project shall be \$500.00 per calendar day.

I-1.07 BASIS OF AWARD OF CONTRACT:

The basis of award referred to in Item I-2.11 of Instructions to Bidders shall be the greatest amount of work, which can be accomplished within the funds available as budgeted. The award may be made on the basis of the total bid, base bid, alternates(s) if any, unit bids if any, or any combination thereof deemed to be in the best interest of the City.

INSTRUCTIONS TO BIDDERS  
SECTION 1 - SPECIAL INSTRUCTIONS

Unless all bids are rejected, the award will be made within 90 days after opening proposals.

I-1.08 GROUND BREAKING CEREMONY:

Arrangement may be made by the City in coordination with the Contractor, for construction to commence with a Ground Breaking Ceremony. Details will be discussed at the pre-construction conference.

I-1.09 INSURANCE:

The insurance required for this project shall be as indicated on Pages beginning with INS-1. Before commencing work, the Contractor shall provide the evidence of the insurance required on a Certificate of Insurance accompanied by evidence of authority to bind the insurance company or companies such as agents license, power of attorney, or letter of authority.

I-1.10 EQUAL BUSINESS OPPORTUNITY PROGRAM / SLBE / REQUIREMENTS

In accordance with the City of Tampa's Equal Business Opportunity Program, a goal of \_\_\_\_% has been established for subcontracting with Small Local Business Enterprises, (SLBEs), certified by the City. The goal is based upon the availability of the firms listed on the Goal Worksheet and as posted in the "SLBEs" link under this Contract's notice on the Department's Construction Project Bidding web page.

BIDDERS MUST SOLICIT ALL SLBEs ON THAT LIST and provide documentation of emails, faxes, phone calls, letters, or other communication with the firms as a first step to demonstrate Good Faith Efforts to achieve the goal. The list is formatted to facilitate e-mail solicitations to the listed firms by copying and pasting e-mail addresses.

Bidders may explore other opportunities for subcontracting with SLBEs by consulting the current directory of all certified SLBEs posted on the Minority Business Development Office web page.

GOOD FAITH EFFORT COMPLIANCE PLAN REQUIRED - When a Goal has been established, the Bidder must submit, with its bid, completed to the fullest extent possible, a Good Faith Effort Compliance Plan using the form GFECF contained herein. Additional documentation is required whenever an SLBE subcontractor's low quote is not utilized. Supplemental information or documentation concerning the Bidder's Compliance Plan may be required prior to award as requested by the City.

DIVERSITY MANAGEMENT INITIATIVE, DMI, DATA REPORTING FORMS REQUIRED - Bidders must submit, with its bid, "DMI-Solicited" forms listing all subcontractors solicited and "DMI-Utilized" forms listing all subcontractors to be utilized. Supplemental forms, documentation, or information may be submitted at bid time or as requested by the City.

After an award, "DMI-Payments" forms are to be submitted with payment requests to report payments to subcontractors.

Bidders may visit the Minority Business Development Office's web page at TampaGov.net for other information about the SLBE program, FAQ's, and the latest SLBE directory of certified firms.

I-1.11 BID SECURITY:

Surety companies shall have a rating of not less than B+ Class VI as evaluated in the most recently circulated Best Key rating Guide Property-Liability.

I-1.12 PUBLIC CONSTRUCTION BOND:

The Bidder who is awarded the Contract will be required to furnish a Public Construction Bond upon the form provided herein, equal to 100 percent of the Contract price, such Bond to be issued and executed by (a) surety company(ies) acceptable to the City of Tampa and licensed to underwrite contracts in the State of Florida. After execution of the Agreement and before commencing work, the Contractor must provide the City a certified copy of the officially recorded Bond.



INSTRUCTIONS TO BIDDERS  
SECTION 1 - SPECIAL INSTRUCTIONS

I-1.13 AGREEMENT

Section 2 – Powers of the City's Representatives

Add the following:

Article 2.05 CITY'S TERMINATION FOR CONVENIENCE:

The City may, at any time, terminate the Contract in whole or in part for the City's convenience and without cause. Termination by the City under this Paragraph shall be by a notice of termination delivered to the Contractor, specify the extent of termination and the effective date.

Upon receipt of a notice of termination, the Contractor shall immediately, in accordance with instructions from the City, proceed with performance of the following duties regardless of delay in determining or adjusting amounts due under this Paragraph:

- (a) cease operations as specified in the notice;
- (b) place no further orders and enter into no further subcontracts for materials, labor, services or facilities except as necessary to complete continued portions of the Contract;
- (c) terminate all subcontracts and orders to the extent they relate to the Work terminated;
- (d) proceed to complete the performance of Work not terminated; and
- (e) take actions that may be necessary, or that the City may direct, for the protection and preservation of the terminated Work.

The amount to be paid to the Contract by the City because of the termination shall consist of:

- (a) for costs related to work performed on the terminated portion of the Work prior to the effective date including termination costs relative to subcontracts that are properly chargeable to the terminated portion of the Work.
- (b) the reasonable costs of settlement of the Work terminated, including accounting, legal, clerical and other expenses reasonable necessary for the preparation of termination settlement proposals and supporting data; additional costs of termination and settlement of subcontracts excluding amounts of such settlements; and storage, transportation, and other costs incurred which are reasonably necessary for the preservation, protection or disposition of the terminated Work; and
- (c) a fair and reasonable profit on the completed Work unless the Contractor would have sustained a loss on the entire Contract had it been completed.

Allowance shall be made for payments previously made to the Contractor for the terminated portion of the Work, and claims which the City has against the Contractor under the Contract, and for the value of materials supplies, equipment or other items that are part of the costs of the Work to be disposed of by the Contractor.

I-1.14 Section 5 – subcontracts and Assignments, Article 5.01, Page A-7, Last Paragraph:

Change "...twenty-five (25) percent..." to fifty-one (51) percent..."

Section 10-Payments, Article .05 Partial Payments, 1<sup>st</sup> Paragraph, 1<sup>st</sup> Sentence:

Change "...fair value of the work done, and may apply for..." to "...fair value of the work done, and shall apply for..."

I-1.15 Contractors must utilize the U.S. Department of Homeland Security's E-Verify Systems to verify the employment eligibility of all persons employed during the term of the contract to perform employment duties within the State of Florida and all persons, including subcontractors, assigned by the contractor to perform work pursuant to the contract.

I-1.16 GENERAL PROVISIONS; G-2.02 Copies Furnished to Contractor: Replace the first paragraph with the following:

The Contractor shall acquire for its use copies of the plans and specifications as needed. The documents may be downloaded from the City's web site, at

[http://www.tampagov.net/dept\\_contract\\_administration/programs\\_and\\_services/construction\\_project\\_bidding/index.asp](http://www.tampagov.net/dept_contract_administration/programs_and_services/construction_project_bidding/index.asp)

INSTRUCTIONS TO BIDDERS  
SECTION 1 - SPECIAL INSTRUCTIONS

I-1.17 PAYMENT DISPUTE RESOLUTION

Any dispute pertaining to pay requests must be presented to the City pursuant to Executive Order 2003-1.

I-1.18 SCRUTINIZED COMPANIES.

For Contracts \$1,000,000 and greater, if the City determines the Contractor submitted a false certification under Section 287.135(5) of the Florida Statutes, or if the Contractor has been placed on the Scrutinized Companies with Activities in the Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, the City shall either terminate the Contract after it has given the Contractor notice and an opportunity to demonstrate the City's determination of false certification was in error pursuant to Section 287.135(5)(a) of the Florida Statutes, or maintain the Contract if the conditions of Section 287.135(4) of the Florida Statutes are met.

I-1.19 FLORIDA'S PUBLIC RECORDS LAW

4.33.3 The City of Tampa is a public agency subject to Chapter 119, Florida Statutes. In accordance with Florida Statutes, 119.0701, if applicable, Contractor shall comply with Florida's Public Records Law. Specifically, the Contractor shall:

1. Keep and maintain public records that ordinarily and necessarily would be required by the City in order to perform the service;
2. Provide the public with access to such public records on the same terms and conditions that the City would provide the records and at a cost that does not exceed that provided in Chapter 119, Florida Statutes, or as otherwise provided by law;
3. Ensure that public records that are exempt or that are confidential and exempt from public record requirements are not disclosed except as authorized by law;
4. Meet all requirements for retaining public records and transfer to the City, at no cost, all public records in possession of the contractor upon termination of the contract and destroy any duplicate public records that are exempt or confidential and exempt. All records stored electronically must be provided to the City in a format that is compatible with the information technology systems of the agency.

4.33.4 The failure of Contractor to comply with the provisions set forth in this Article shall constitute a Default and Breach of this award and the City shall enforce the Default in accordance with the provisions set forth in the DEFAULT/RE-AWARD section of this document.

## INSTRUCTIONS TO BIDDERS

### SECTION 2 GENERAL INSTRUCTIONS

#### I-2.01 BIDDER'S RESPONSIBILITY

Before submitting Proposals, Bidders shall carefully examine the entire site of the proposed work and adjacent premises and the various means of approach and access to the site, and make all necessary investigations to inform themselves thoroughly as to the facilities necessary for delivering, placing and operating the necessary construction equipment, and for delivering and handling materials at the site, and inform themselves thoroughly as to all difficulties involved in the completion of all the work in accordance with the Contract Documents.

Bidders must examine the Plans, Specifications, and other Contract Documents and shall exercise their own judgment as to the nature and amount of the whole of the work to be done, and for the bid prices must assume all risk of variance, by whomsoever made, in any computation or statement of amounts or quantities necessary to complete the work in strict compliance with the Contract Documents.

Elevations of the ground are shown on the Plans and are believed to be reasonably correct, but are not guaranteed to be absolutely so and are presented only as an approximation. Bidders shall satisfy themselves as to the correctness of all elevations.

The City may have acquired, for its own use, certain information relating to the character of materials, earth formations, probable profiles of the ground, conditions below ground, and water surfaces to be encountered at the site of the proposed work. This information, if it exists, is on file at the offices of the Department of Public Works and Bidders will be permitted to see and examine this information for whatever value they consider it worth. However, this information is not guaranteed, and Bidders should satisfy themselves by making borings or test pits, or by such other methods as they may prefer, as to the character, location, and amounts of water, peat, clay, sand, quicksand, gravel, boulders, conglomerate, rock, gas or other material to be encountered or work to be performed.

Various underground and overhead structures and utilities are shown on the plans. The location and dimensions of such structures and utilities, where given, are believed to be reasonably correct, but do not purport to be absolutely so. These structures and utilities are plotted on the Plans for the information of the Bidders, but information so given is not to be construed as a representation or assurance that such structures will be found or encountered as plotted, or that such information is complete or accurate.

#### I-2.02 FORM, PREPARATION AND PRESENTATION OF PROPOSALS

Each Proposal shall be submitted upon the Proposal Form and in accordance with the instructions included herein. The Proposal Form must not be detached herefrom. All blank spaces for bid prices must be filled in, in both words and figures, with the unit or lump sum prices, or both, for which the Proposal is made. The computed total price for each unit price Contract Item shall be determined by multiplying the estimated quantity of the item, as set forth in the Proposal Form, by the corresponding unit price bid for such item. The resulting product shall be entered in the appropriate blank space under the column headed "Computed Total Price for Item". The lump sum price bid for each lump sum price Contract Item shall also be entered in the column headed "Computed Total Price for Item". If a Proposal contains any omissions, erasures, alterations, additions, or items not called for in the itemized Proposal, or contains irregularities of any kind, such may constitute sufficient cause for rejection of the Proposal. In case of any discrepancy in the unit price or amount bid for any item in the Proposal, the price as expressed in written words will govern. In no case is the Agreement Form to be filled out or signed by the Bidder.

In the case of certain jobs bid Lump Sum a "Schedule of Unit Prices" must be filled out as an attachment to the Lump Sum proposal. These prices may be used as a guide for the negotiation of change orders, at the City's option.

The proposal must be signed and certified and be presented on the prescribed form in a sealed envelope on/or before the time and at the place stated in the Notice of Bidders, endorsed with the name of the person, firm or corporation presenting it, the date of presentation, and the title of the work for which the Proposal is made.

Unless the apparent low bidder is now engaged in or has recently completed contract work for the City of Tampa, he, if requested, shall furnish to the City, after the opening of bids and prior to award, a summary statement of record of construction experience over the past three (3) years with proper supporting evidence, and, if required by the City, shall also furnish a list of equipment and other facilities pertinent to and available for the proper execution of the proposed work, and a statement of financial resources to the extent necessary to establish ability to carry on the proposed work. The City may make further investigations as considered necessary with respect to responsibility of the Bidder to whom it appears may be awarded the Contract.

If forwarded by mail, the sealed envelope containing the Proposal, endorsed as directed above, must be enclosed in another envelope addressed as specified in the Notice to Bidders and sent by registered mail.

#### I-2.03 ADDENDA AND INTERPRETATIONS

No interpretation of the meaning of the Plans, Specifications, or other Contract Documents will be made to any Bidder orally.

Every request for such interpretation must be in writing, addressed to the Contract Administration Department, Tampa Municipal Office Building, 4th Floor North, City Hall Plaza, Tampa, Florida 33602. To be given consideration, such request must be received at least seven (7) days prior to the date fixed for the opening of the Proposals. Any and all such interpretations and any supplemental instructions will be in the form of written addenda which, if issued, will be sent by certified mail, with return receipt requested, to all prospective bidders at the respective addresses furnished, for such purposes, not later than three (3) working days prior to the date fixed for the opening of the Proposals, and if requested, a copy will be delivered to the prospective bidder's representative. Failure of any Bidder to receive any such addenda shall not relieve said Bidder from any obligation under his Proposal as submitted. All addenda so issued shall become part of the Contract Documents.

#### I-2.04 BID SECURITY

Each Proposal must be accompanied by a certified or cashier's check issued by a solvent bank or trust company and payable at sight to the City of Tampa, in compliance with Section 255.051 Florida Statutes, or a Bid Bond upon the form provided herein, in an amount of not less than five percent of the sum of the computed total amount of the Bidder's Proposal as a guarantee that if the Proposal is accepted, the Bidder will execute and fill in the proposed Contract and Public Construction Bond within twenty (20) days after notice of award of the Contract. Certified checks shall have all necessary documentary revenue stamps attached if required by law. Surety on Bid Bonds shall be a duly authorized surety company authorized to do business in the State of Florida, and all such Bonds shall be issued or countersigned by a local resident producing agent, and satisfactory evidence of the authority of the person or persons executing such Bond to Execute the same shall be submitted with the Bond. Bid Bonds shall be issued by a surety company acceptable to the City.

Within ten (10) days after the opening of Proposals, the bid security of all but the three lowest Bidders will be returned. The bid security of the remaining two Bidders whose Proposals are not accepted will be

returned within ten (10) days after the execution of the Contract, or, if no such Contract has been executed, within ninety (90) days after the date of opening Proposals. The bid security of the Bidder whose Proposal is accepted will be returned only after he has duly executed the Contract and furnished the required Public Construction Bond and insurance.

Should it be necessary for the City to retain the bid security and said bid security is in the form of checks, the checks of these Bidders will be returned if replaced by Bid Bonds in an amount equal to the amount of the checks of such Bidders in such form and issued by a surety company acceptable to the City.

A Bidder may withdraw his Proposal before the time fixed for the opening of Proposals, without prejudice to himself, by communicating his purpose, in writing, to the Mayor and City Council, and when his communication is received, the Proposal will be handed to him or his authorized agent unopened. No Bidder may withdraw his Proposal within ninety (90) days after the day of opening Proposals.

The Bidder whose Proposal is accepted shall enter into a written contract, upon the Agreement form included herein, for the performance of the work and furnish the required Public Construction Bond within twenty (20) days after written notice by the City of Award of Contract has been served on such Bidder personally or after receipt of the written notice by registered mail to such Bidder at the address given in his Proposal.

If the Bidder to whom a Contract is awarded refuses or neglects to execute it or fails to furnish the required Public Construction Bond within twenty (20) days after receipt by him of the Notice of Award of Contract, the amount of his bid security shall be forfeited and shall be retained by the City as liquidated damages, and not as a penalty, it being now agreed that said sum is a fair estimate of the amount of damages that the City will sustain in case said Bidder fails to enter into a Contract and furnish the required Public Construction Bond. If a Bid Bond was furnished, the full amount of the Bond shall become due and payable as liquidated damages caused by such failure. The full amount of the bid security shall be forfeited as liquidated damages without consideration of the fact that an award may be less than the full amount of the Bidder's Proposal, excepting that the award shall be within the conditions of said Proposal relating to the basis of consideration for an award. No plea of mistake in the bid or misunderstanding of the conditions of forfeiture shall be available to the Bidder for the recovery of his deposit or as a defense to any action based upon the neglect or refusal to execute a contract.

#### I-2.05 LAWS AND REGULATIONS

The Bidder who is awarded the Contract must comply with all laws of the State of Florida, and all applicable Ordinances of the City of Tampa respecting labor and compensation and with all other statutes, ordinances, rules and regulations applicable and having the force of law.

#### I-2.06 PUBLIC CONSTRUCTION BOND

The Bidder who is awarded the Contract will be required to furnish a Public Construction Bond upon the form provided herein, equal to 100 percent of the Contract price, such Bond to be executed by a surety company acceptable to the City of Tampa and licensed to underwrite contracts in the State of Florida. Surety companies shall have a rating of not less than: B+ Class VI as evaluated in the most recently circulated BEST'S KEY RATING GUIDE PROPERTY-LIABILITY.

#### I-2.07 SIGNATURE AND QUALIFICATIONS OF BIDDERS

Proposals must be signed in ink by the Bidder with signature in full. When a firm is a Bidder, the Proposal shall be signed in the name of the firm by one or more of the partners. When a corporation is a Bidder the officer signing shall set out the corporate name in full beneath which he shall sign his name and give the title of his office. The Proposal shall also bear the seal of the corporation attested by its secretary. Anyone signing the Proposal as agent must file with it legal evidence of his authority to do so.

Bidders who are nonresident corporations shall furnish to the City a

duly certified copy of their permit to transact business in the State of Florida, signed by the Secretary of State, within ten days of the notice to do so. Such notice will be given to Bidders who are nonresident corporations, to whom it appears an award will be made, and the copy of the permit must be filed with the City before the award will be made. Failure to promptly submit this evidence of qualification to do business in the State of Florida may be basis for rejection of the Proposal.

#### I-2.08 REJECTION OF PROPOSALS

The City reserves the right to reject any Proposal if investigation of the Bidder fails to satisfy the City that such Bidder is properly qualified to carry out the obligations and to complete the work contemplated therein. Any or all Proposals will be rejected if there is reason to believe that collusion exists among Bidders. Proposals will be considered irregular and may be rejected if they show serious omissions, alterations in form, additions not called for, conditions or unauthorized alternates, or irregularities of any kind. The City reserves the right to reject any or all Proposals and to waive such technical errors as may be deemed best for the interests of the City.

#### I-2.09 QUANTITIES ESTIMATED ONLY

The estimate of quantities of the various items of work and materials, if set forth in the Proposal Form, is approximate only and is given solely to be used as a uniform basis for the comparison of Proposals.

The quantities actually required to complete the Contract work may be less or more than so estimated, and if awarded a Contract for the work specified, the Contractor agrees that he will not make any claim for damages or for loss of profits because of a difference between the quantities of the various classes of work assumed for comparison of Proposals and quantities of work actually performed. The City further reserves the right to vary the quantities in any amount.

#### I-2.10 COMPARISON OF PROPOSALS

Except jobs bid on a "One Lump Sum" basis, proposals will be compared on the basis of a total computed price arrived at by taking the sum of the estimated quantity of each item and the corresponding unit price of each item, and including any lump sum prices on individual items.

The computed total prices for individual Contract Items and the total computed price for the entire Contract, as entered by the Bidder in the Proposal Form, are for convenience only and are subject to correction in the tabulation and computation of the Proposals.

#### I-2.11 BASIS OF AWARD

The Contract will be awarded, if at all, to the lowest responsible Bidder or Bidders, as determined by the City and by the terms and conditions of the Contract Documents. Unless all bids are rejected, the award will be made within ninety (90) days after the opening of Proposals. The successful Bidder will be required to possess, or obtain, a valid City Occupational License.

#### I-2.12 INSURANCE REQUIRED

The successful Bidder and his subcontractors will be required to procure and pay for insurance covering the work in accordance with the provisions of Article 6.02 of the Agreement as indicated on special instructions pages beginning with INS-1.

#### I-2.13 NO ASSIGNMENT OF BID

No Bidder shall assign his bid or any rights thereunder.

#### I-2.14 NONDISCRIMINATION IN EMPLOYMENT

Contracts for work under this Proposal will obligate the contractors and subcontractors not to discriminate in employment practices.

Bidders must, if requested, submit with their initial bid a signed statement as to whether they have previously performed work subject to the President's Executive Order Nos. 11246 and 11375.

Bidders must, if requested, submit a compliance report concerning their employment practices and policies in order to maintain their eligibility to receive the award of the Contract.

Successful Bidders must, if requested, submit a list of all subcontractors who will perform work on the project and written,

signed statement from authorized agents of the labor pools with which they will or may deal for employees on the work together with supporting information to the effect that said labor pools practices and policies are in conformity with Executive Order No. 11246 and that said labor pools will affirmatively cooperate in or offer no hindrance to the recruitment, employment and equal treatment of employees seeking employment and performing work under the Contract, or a certification as to what efforts have been made to secure such statements when such agents or labor pools have failed or refused to furnish them prior to the award of the Contract.

#### I-2.15 LABOR STANDARDS

The Bidder's attention is directed to the Contract Provisions of the Labor Standards for federally assisted projects which may be attached to and made a part of the Agreement.

#### I-2.16 NOTICE TO LABOR UNIONS

If applicable, the successful Bidder will be required to provide Labor Unions and other organizations of workers a completed copy of the form entitled "Notice to Labor Unions or Other Organizations of Workers", and such form may be made a part of the Agreement.

#### I-2.17 NOTICE TO PROSPECTIVE FEDERALLY-ASSISTED CONSTRUCTION CONTRACTORS

A Certification of Nonsegregated Facilities, as required by the May 9, 1967, Order (32 F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted to said Secretary prior to the award of a federally-assisted construction and Contract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity Clause. The form of certification may be bound herein following the form of Bid Bond.

Contractors receiving federally-assisted construction Contract awards exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of the following notice to prospective subcontractor for supplies and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions of the Equal Opportunity Clause:

#### NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENT FOR CERTIFICATIONS OF NONSEGREGATED FACILITIES

"A Certification of Nonsegregated Facilities, as required by the May 9, 1967, Order (32 F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted prior to the award of a subcontract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity Clause."

"Contractors receiving subcontract awards exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide from the forwarding of this notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions of the Equal Opportunity Clause."

The United States requires a pre-award conference if a proposed construction contract exceeds one million dollars to determine if the the prospective contractor is in compliance with the Equal Employment Opportunity requirements of Executive Order 11246 of September 24, 1965. In such instances, a meeting may be scheduled at which the prospective contractor must specify what affirmative action he has taken or proposed to take to assure equal employment opportunity which must be approved by the United States before award of the contract will be authorized.

Bidders must be prepared to submit an Equal Employment Opportunity (EEO) plan at a pre-award conference. The plan must include bidding opportunities offered by the Bidder to minority subcontractors.

On October 13, 1971, President Nixon issued Executive Order 11246 emphasizing the government's commitment to the promotion of minority business enterprise. Accordingly, the United States is firmly

committed to the utilization of available resources to support this important program. U.S. agencies are most interested in realizing minority participation on the subject. Achieving equal employment opportunity compliance is required through Executive Order 11246. WE cannot emphasize too strongly that minority subcontractors be extended subcontractors bidding opportunities as but one step in your affirmative action policy.

Due to the importance of this contract, U.S. Agencies may conduct an EEO Conference prior to the award of the Contract. It is suggested that the responsive Bidder confirm the minority subcontractors he contacted for bids or quotations in his EEO plan submitted at the conference.

#### I-2.18 EEO AFFIRMATIVE ACTION REQUIREMENTS

By the submission of a Proposal, each Bidder acknowledges that he understands and will agree to be bound by the equal opportunity requirements of Federal regulations which shall be applicable throughout the performance of work under any contract awarded pursuant to solicitation. Each Bidder agrees that if awarded a contract, he will similarly bind contractually each subcontractor. In policies, each Bidder further understands and agrees that if awarded a contract, he must engage in Affirmative Action directed to promoting and ensuring equal employment opportunity in the work force used under the contract (and he must require contractually the same effort of all subcontractors whose subcontracts exceed \$100,000). The Bidder understands and agrees that "Affirmative Action" as used herein shall constitute a good faith effort to achieve and maintain minority employment in each trade in the on-site work force used on the project. \*\*\*\*\* END of SECTION \*\*\*\*\*

## CITY OF TAMPA INSURANCE REQUIREMENTS

During the life of the award/contract the Awardee/Contractor shall provide, pay for, and maintain insurance with companies authorized to do business in Florida, with an A.M. Best rating of B+ (or better) Class VII (or higher), or otherwise be acceptable to the City if not rated by A.M. Best. All insurance shall be from responsible companies duly authorized to do business in the State of Florida.

All commercial general liability insurance policies (and Excess or Umbrella Liability Insurance policies, if applicable) shall provide that the City is an additional insured as to the operations of the Awardee/Contractor under the award/contract including the additional insured endorsement, the subrogation waiver endorsement, and the Severability of Interest Provision. In lieu of the additional named insured requirement, if the Awardee/Contractor's company has a declared existing policy which precludes it from including additional insureds, the City may permit the Contractor to purchase an Owners and Contractors Protective Liability policy. Such policy shall be written in the name of the City at the same limit as is required for General Liability coverage. The policy shall be evidenced on an insurance binder which must be effective from the date of issue until such time as a policy is in existence and shall be submitted to the City in the manner described below as applicable to certificates of insurance.

The insurance coverages and limits required must be evidenced by a properly executed Acord 25 Certificate of Insurance form or its equivalent. Each Certificate must be personally manually signed by the Authorized Representative of the insurance company shown in the Certificate with proof that he/she is an authorized representative thereof. Thirty days' written notice must be given to the City of any cancellation, intent not to renew, or reduction in the policy coverages, except in the application of the aggregate liability limits provisions. Should any aggregate limit of liability coverage be reduced, it shall be immediately increased back to the limit required by the contract. The insurance coverages required herein are to be primary to any insurance carried by the City or any self-insurance program thereof.

The following coverages are required:

A. Commercial General Liability Insurance shall be provided on the most current Insurance Services Office (ISO) form or its equivalent. This coverage must be provided to cover liability arising from premises and operations, independent contractors, products and completed operations, personal and advertising injury, contractual liability, and XCU exposures (if applicable). Completed operations liability coverage shall be maintained for a minimum of one-year following completion of work. The amount of Commercial General Liability insurance shall not be less than the amount specified.

(a) \$1,000,000 per occurrence and a \$2,000,000 general aggregate for projects valued at \$2,000,000 or less. General aggregate limit for projects over that price shall equal or exceed the price of the project. An Excess or Umbrella Liability insurance policy can be provided to meet the required limit. Risk Management may be contacted for additional information regarding projects of this nature.

B. Automobile Liability Insurance shall be maintained in accordance with the laws of the State of Florida, as to the ownership, maintenance, and use of all owned, non-owned, leased, or hired vehicles. The amount of Automobile Liability Insurance shall not be less than the amount specified.

(a) \$500,000 combined single limit each occurrence bodily injury & property damage- for projects valued at \$100,000 and under

(b) \$1,000,000 combined single limit each occurrence bodily injury & property damage – for projects valued over \$100,000

C. Worker's Compensation and Employer's Liability Insurance shall be provided for all employees engaged in the work under the contract, in accordance with the Florida Statutory Requirements. The amount of the Employer's Liability Insurance shall not be less than:

(a) \$500,000 bodily injury by accident and each accident, bodily injury by disease policy limit, and bodily injury by disease each employee – for projects valued at \$100,00 and under

(b) \$1,000,000 bodily injury by accident and each accident, bodily injury by disease policy limit, and bodily injury by disease each –for projects valued over \$100,000

D. Excess Liability Insurance or Umbrella Liability Insurance may compensate for a deficiency in general liability, automobile, or worker's compensation insurance coverage limits. If the Excess or Umbrella policy is being provided as proof of coverage, it must name the City of Tampa as an additional insured (**IF APPLICABLE**).

E. Builder's Risk Insurance, specialized policy designed to cover the property loss exposures that are associated with construction of buildings. The amount of coverage should not be less than the amount of the project. **(IF APPLICABLE)**.

F. Installation Floater- a builder's risk type policy that covers specific type of property during its installation, is coverage required for highly valued equipment or materials such as compressors, generators, or other machinery that are not covered by the builder's risk policy **(IF APPLICABLE)**.

G. Longshoreman's & Harbor Worker's Compensation Act/Jones Act coverage shall be maintained for work being conducted upon navigable water of the United States. The limit required shall be the same limit as the worker's compensation/employer's liability insurance limit **(IF APPLICABLE)**.

H. Professional Liability shall be maintained against claims of negligence, errors, mistakes, or omissions in the performance of the services to be performed and furnished by the Awardee/Contractor or any of its subcontractors when it acts as a DESIGN PROFESSIONAL. The amount of coverage shall be no less than amount specified **(IF APPLICABLE)**.

(a) \$1,000,000 per incident and general aggregate. Note all claims made policies must provide the date of retroactive coverage.

The City may waive any or all of the above referenced insurance requirements based on the specific nature of goods or services to be provided under the award/contract.

ADDITIONAL INSURED - The City must be included as an additional insured by on the general and (Excess or Umbrella liability policies) if applicable. Alternatively, the Contractor may purchase a separate owners protective liability policy in the name of the City in the specified amount as indicated in the insurance requirements.

CLAIMS MADE POLICIES - If any liability insurance is issued on a claims made form, Contractor agrees to maintain uninterrupted coverage for a minimum of one year following completion and acceptance of the work either through purchase of an extended reporting provision, or through purchase of successive renewals with a retroactive

date not later than the beginning of performance of work for the City. The retroactive date must be provided for all claims made policies.

CANCELLATION/NON-RENEWAL - Thirty (30) days written notice must be given to the City of any cancellation, intent to non-renew or material reduction in coverages (except aggregate liability limits). However, ten (10) days notice may be given for non-payment of premium. Notice shall be sent to the City of Tampa Department of Public Works, 306 E. Jackson Street, Tampa, FL 33602.

NUMBER OF POLICIES - General and other liability insurance may be arranged under single policies for the full amounts required or by a combination of underlying policies with the balance provided by an excess or umbrella liability insurance policy.

WAIVER OF SUBROGATION - Contractor waives all rights against City, its agents, officers, directors and employees for recovery of damages to the extent such damage is covered under the automobile or excess liability policies.

SUBCONTRACTORS - It is the Contractor's responsibility to require all subcontractors to maintain adequate insurance coverage.

PRIMARY POLICIES - The Contractor's insurance is primary to the City's insurance or any self insurance program thereof.

RATING - All insurers shall be authorized to do business in Florida, and shall have an A.M. Best rating of B+ (or better), Class VII (or higher), or otherwise be acceptable to the City if not rated by A.M. Best.

DEDUCTIBLES - The Contractor is responsible for all deductibles. In the event of loss which would have been covered but for the presence of a deductible, the City may withhold from payment to Contractor an amount equal to the deductible to cover such loss should full recovery not be obtained under the insurance policy.

INSURANCE ADJUSTMENTS - These insurance requirements may be increased, reduced, or waived at the City's sole option with an appropriate adjustment to the Contract price.

Document updated on 12/22/2009 by RLD (Risk Management)

*City of Tampa MBD Office*  
*U-WMBE Goal Setting Firms Report*

*3/26/15*

**ELECTRICAL SERVICES**

**Brown & Brown Electric, Inc.**

6555 N.W. 9th Ave. S-205  
Ft. Lauderdale, FL 33310-5003

**Phone** (954) 938-8986  
**Fax** (954) 938-9272

**E-mail** [winston@brownandbrownelectric.com](mailto:winston@brownandbrownelectric.com)

**Federal Number** 59-2283934

**Minority** African American  
**Contact** Winston Brown

**Acktel Electric Company, Inc.**

P.O. Box 52292  
Jacksonville, FL 32201-2292

**Phone** (904) 356-1274  
**Fax** (904) 356-1374

**E-mail** [acktelel@bellsouth.net](mailto:acktelel@bellsouth.net)

**Federal Number** 59-3579225

**Minority** African American  
**Contact** Sedley Huey

**All-In-One Electric, Inc.**

1201 W Waters Ave.  
Tampa, FL 33604

**Phone** (813) 849-6331  
**Fax** (813) 514-0473

**E-mail** [allinoneelectric@msn.com](mailto:allinoneelectric@msn.com)

**Federal Number** 04-3689273

**Minority** African American  
**Contact** Rodney Jones

**Prime Electric, LLC**

1229 W. Main St  
Leesburg, FL 34748

**Phone** (352) 728-5966  
**Fax** (352) 728-5921

**E-mail** [wylie@primeelectricllc.net](mailto:wylie@primeelectricllc.net)

**Federal Number** 20-1137443

**Minority** African American  
**Contact** Wylie Hamilton

**MDH Enterprises, Inc.**

281 E C St.  
Orange City, FL 32763

**Phone** (386) 789-2672  
**Fax** (866) 681-5026

**E-mail** [matize@my-es.com](mailto:matize@my-es.com)

**Federal Number** 55-0849332

**Minority** African American  
**Contact** Matize Hoskins



# City of Tampa MBD Office



## SLBE Goal Setting Firms Report

as of 3/26/2015

### AIR CONDITIONING (HVAC) CONTROL SYSTEMS, COMPLETE

**George G. Solar & Company, Inc.**

4407 W. South Ave.  
Tampa, FL 33614

**Phone** (813) 875-9148

**Fax** (813) 879-2315

**E-mail** georgesolarcompany@verizon.net

**Federal Number** 59-1314899

**Minority** Small Business

**Contact** George Solar

**Benro Enterprises Inc. d/b/a Rocha Controls**

P.O. Box 45139  
Tampa, FL 33677

**Phone** (813) 628-5584

**Fax** (813) 664-6713

**E-mail** rrocha@rochacontrols.com

**Federal Number** 59-3425954

**Minority** Small Business

**Contact** Raymond Rocha

**DJ's Commercial Air, LLC**

16601 Manna Road  
Lutz, FL 33549

**Phone** (813) 451-2272

**Fax** (813) 948-1224

**E-mail** jcdc1001@hotmail.com

**Federal Number** 11-3810019

**Minority** Small Business

**Contact** Joseph E Castellano

**G.S. Sears Enterprises, Inc.**

3957 Warbler Dr  
Winter Haven, FL 33880

**Phone** (863) 228-2326

**Fax** (863) 875-2331

**E-mail** treetop863@yahoo.com

**Federal Number** 46-1251893

**Minority** Small Business

**Contact** Gerald Sears, Jr.

### ELECTRICAL SERVICES

**Gaylord / Miller Electric Corp**

602 North Oregon Avenue  
Tampa, FL 33606

**Phone** (813) 254-4681

**Fax** (813) 254-9473

**E-mail** james.gmelectric@verizon.net

**Federal Number** 59-1631953

**Minority** Small Business

**Contact** James A. Tepper

**All-In-One Electric, Inc.**

1201 W Waters Ave.  
Tampa, FL 33604

**Phone** (813) 849-6331

**Fax** (813) 514-0473

**E-mail** allinoneelectric@msn.com

**Federal Number** 04-3689273

**Minority** Small Business

**Contact** Rodney Jones

## City of Tampa MBD Office

# SLBE Goal Setting Firms Report

as of 3/26/2015



### ELECTRICAL SERVICES

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**JDP Electric, Inc.**

6600 N. Florida Avenue  
Tampa, FL 33604

**Phone** (813) 234-4004

**Fax** (813) 236-0394

**E-mail** jdpinc@tampabay.rr.com

**Federal Number** 59-3511620

**Minority** Small Business

**Contact** Jeffrey Priede

**Mandy Electric, Inc.**

9353 E. Fowler Ave.  
Thonotosassa, FL 33592

**Phone** (813) 264-9234

**Fax** (813) 333-9701

**E-mail** lhernandez@mandyselectric.com

**Federal Number** 59-2914874

**Minority** Small Business

**Contact** Armando Hernandez

**Crevello Electric, Inc.**

3305 N. Stanley Rd.  
Plant City, FL 33565

**Phone** (813) 986-6106

**Fax** (813) 986-9633

**E-mail** crevelloelectric@gmail.com

**Federal Number** 59-3559003

**Minority** Small Business

**Contact** Bill Crevello

**Electrical Handyman Services**

7046-B West Hillsborough Ave  
Tampa, FL 33634

**Phone** (813) 901-8185

**Fax** (813) 884-5060

**E-mail** ehs915@aol.com

**Federal Number** 27-2406369

**Minority** Small Business

**Contact** Jose Cruz

**SJM Electric Corporation**

333 North Falkenburg Rd, Suite B201  
Tampa, FL 33619

**Phone** (813) 684-7459

**Fax** (813) 654-0420

**E-mail** scott@sjmelectric.com

**Federal Number** 20-4183090

**Minority** Small Business

**Contact** Scott Mroczkowski

**Best Price Electric Service, LLC**

P.O. Box 6516  
Seffner, FL 33583

**Phone** (813) 927-1668

**Fax** (813) 409-3154

**E-mail** BestPriceElectricServ@hotmail.com

**Federal Number** 27-1211988

**Minority** Small Business

**Contact** Frank Fleites

**Manatee Electric, Inc.**

845 Thompson Road  
Lithia, FL FL

**Phone** (813) 645-7000

**Fax** (813) 654-7568

**E-mail** john@reliableelectricusa.com

**Federal Number** 59-3454485

**Minority** Small Business

**Contact** John Babuka

*City of Tampa MBD Office*



**SLBE Goal Setting Firms Report**

*as of 3/26/2015*

**ELECTRICAL SERVICES**

**Aguila Electrical Services, Inc.**

8928 N. Newport Avenue  
Tampa, FL 33604

**Phone** (813) 368-9323

**Fax** (813) 884-4092

**E-mail** sales@aguilaelectrical.com

**Federal Number** 20-0818128

**Minority** Small Business

**Contact** Jael Aguila

**Rhythms Electric Corporation**

433 37th Ave NE  
St. Petersburg, FL 33704

**Phone** (727) 460-8779

**Fax**

**E-mail** rhythmselectric@me.com

**Federal Number** 27-3150153

**Minority** Small Business

**Contact** Mathew Krchmar

**TAMCO Electric, Inc.**

P.O. Box 579  
Tampa, FL 33614

**Phone** (813) 986-3472

**Fax** (813) 986-5979

**E-mail** atrujill@tampabay.rr.com

**Federal Number** 59-1396630

**Minority** Small Business

**Contact** Steven Moates

**SLBE Contract Goal**

Goal
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Instructions Regarding Use of the SLBE Goal Setting List

**Bidders must solicit a subcontracting bid from ALL of the firms listed on the SLBEs list provided on the City's web site, and provide documentation of emails, faxes, phone calls, letters, or other communication with the firms a first step in demonstrating Good-Faith Efforts to achieve the goal set for SLBE participation on this contract.**

The list is formatted to facilitate e-mailing of a solicitation to the listed firms by copying and pasting the email addresses.

The SLBE participation Goal is based upon the availability of the certified firms indicated on the attached list. The Goal and Requirements of the City's Equal Business Opportunity Program are stated in the Bid/Contract Document, Specifications.

SOLICITATION FOR SUBCONTRACTOR QUOTES

From:  
OUR COMPANY NAME:  
TELEPHONE NUMBER:  
ADDRESS:  
FAX NUMBER:  
E-MAIL ADDRESS:

To Subcontractor:

Our firm is in the process of preparing a bid for a **City of Tampa Contract**. Please accept this notice as our request for quotes for the scope of work identified below. Please respond to this request by filling in the information below and returning via e-mail or fax to the address or number provided. Please contact us if you need any assistance in obtaining bonding, lines of credit, insurance, assistance in obtaining necessary equipment, supplies, materials, participation in a City-sponsored mentor-protégé program, or if you have any questions.

Plans and Specs for this project are posted at:  
[http://www.tampagov.net/dept\\_contract\\_administration/programs\\_and\\_services/construction\\_project\\_bidding/](http://www.tampagov.net/dept_contract_administration/programs_and_services/construction_project_bidding/)

CONTRACT NO.:  
CONTRACT NAME:  
CITY'S BID OPENING DATE:  
DEADLINE FOR YOUR SUBCONTRACTOR BID OR RESPONSE:  
SPECIFIC SCOPE OF WORK:

Please complete and submit with your subcontract bid or response:

YOUR FIRM'S NAME:  
MAILING ADDRESS:  
CITY:  
STATE:  
ZIP:  
FAX NUMBER:  
E-MAIL ADDRESS:

Yes, my company is interested in quoting this project for the following items of work:

No, my company will not quote this project for the following reason(s):

(Sample Suggested Sub Solicitation 3-9-9 Tampa MBDO)

PROPOSAL

To the Mayor and City Council of the City of Tampa, Florida:

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

Business Phone Number and Email Address \_\_\_\_\_

Business Name and Mailing Address \_\_\_\_\_

Phone Number and Name of Contact Regarding Permits \_\_\_\_\_

Contractor/Qualifiers Name and Federal Identification Number \_\_\_\_\_

Date of Proposal \_\_\_\_\_

(If Bidder is a firm, fill in the following blanks):

Names and Residential Addresses of Partners \_\_\_\_\_

\_\_\_\_\_

(If Bidder is a corporation, fill in the following blanks):

Organized under the laws of the State of \_\_\_\_\_

Names and Address of President \_\_\_\_\_

\_\_\_\_\_

Name and Address of Vice President \_\_\_\_\_

\_\_\_\_\_

Name and Address of Secretary \_\_\_\_\_

\_\_\_\_\_

Names and Address of Treasurer \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

The above-named Bidder affirms and declares:

- (1) That the Bidder is of lawful age and that no other person, firm or corporation has any interest in this Proposal or in the Contract proposed to be entered into.
- (2) That this Proposal is made without any understanding, agreement or connection with any other person, firm, or corporation making Proposal for the same purposes, and is in all respects fair and without collusion or fraud.
- (3) That the Bidder is not in arrears to the City of Tampa, upon debt or contract, and is not a defaulter, as surety or otherwise, upon any obligation to the City of Tampa.
- (4) That no officer or employee or person whose salary is payable in whole or in part from the City Treasury is, shall be or become interested, directly or indirectly, as a contracting party, partner, stockholder, surety or otherwise, in this Proposal, or in the performance of the Contract, or in the supplies, materials, or equipment and work or labor to which it relates, or in any portion of the profits thereof.
- (5) That the Bidder has carefully examined the site of the work and that, from his own investigations, he has satisfied himself as to the nature and location of the work, the character, quality, and quantity of materials and the kinds and extent of equipment and other facilities needed for the performance of the work, the general and local conditions and all difficulties to be encountered, and all other items which may, in any way, affect the work or its performance.
- (6) That the Bidder  
\_\_\_\_\_ Has; Treasury Number \_\_\_\_\_  
\_\_\_\_\_ Has not  
(Check applicable box)  
previously performed work under the President's Executive Order Nos. 11246 and 11375.
- (7) That the undersigned, as Bidder, also declares that he has carefully examined and fully understands all the component parts of the Contract Documents and agrees that he will execute the Contract and finish the required Performance Bond and will completely perform the work in strict accordance with the terms of the Contract and the Contract Documents therein referred to for the following prices, to wit:

Contract Item No.	Estimated Quantity	Description and Price in Words	Computed Total Price for Item in Figures
BASE BID	LS	<p>The work includes the furnishing of all labor, equipment, and materials for replacement of portions of four (4) <u>north core</u> elevators, including traction machines, operation systems, car finishes, ceilings and lighting, handrails, car and hoistway doors, signal equipment, wiring and cables, electrical modifications and north and south core elevator related fire alarm system, including control unit and printer, annunciator, signal initiation and notification devices, manual devices, wiring, etc., (excluding the Scope of Work related to Alternate No. 1), and any allowances that may be listed in Section 01020, with all associated work required for a complete project in accordance with the Contract Documents.</p>	<p>_____ dollars and _____ cents (BASE BID) LS \$ _____</p>
ALTERNATE NO. 1	LS	<p>This includes the furnishing of all labor, equipment, and material for replacement of four (4) <u>south core</u> elevators, including traction machines, operation systems, car finishes, ceilings and lighting, and rails, car and hoistway doors, signal equipment, wiring and cables, and electrical modifications, with all associated work required for a complete project in accordance with the Contract Documents.</p>	<p>_____ dollars and _____ cents (ADDITIVE) LS \$ _____</p>
ALTERNATE NO. 2	LS	<p>This includes the furnishing of all labor, equipment, and material for the additional scope of work for four (4) items related to the fire alarm system as described in the boxed note on the plans (Sheet No. E-9), with all associated work required for a complete project in accordance with the Contract Documents.</p>	<p>_____ dollars and _____ cents (ADDITIVE) LS \$ _____</p>



Computed Total Price In Words:

\_\_\_\_\_ dollars and \_\_\_\_\_ cents.

Computed Total Price in Figures: \$ \_\_\_\_\_

The bidder acknowledges that the following addenda have been received and that the changes covered by the addendum(s) have been taken into account in this proposal: #1 \_\_\_ #2 \_\_\_ #3 \_\_\_ #4 \_\_\_ #5 \_\_\_.

The bidder acknowledges the requirements of the City of Tampa's Equal Business Opportunity Program.

Bidder acknowledges that included in the various items of the proposal and the Total Bid Price are costs for complying with the Florida Trench Safety Act (90096), (Laws of Fla.) effective October 1, 1990. The bidder further identifies the costs to be summarized below:

	Trench Safety Measure (Description)	Unit of Measure (LF, SY)	Unit Quantity	Unit Cost	Extended Cost
A.	_____	_____	_____	_____	_____
B.	_____	_____	_____	_____	_____
C.	_____	_____	_____	_____	_____
D.	_____	_____	_____	_____	_____
				Total Cost \$	_____

Signed \_\_\_\_\_

Failure to complete the above may result in the bid being declared non-responsive.

Accompanying this Proposal is a certified check, cashier's check or Bid Bond (form included herein must be used) on the form at least five (5) percent of the total amount of the Proposal which check shall become the property of the

\_\_\_\_\_ of \_\_\_\_\_  
(Name of Bank or Surety) (City & State)

City of Tampa, or which bond shall become forthwith due and payable to the City of Tampa, if this Proposal shall be accepted by the City of Tampa and the undersigned shall fail to execute a contract with and to furnish the required Performance Bond and Payment Bond to the City of Tampa within twenty (20) days after the date of receipt of written Notice of Award by the City of Tampa to the undersigned so to do.

Dated \_\_\_\_\_, 20\_\_

\_\_\_\_\_  
(Name of Bidder)

\_\_\_\_\_  
(Address of Bidder)

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

\_\_\_\_\_  
(Title)

Where Bidder is a Corporation:

Attest:

\_\_\_\_\_  
Secretary

AFFIX  
CORPORATE  
SEAL

(ACKNOWLEDGMENT OF PRINCIPAL)

STATE OF \_\_\_\_\_ )  
 ) SS:  
COUNTY OF \_\_\_\_\_ )

For a Corporation:

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

The foregoing instrument was acknowledged before me this \_\_\_\_ of \_\_\_\_\_, 20\_\_ by \_\_\_\_\_ of \_\_\_\_\_, a \_\_\_\_\_ corporation, on behalf of the corporation. He/she is \_\_\_\_ personally known or has \_\_\_\_ produced \_\_\_\_\_ as identification.

\_\_\_\_\_  
Notary

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

For an Individual:

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

The foregoing instrument was acknowledged before me this \_\_\_\_ of \_\_\_\_\_, 20\_\_ by \_\_\_\_\_ who is \_\_\_\_ personally known to me or has \_\_\_\_ produced \_\_\_\_\_ as identification.

\_\_\_\_\_  
Notary

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

For a Firm:

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

The foregoing instrument was acknowledged before me this \_\_\_\_ of \_\_\_\_\_, 20\_\_ by \_\_\_\_\_ who signed on behalf of the said firm. He/she is \_\_\_\_ personally known or has \_\_\_\_ produced \_\_\_\_\_ as identification.

\_\_\_\_\_  
Notary

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

**Good Faith Effort Compliance Plan** for Small Local Business Subcontracting  
City of Tampa - Equal Business Opportunity Program

Contract \_\_\_\_\_ Bid Date \_\_\_\_\_

Bidder \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

Name \_\_\_\_\_ Title \_\_\_\_\_

The following Compliance Plan is a true report of Good Faith Efforts made to accomplish subcontracting goals for Small Local Business Enterprises, SLBEs, on the referenced contract:

The goal for SLBE participation has been met or exceeded. See the DMI form reporting subcontractors to be utilized.  
(Check Box, if appropriate; the remainder of the Compliance Plan need not be reported.)

The goal for SLBE participation has not been met. The following is a recap of Good Faith Efforts made:  
(Check applicable boxes below. Enclose additional documents, and/or add remarks below as needed.)

- (1) Soliciting through reasonable and available means the interest of SLBEs that have the capability to perform the work of the contract. The Bidder or Contractor must solicit this interest within sufficient time to allow the SLBEs to respond. The Bidder or Contractor must take appropriate steps to follow up initial solicitations with interested SLBEs.  See DMI report forms for subcontractors solicited.  See enclosed supplemental data on solicitation efforts.  Remarks:
- (2) Providing interested SLBEs with adequate information about the plans, specifications, and requirements of the contract, including addenda, in a timely manner to assist them in responding to the solicitation.  See enclosed sample solicitation.  Remarks:
- (3) Negotiating in good faith with interested SLBEs that have submitted bids. Documentation of negotiation must include the names, addresses, and telephone numbers of SLBEs that were solicited; the date of each such solicitation; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why agreements could not be reached with SLBEs to perform the work. That there may be some additional costs involved in soliciting and using SLBEs is not a sufficient reason for a contractor's failure to meet the goals, as long as such costs are reasonable. Bidders are not required to accept higher quotes in order to meet the goal.  DMI subcontractor-utilized forms reflect successful negotiations  This project is of a low-bid nature and negotiations are limited to clarifications of scope and specifications.  See enclosed document.  Remarks:
- (4) Not rejecting SLBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The SLBEs standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations are not legitimate causes for rejecting or not soliciting bids to meet the goals.  Not applicable.  See attached explanation for rejection of a low-bidding subcontractor's bid.  Remarks:
- (5) Making a portion of the work available to SLBE subcontractors and suppliers and to select those portions of the work or material consistent with the available SLBE subcontractors and suppliers, so as to facilitate meeting the goal.  Sub-Contractors were allowed to bid on their own choice of work or trade without restriction to a pre-determined portion.  See enclosed comments.  Remarks:
- (6) Making good faith efforts, despite the ability or desire of a Bidder or Contractor to perform the work of a contract with its own organization. A Bidder or Contractor who desires to self-perform the work of a contract must demonstrate good faith efforts unless the goal has been met.  Sub-Contractors were not prohibited from submitting bids on work not usually sub-contracted.  Remarks:
- (7) Selecting portions of the work to be performed by SLBEs in order to increase the likelihood that the goals will be met. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate SLBE participation, even when the Bidder or Contractor might otherwise prefer to perform these work items with its own forces.  Sub-Contractors were allowed to bid on their own choice of work or trade without restriction to a pre-determined portion.  Sub-Contractors were not prohibited from submitting bids on work not usually sub-contracted.  See enclosed comments.  Remarks:
- (8) Making efforts to assist interested SLBEs in obtaining bonding, lines of credit, or insurance as required by the city or contractor.  See enclosed sample solicitation  see enclosed document.  Remarks:
- (9) Making efforts to assist interested SLBEs in obtaining necessary equipment, supplies, materials, or related assistance or services, including participation in a City-sponsored mentor-protégé program.  See enclosed sample solicitation.  See enclosed document.  Remarks:
- (10) Effectively using the services of the City and other organizations that provide assistance in the recruitment and placement of SLBEs.  See enclosed document.  The following services were used:

Other Supporting Good Faith Efforts:  See enclosed document.  Remarks:

## **Compliance Plan: Guidance For Meeting Good Faith Efforts**

1. All firms on the SLBE Goal Setting List must be solicited and documentation provided for email, fax, letters, phone calls, and other communication with the listed firms. The DMI Solicited and DMI-Utilized forms must be completed for all firms solicited or utilized. Other opportunities for subcontracting may be explored by consulting the City of Tampa and/or Hillsborough County certification listings of SLBE's.
2. Solicitation of SLBEs, via written or electronic notification, should provide specific information on the services needed, where plans can be reviewed and assistance offered in obtaining these, if required. Solicitations should be typically be sent a week or more before the bid date. Sample copies of the bidder's solicitations should be provided.
3. With any quotes received, a follow-up should be made whenever needed to confirm scope of work. For any SLBE low quotes rejected, an explanation should be provided detailing negotiation efforts.
4. If a low bid SLBE is rejected or deemed unqualified the contractor must provide an explanation and supporting documentation for this decision.
5. Prime should break down portions of work into economical feasible opportunities for subcontracting. The SLBE directory can be useful in identifying additional subcontracting opportunities and firms not listed in the "SLBE Goal Setting Firms List."
6. Contractor should not preclude SLBEs from bidding on any part of work, even if the Contractor can self-perform the work.
7. Contractor should avoid relying solely on subcontracting out work where availability is not sufficient to attain pre-determined goal.
8. In its solicitations, the Bidder should offer assistance to SLBEs in obtaining bonding, insurance, etc, if required of subcontractors by the City or Prime Contractor.
9. In its solicitation, the Bidder should offer assistance in obtaining equipment for a specific job to SLBEs, if needed.
10. Contractor should use the services offered by such agencies as the Minority Business Development Office of the City of Tampa, Hillsborough County and the NAACP Empowerment Center for the recruitment and placement of SLBEs.





## Instructions for completing The Sub-(Contractors/Consultants/ Suppliers) Solicited Form (Form MBD-10)

**This form must be submitted with all bids or proposals.** All subcontractors (regardless of ownership or size) solicited and subcontractors from whom unsolicited quotations were received must be included on this form. The instructions that follow correspond to the headings on the form required to be completed. Note: Ability or desire to self-perform all work shall not exempt the prime from Good Faith Efforts when Goal has been established.

- **Contract No.** This is the number assigned by the City of Tampa for the bid or proposal.
- **Contract Name.** This is the name of the contract assigned by the City of Tampa for the bid or proposal.
- **Contractor Name.** The name of your business.
- **Address.** The physical address of your business.
- **Federal ID.FIN.** A number assigned to your business for tax reporting purposes.
- **Phone.** Telephone number to contact business.
- **Fax.** Fax number for business.
- **Email.** Provide email address for electronic correspondence.
- **No Firms were contacted/solicited for this contract.** Checking the box indicates that a pre-determined Subcontract Goal was not set by the City resulting in your business not using subcontractors and will self-perform all work. If during the performance of the contract you employ subcontractors, the City must pre-approve subcontractors. Use of the “Sub-(Contractors/Consultants/Suppliers) Payments” form must be submitted with your invoices. Note: Certified SLBE or WMBE firms bidding as Primes are not exempt from outreach and solicitation of subcontractors.
- **No Firms were contacted because.** Provide brief explanation why no firms were contacted/solicited.
- **See attached documents.** Check box, if after you have completed the DMI Form in its entirety, you are providing any additional documentation relating to the form. All DMI data not submitted on the MBD Form-10 must be in the same format and have all requested data from MBD Form-10 included.

The following instructions are for information of any and all subcontractors solicited.

- **“S” = SLBE, “W” = WMBE.** Enter “S” for firms Certified by the City as Small Local Business Enterprises and/or “W” for firms Certified by the City as Women/Minority Business Enterprise.
- **Federal ID.FIN.** A number assigned to a business for tax reporting purposes. This information is critical in proper identification of the subcontractor.
- **Company Name, Address, Phone & Fax.** Provide company information for verification of payments.
- **Type of Ownership.** Indicate the Ethnicity and Gender of the owner of the subcontracting business.
- **Trade, Services, or Materials** Indicate the trade, service, or material provided by the subcontractor. NIGP codes are listed at top section of document.
- **Contact Method L=letter, F=fax, E=Email, P=Phone.** Indicate with letter the method of soliciting for bid.
- **Quote or Resp. (response) Rec’d (received) Y/N.** Indicate “Y” Yes if you received a quotation or if you received a response to your solicitation. Indicate “N” No if you received no response to your solicitation from the subcontractor.

If any additional information is required or you have any questions, you may call the Minority Business Development Office at (813) 274-5522.







## Page 4 of 4DMI – Solicited/Utilized

### Instructions for completing **The Sub-(Contractors/Consultants/ Suppliers) to be Utilized Form (Form MBD-20)**

**This form must be submitted with all bids or proposals. All subcontractors projected to be utilized must be included on this form.**

- **Contract No.** This is the number assigned by the City of Tampa for the bid or proposal.
- **Contract Name.** This is the name of the contract assigned by the City of Tampa for the bid or proposal.
- **Contractor Name.** The name of your business.
- **Address.** The physical address of your business.
- **Federal ID.FIN.** A number assigned to your business for tax reporting purposes.
- **Phone.** Telephone number to contact business.
- **Fax.** Fax number for business.
- **Email.** Provide email address for electronic correspondence.
- **No Subcontracting (of any kind) will be performed on this contract.** Checking box indicates your business will not use subcontractors when no Subcontract Goal has been set by the City, but will self-perform all work. When subcontractors are utilized during the performance of the contract, the “Sub-(Contractors/Consultants/Suppliers) Payments” form must be submitted with your invoices. Note: Certified SLBE or WMBE firms bidding as Primes are not exempt from outreach and solicitation of subcontractors.
- **See attached documents.** Check if you have provided any additional documentation relating to the utilization of subcontractors.
- 

The following instructions are for information of Any and All subcontractors to be utilized.

- **Federal ID.FIN.** A number assigned to a business for tax reporting purposes. This information is critical in proper identification of the subcontractor.
- **“S” = SLBE, “W” = WMBE.** Enter “S” for firms Certified by the City as Small Local Business Enterprises and/or “W” for firms Certified by the City as Women/Minority Business Enterprise.
- **Company Name, Address, Phone & Fax.** Provide company information for verification of payments.
- **Type of Ownership.** Indicate the Ethnicity and Gender of the owner of the subcontracting business.
- **Trade, Services, or Materials (NIGP code if Known)** Indicate the trade, service, or material provided by the subcontractor. NIGP codes are available at <http://www.tampagov.net/mbd>.
- **Amount of Quote, Letters of Intent** (required for both SLBEs and WMBEs)
- **Percent of Work/Contract.** Indicate the percent of the total contract price the subcontract(s) represent.
- **Total Subcontract/Supplier Utilization.** – Provide total dollar amount of all subcontractors/suppliers projected to be used for the contract. (Dollar amounts may not apply to CCNA proposals.)
- **Total SLBE Utilization.** Provide total dollar amount for all projected SLBE subcontractors/Suppliers used for this contract. (Dollar amounts may not apply to CCNA proposals.)
- **Total WMBE Utilization.** Provide total dollar amount for all projected WMBE subcontractors/Suppliers used for this contract. (Dollar amounts may not apply to CCNA proposals.)
- **Percent SLBE Utilization.** Total amount allocated to SLBEs divided by the total bid amount. (Dollar amounts may not apply to CCNA proposals.)
- **Percent WMBE Utilization.** Total amount allocated to WMBEs divided by the total bid/proposal amount. (Dollar amounts may not apply to CCNA proposals.)

If any additional information is required or you have any questions, you may call the Minority Business Development Office at (813) 274-5522.

TAMPA BID BOND  
Contract 15-C-00031; Ft. Brooke Parking Garage - Elevator Improvements

KNOW ALL MEN BY THESE PRESENTS, that we, \_\_\_\_\_

\_\_\_\_\_ (hereinafter called the Principal) and \_\_\_\_\_

(hereinafter called the Surety) a Corporation chartered and existing under the laws of the State of \_\_\_\_\_, with its principal offices in the City of \_\_\_\_\_, and authorized to do business in the State of Florida, are held and firmly bound unto the City of Tampa, a Municipal Corporation of Hillsborough County, Florida, in the full and just sum of 5% of the amount of the (Bid) (Proposal) good and lawful money of the United States of America, to be paid upon demand of the City of Tampa, Florida, to which payment will and truly be made we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally and firmly these presents.

WHEREAS, the Principal is about to submit, or has submitted to the City of Tampa, Florida, a Proposal for the construction of certain facilities for the City designated Contract 15-C-00031, Ft. Brooke Parking Garage - Elevator Improvements.

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

NOW, THEREFORE: The conditions of this obligation are such that if the Proposal be accepted, the Principal shall, within twenty (20) days after the date of receipt of written Notice of Award, execute a contract in accordance with the Proposal and upon the terms, conditions and price set forth therein, in the form and manner required by the City of Tampa, Florida and execute a sufficient and satisfactory Public Construction Bond payable to the City of Tampa, Florida in an amount of one hundred percent (100%) of the total contract price, in form and with security satisfactory to said City, then this Bid Bond obligation is to be void; otherwise to be and remain in full force and virtue in law, and the Surety shall, upon failure of the Principal to comply with any or all of the foregoing requirements within the time specified above, immediately pay to the aforesaid City, upon demand, the amount thereof, in good and lawful money of the United States of America, not as a penalty, but as liquidated damages.

IN TESTIMONY THEREOF, the Principal and Surety have caused these presents to be duly signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

Principal \_\_\_\_\_

BY \_\_\_\_\_

TITLE \_\_\_\_\_

BY \_\_\_\_\_

TITLE \_\_\_\_\_

(SEAL) \_\_\_\_\_  
Producing Agent

\_\_\_\_\_  
Producing Agent's Address

\_\_\_\_\_  
Name of Agency

\_\_\_\_\_  
The addition of such phrases as "not to exceed" or like import shall render the (Bid) (Proposal) non-responsive.

AGREEMENT

For furnishing all labor, materials and equipment, together with all work incidental thereto, necessary and required for the performance of the work for the construction of Contract 15-C-00031 in accordance with your Proposal dated \_\_\_\_\_, amounting to a total of \$ \_\_\_\_\_ as completed in accordance with subsections I-2.09 and I-2.10 of the Instruction to Bidders.

THIS AGREEMENT, made and entered into in triplicate, this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, between the City of Tampa, Florida, hereinafter called the City, and hereinafter called the Contractor.

WITNESSETH that, in consideration of the mutual stipulations, agreements, and covenants herein contained, the parties hereto have agreed and hereby agree with each other, the Party of the First Part for itself, its successors and assigns, and the Party of the Second Part for itself, or himself, or themselves, and its successors and assigns, or his or their executors, administrators and assigns, as follows:

Contract 15-C-00031; Ft. Brooke Parking Garage - Elevator Improvements, shall include, but not be limited to, replacement of portions of eight (8) elevators (4 in each north and south core), including traction machines, operation systems (installation of Owner purchased controllers and selectors), car finishes, ceilings and lighting, handrails, car and hoistway doors, signal equipment, wiring and cables, related electrical, etc.; also, related fire alarm system, including control unit (installation of Owner purchased unit) and printer, annunciator, signal initiation and notification devices, manual devices, wiring, etc. with all associated work required for a complete project in accordance with the Contract Documents.

Contract Documents referred to in Article 1.01 of this Agreement also includes this volume, applicable standard drawings, the plans and any provisions referred to whether actually attached or not.

# TAMPA AGREEMENT

## SECTION 1 GENERAL

### ARTICLE 1.01 THE CONTRACT

Except for titles, subtitles, headings, running headlines, and tables of contents (all of which are printed herein merely for convenience), the following, except for such portions thereof as may be specifically excluded, constitute the Contract:

The Notice to Bidders;  
The Instructions to Bidders, including Special Instructions and General Instructions;  
The Proposal;  
The Bid Bond;  
The Certification of Nonsegregated Facilities;  
The Notice of Award;  
The Agreement;  
The Performance Bond;  
The Notice To Proceed;  
The Specifications, including the General Provisions, the Workmanship and Materials, the Specific Provisions or the Contract Items  
The Plans;  
All Supplementary Drawings Issued after award of the Contract;  
All Addenda issued by the City prior to the receipt of proposals;  
All provisions required by law to be inserted in this Contract, whether actually inserted or not.

### ARTICLE 1.02 DEFINITIONS

The following words and terms, or pronouns used in their stead, shall, wherever they appear in this Contract, be construed as follows, unless different meaning is clear from the context:

(a)"City" shall mean the City of Tampa, Florida, represented by its Mayor and City Council, Party of the First Part, or such other City official as shall be duly empowered to act for the City on matters relating to this Contract.

(b)"Contractor" shall mean the Party of the Second Part hereto, whether corporation, firm or individual, or any combination thereof, and its, their, or his successors, personal representatives, executors, administrators, and assigns, and any person, firm or corporation who or which shall at any time be substituted in the place of the Party of the Second Part under this Contract.

(c)"Engineer" shall mean the Director of the Department or his duly authorized representative.

(d)"Consultant" shall mean the engineering or architectural firm or individual employed by the City to consult with and advise the City in the construction of the project.

(e)"Surety" shall mean any person, firm or corporation that has executed as Surety the Contractor's Performance Bond securing the performance of this Contract.

(f)"The Work" shall mean everything expressly or implied required to be furnished and done by the Contractor under the Contract, and shall include both Contract Work

and Extra Work.

(g)"Contract Work" shall mean everything expressly or implied required to be furnished and done by the Contractor by any one or more of the Contract parts referred to in Article 1.01 hereof, except Extra Work, as hereinafter defined; it being understood that, in case of any inconsistency in or between any part or parts of this Contract, the Engineer shall determine which shall prevail.

(h)"Contract" or "Contract Documents" shall mean each of the various part of the Contract referred to in Article 1.01 hereof, both as a whole and severally.

(i)"Extra Work" shall mean work other than that required either expressly or implied by the contract in its present form.

(j)"Plans" shall mean only those drawings specifically referred to as such in these documents, or in any Addendum. Drawings issued after the execution of the Contract to explain further, or to illustrate, or to show changes in the work, will be known as "Supplementary Drawings" and shall be binding upon the Contractor with the same force as the Plans.

(k)"Specifications" shall mean all of the directions, requirements, and standards of performance applying to the work, as hereinafter detailed and designated as such, or which may be issued in an addendum.

(l)"Addendum or Addenda" shall mean the additional contract provisions issued in writing prior to the receipt of bids.

(m)"Notice" shall mean written notice. Notice shall be served upon the Contractor, either personally or by leaving the said notice at his residence or with any employee found on the work, or addressed to the Contractor at the residence or place of business given in his proposal and deposited in a postpaid wrapper in any post office box regularly maintained by the United States Post Office.

(n)"Project" shall mean the entire improvement package or related work. The "project" may consist of several different, but related, contracts.

(o)"Site" shall mean, and be limited to, the area upon or in which the Contractor's operations are carried on and such other appropriate areas as may be designed as such by the Engineer.

(p)"Subcontractor" shall mean any person, firm, or corporation, other than employees of the Contractor, who or which contracts with the Contractor to furnish, or actually furnishes labor, or labor and materials, or labor and equipment or labor, materials, and equipment at the site.

(q)Whenever in the Contract the words "directed", "required", "permitted", "ordered", "designated", "prescribed", and words of like import are used, they shall imply the direction, requirement, permission, order, designation, or prescription of the Engineer; and "approved", "acceptable", "satisfactory", "in the judgement of", and words of like import shall mean approved by, or acceptable to, or satisfactory to, or in the judgment of the Engineer.

(r)Whenever in the Contract the word "day" is used, it shall mean calendar day.

(s)"Final Acceptance" shall mean acceptance of the

work as evidenced by an official resolution of the City. Such acceptance shall be deemed to have taken place only if and when an approving resolution has been adopted by the City Council. The final acceptance shall be signed only after the City has assured itself by tests, inspection, or otherwise, that all of the provisions of the Contract have been carried out to its satisfaction.

(t)"Eastern Standard Time" shall be construed as the time being observed in the City on the day proposals are received or other documents issued or signed.

## **SECTION 2 POWERS OF THE CITY'S REPRESENTATIVES**

### **ARTICLE 2.01 THE ENGINEER**

It is covenanted and agreed that the Engineer, in addition to those matters elsewhere herein expressly made subject to his determination, direction, or approval, shall have the power, subject to such express provisions and limitations herein contained as are not in conflict herewith, and subject to review by the Mayor and City Council:

(a)To monitor the performance of the work.

(b)To determine the amount, kind, quality, sequence, and location of the work to be paid for hereunder and, when completed, to measure such work for payment.

(c)To determine all questions of an engineering character in relation to the work, to interpret the Plans, Specifications and Addenda.

(d)To determine how the work of this Contract shall be coordinated with the work of other contractors engaged simultaneously on this project.

(e)To make minor changes in the work as he deems necessary, provided such changes do not result in a net increase in the cost to the City or to the Contractor of the work to be done under the Contract.

(f)To amplify the Plans, add explanatory information and furnish additional Specifications and Drawings consistent with the intent of the Contract Documents.

The power of the Engineer shall not be limited to the foregoing enumeration, for it is the intent of this Contract that all of the work shall be subject to his determinations and approval, except where the determination or approval of someone other than the Engineer is expressly called for herein and except as subject to review by the Mayor and City Council. All orders of the Engineer requiring the Contractor to perform work as Contract work shall be promptly obeyed by the Contractor.

The Engineer shall not, however, have the power to issue an extra work order, and the performance of such work on the order of the Engineer without previously obtaining written confirmation thereof from the Mayor in accordance with Article 7.02 hereof may constitute a waiver of any right to extra compensation therefor. The Contractor is warned that the Engineer has no power to change the terms and provisions of this Contract, except minor changes where such change results in no net increase in the Contract Price.

### **ARTICLE 2.02 DIRECTOR**

The Director of the Department in addition to those matters

expressly made subject to his determination, direction or approval in his capacity as "Engineer", shall also have the power:

(a)To review any and all questions in relation to this Contract and its performance, except as herein otherwise specifically provided, and his determination upon such review shall be final and conclusive upon the Contractor.

(b)With the approval of the Mayor and City Council to authorize modifications or changes in the Contract so as to require: (1) the performance of extra work, or (2) the omission of Contract work whenever he deems it in the interest of the City to do so, or both.

(c)To suspend the whole or any part of the work whenever, in his judgment, such suspension is required: (1) in the interest of the City generally, or (2) to coordinate the work of the various Contractors engaged on this project, or (3) to expedite the completion of the entire project, even though the completion of this particular Contract may be thereby delayed, without compensation to the Contractor for such suspension other than extending the time for the completion of the work, as much as it may have been, in the opinion of the City, delayed by such a suspension.

(d)If, before the final acceptance of all the work contemplated herein, it shall be deemed necessary to take over, use, occupy, or operate any part of the completed or partly completed work, the Engineer shall have the right to do so and the Contractor will not, in any way, interfere with or object to the use, occupation, or operation of such work by the City after receipt of notice in writing from the Engineer that such work or part thereof will be used by the City on and after the date specified in such notice. Such taking over, use, occupancy or operation of any part of the completed or partially completed work shall not constitute final acceptance or approval of any such part of the work.

### **ARTICLE 2.03 NO ESTOPPEL**

The City shall not, nor shall any department, officer, agent, or employee thereof, be bound, precluded, or estopped by any determination, decision, acceptance, return, certificate, or payment made or given under or in connection with this Contract by any officer, agent or employee of the City at any time either before or after final completion and acceptance of the work and payment therefor: (a) from showing the true and correct classification, amount, quality, or character of the work done, or that any determination, decision, acceptance, return certificate or payment is untrue, incorrect or improperly made in any particular, or that the work or any part thereof does not in fact conform to the requirements of the Contract Documents, and (b) from demanding and recovering from the Contractor any overpayments made to him or such damages as it may sustain by reason his failure to comply with the requirements of the Contract of Documents, or both.

### **ARTICLE 2.04 NO WAIVER OF RIGHTS**

Neither the inspection, nor any order, measurements or certificate of the City or its employees, officers, or agents, nor by any order of the City for payment of money, nor any money, nor payments for or acceptance of the whole or any part of the work by the City, nor any extension of time, nor any changes in the Contract, Specifications or Plans, nor any possession by the City or its employees shall operate as a

waiver of any provisions of this Contract, nor any power herein provided nor shall any waiver of any breach of this Contract be held as a waiver of any other subsequent breach.

Any remedy provided in this Contract shall be taken and construed as cumulative, namely, in addition to each and every other suit, action, or legal proceeding. The City shall be entitled as of right to an injunction against any breach of the provisions of this Contract.

### **SECTION 3 PERFORMANCE OF WORK**

#### **ARTICLE 3.01 CONTRACTOR'S RESPONSIBILITY**

The Contractor shall do all the work and furnish, at his own cost and expense, all labor, materials, equipment, and other facilities, except as herein otherwise provided, as may be necessary and proper for performing and completing the work under this Contract. The Contractor shall be responsible for the entire work until completed and finally accepted by the City.

The work shall be performed in accordance with the true intent and meaning of the Contract Documents. Unless otherwise expressly provided, the work must be performed in accordance with the best modern practice, with materials as specified and workmanship of the highest quality, all as determined by and entirely to the satisfaction of the Engineer.

Unless otherwise expressly provided, the means and methods of construction shall be such as the Contractor may choose, subject, however, to the approval of the Engineer. Only adequate and safe procedure, methods, structures and equipment shall be used. The Engineer's approval or the Engineer's failure to exercise his right thereon shall not relieve the Contractor of obligations to accomplish the result intended by the Contract, nor shall such create a cause of action for damages.

#### **ARTICLE 3.02 COMPLIANCE WITH LAWS**

The Contractor must comply with all local, State and Federal laws, rules, ordinances and regulations applicable to this Contract and to the work done hereunder, and must obtain, at his own expense, all permits, licenses or other authorization necessary for the prosecution of the work.

No work shall be performed under this Contract on Sundays, legal holidays or after regular working hours without the express permission of the Engineer. Where such permission is granted, the Engineer may require that such work be performed without additional expense to the City.

#### **ARTICLE 3.03 INSPECTION**

During the progress of the work and up to the date of final acceptance, the Contractor shall, at all times, afford the representatives of the City, the Florida Department of Environmental Regulation, and if applicable, the Federal Environmental Protection Agency and the Federal Department of Labor every reasonable, safe and proper facility for inspecting the work done or being done at the

site. The inspection of any work shall not relieve the Contractor of any of his obligations to perform proper and satisfactory work as herein specified. Finished or unfinished work found not to be in strict accordance with the Contract shall be replaced as directed by the Engineer, even though such work may have been previously approved and payment made therefor.

The City shall have the right to reject materials and workmanship which are defective or require their correction. Rejected work and materials must be promptly removed from the site, which must at all times be kept in a reasonably clean and neat condition.

Failure or neglect on the part of the City to condemn or reject bad or inferior work or materials shall not be construed to imply an acceptance of such work or materials, if it becomes evident at any time prior to the final acceptance of the work by the City. Neither shall it be construed as barring the City at any subsequent time from the recovery of damages of such a sum of money as may be needed to build anew all portions of the work in which inferior work or improper materials were used, wherever found.

Should it be considered necessary or advisable by the City at any time before final acceptance of the entire work to make examinations of work already completed, by removing or tearing out all or portions of such work, the Contractor shall, on request, promptly furnish all necessary facilities, labor, and material for that purpose. If such work is found to be defective in any material respect, due to the fault of the Contractor or his subcontractors, he shall defray all expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the cost of examination and restoration of the work shall be considered an item of extra work to be paid for in accordance with the provisions of Article 7.02 hereof.

#### **ARTICLE 3.04 PROTECTION**

During performance and until final acceptance, the Contractor shall be under an absolute obligation to protect the finished and unfinished work against any damage, loss, or injury. The Contractor shall take proper precaution to protect the finished work from loss or damage, pending completion and the final acceptance of all the work included in the entire Contract, provided that such precaution shall not relieve the Contractor from any and all liability and responsibility for loss or damage to the work occurring before final acceptance by the City. Such loss or damage shall be at the risk of and borne by the Contractor, whether arising from acts or omissions of the Contractor or others. In the event of any such loss or damage, the Contractor shall forthwith repair, replace, and make good the work without extension of time therefor, except as may be otherwise provided herein.

The provisions of this Article shall not be deemed to create any new right of action in favor of third parties against the Contractor or the City.

#### **ARTICLE 3.05 PRESERVATION OF PROPERTY**

The Contractor shall preserve from damage all property along the line of the work, or which is in the vicinity of or is in anywise affected by the work, the removal or destruction of which is not called for by the Plans. This applies, but is not limited, to the public utilities, trees, lawn areas, building monuments, fences, pipe and underground structures, public streets (except natural wear and tear of streets resulting from legitimate use thereof by the Contractor), and wherever such property is damaged due to the activities of the Contractor, it shall be immediately restored to its original condition by the Contractor and at his own expense.

In case of failure on the part of the Contractor to restore such property, or make good such damage or injury, the City may, upon forty-eight (48) hour written notice, proceed to repair, rebuild, or otherwise restore such property as may be deemed necessary, and the cost thereof will be deducted from any monies due or which may become due the Contractor under this Contract. Nothing in this clause shall prevent the Contractor from receiving proper compensation for the removal, damage, or replacement of any public or private property not shown on the Plans, when this is made necessary by alteration of grade or alignment authorized by the Engineer, provided that such property has not been damaged through fault of the Contractor, his employees or agents.

**ARTICLE 3.06 BOUNDARIES**

The Contractor shall confine his equipment, apparatus, the storage of materials, supplies and apparatus of his workmen to the limits indicated on the plans, by law, ordinances, permits or direction of the Engineer.

**ARTICLE 3.07 SAFETY AND HEALTH REGULATIONS**

The Contractor shall comply with the Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (PL 91- 596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL91-54).

**ARTICLE 3.08 TAXES**

All taxes of any kind and character payable on account of the work done and materials furnished under this Contract shall be paid by the Contractor and shall be deemed to have been included in his bid. The laws of the State of Florida provide that sales and use taxes are payable by the Contractor upon the tangible personal property incorporated in the work and such taxes shall be paid by the Contractor and shall be deemed to have been included in his bid.

**ARTICLE 3.09 ENVIRONMENTAL CONSIDERATIONS**

The Contractor, in the performance of the work under this Contract, shall comply with all Local, State and Federal laws, statutes, ordinances, rules and regulations applicable to protection of the environment; and, in the event he violates any of the provisions of same, he shall be answerable to the Local, State and Federal agencies designated by law to protect the environment. In the event the City receives, from any of the environmental agencies, a citation which is occasioned by an act or omission of the Contractor or his

subcontractor or any officers, employees or agents of either, it is understood and agreed that the Contractor shall automatically become a party-respondent under said citation; and the City immediately shall notify the Contractor and provide him with a copy of said citation.

The Contractor shall comply with the requirements of the citation and correct the offending condition(s) within the time stated in said citation and further shall be held fully responsible for all fines and/or penalties.

**SECTION 4  
TIME PROVISIONS**

**ARTICLE 4.01 TIME OF START AND COMPLETION**

The Contractor must commence work within thirty (30) days subsequent to the date of the receipt of the "Notice to Proceed" by the City unless otherwise provided in the Specific Provisions and Special Instructions. Time being of the essence of this Contract, the Contractor shall thereafter prosecute the work diligently, using such means and methods of construction as well as secure its full completion in accordance with the requirements of the Contract Documents no later than the date specified therefor, or on the date to which the time for completion may be extended.

The Contractor must complete the work covered by this Contract in the number of consecutive calendar days set forth in the Instructions to Bidders, unless the date of completion is extended pursuant to the provisions of Article 4.05 hereof.

The period for performance shall start from the date of signing of this Agreement by the City.

The actual date of completion will be established after a final inspection as provided in Article 4.07 hereof.

**ARTICLE 4.02 PROGRESS SCHEDULE**

To enable the work to be laid out and prosecuted in an orderly and expeditious manner, the Contractor shall submit to the Engineer a proposed progress schedule within fifteen (15) days after the award of this Contract.

The schedule shall state the Contract starting date, time for completion and date of completion and shall show the anticipated time of starting and completion of each of the various operations to be performed under this Contract, together with all necessary and appropriate information regarding sequence and correlation of work and an estimated time required for the delivery of all materials and equipment required for the work. The proposed schedule shall be revised as directed by the Engineer until finally approved by him, and, after such approval, shall be strictly adhered to by the Contractor. The approved progress schedule may be changed only with the written permission of the Engineer.

If the Contractor shall fail to adhere to the approved progress schedule or the schedule as revised, he shall promptly adopt such other or additional means and methods of construction as will make up for the time lost, and will assure completion in accordance with the contract time.

**ARTICLE 4.03 APPROVAL REQUESTS**

From time to time, as the work progresses and in the sequence indicated by the approved schedule, the Contractor must submit to the Engineer a specific request, in writing, for each item of information or approval required of him by the Contract. These requests must be submitted sufficiently in advance of the date upon which the information or approval is actually required by the Contractor to allow for the time the Engineer may take to act upon such submissions or resubmissions. The Contractor shall not have any right to an extension of time on account of delays due to his failure to submit his requests for the required information or the required approval in accordance with these requirements.

**ARTICLE 4.04 COORDINATION WITH OTHER CONTRACTORS**

During progress of the work, other Contractors may be engaged in performing other work on this project or on other projects on the site. In that event, the Contractor shall coordinate the work to be done hereunder with the work of such other Contractors in such manner as the Engineer may direct.

**ARTICLE 4.05 EXTENSION OF TIME**

If such an application is made, the Contractor shall be entitled to an extension of time for delay in completion of the work should the Contractor be obstructed or delayed in the commencement, prosecution or completion of any part of said work by any act or delay of the City, or by acts or omissions of other Contractors on this project, or by a riot, insurrection, war, pestilence, acts of public authorities, fire, lightning, hurricanes, earthquakes, tornadoes, floods, extremely abnormal and excessive inclement weather as indicated by the records of the local weather bureau for a five-year period preceding the date of the Contract, or by strikes, or other causes, which causes of delay mentioned in this Article, in the opinion of the City, are entirely beyond the expectation and control of the Contractor.

The Contractor shall, however, be entitled to an extension of time for such causes only for the number of days of delay which the City may determine to be due solely to such causes and only to the extent that such occurrences actually delay the completion of the project and then only if the Contractor shall have strictly complied with all of the requirements of Articles 4.01, 4.02, 4.03 and 4.04 hereof. It is hereby understood that the determination by the Engineer as to the order and sequence of the work shall not in itself constitute a basis for extension of time.

The determination made by the City on an application for an extension of time shall be binding and conclusive on the Contractor.

Delays caused by failure of the Contractor's materialmen, manufacturers, and dealers to furnish approved working drawings, materials, fixtures, equipment, appliances, or other fittings on time or failure of subcontractors to perform their work shall not constitute a basis of extension of time.

The Contractor agrees to make no claim for damages for delay in the performance of this Contract occasioned by any

act or omission to act of the City or any of its representatives or because of any injunction which may be brought against the City or its representatives and agrees that any such claim shall be fully compensated for by an extension of time to complete performance of the work as provided herein.

**ARTICLE 4.06 LIQUIDATED DAMAGES**

It is mutually agreed between the parties that time is the essence of this Contract and that there will be on the part of the City considerable monetary damage in the event the Contractor should fail to complete the work within the time fixed for completion in the Contract or within the time to which such completion may have been extended.

The amount per day set forth in the Instructions to Bidders is hereby agreed upon as the liquidated damages for each and every calendar day that the time consumed in completing the work under this Contract exceeds the time allowed.

This amount shall, in no event, be considered as a penalty or otherwise than as the liquidated and adjusted damages to the City because of the delay and the Contractor and his Surety agree that the stated sum per day for each such day of delay shall be deducted and retained out of the monies which may become due hereunder and if not so deductible, the Contractor and his Surety shall be liable therefor.

**ARTICLE 4.07 FINAL INSPECTION**

When the work has been completed in accordance with the requirements of the Contract and final cleaning up performed, a date for final inspection of the work by the Engineer shall be set by the Contractor in a written request therefor, which date shall be not less than ten (10) days after the date of such request. The work will be deemed complete as of the date so set by the Contractor if, upon such inspection, the Engineer determines that no further work remains to be done at the site.

If such inspection reveals interms of work still to be performed, however, the Contractor shall promptly perform them and then request a reinspection. If, upon such inspection, the Engineer determines that the work is complete, the date of final completion shall be deemed to be the last day of such reinspection.

**SECTION 5  
SUBCONTRACTS AND ASSIGNMENTS**

**ARTICLE 5.01 LIMITATIONS AND CONSENT**

The Contractor shall not assign, transfer, convey, sublet or otherwise dispose of this Contract or of his right, title, or interest therein, or his power to execute such Contract, or to assign any monies due or to become due thereunder to any other person, firm or corporation unless the previous written consent of the City shall first be obtained thereto and the giving of any such consent to a particular subcontract or assignment shall not dispense with the necessity of such consent to any further or other assignment.

Before making any subcontract, the Contractor must submit a



written statement to the Engineer, giving the name and address of the proposed contractor, the portion of the work and materials which he is to perform and furnish and any other information tending to prove that the proposed subcontractor has the necessary facilities, skill, integrity, past experience and financial resources to perform the work in accordance with the terms and conditions of this Contract.

If the City finds that the proposed subcontractor is qualified, the Contractor will be notified in writing. The City may revoke approval of any subcontractor when such subcontractor evidences an unwillingness or inability to perform his work in strict accordance with these Contract Documents. Notice of such revocation of approval will be given in writing to the Contractor.

The Contractor will promptly, upon request, file with the City a conformed copy of the subcontract. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of these Contract Documents, insofar as applicable to the work of subcontractors, and to give the Contractor the same power as regards terminating any subcontracts that the City may exercise over the Contractor under provisions of these Contract Documents.

The Contractor shall be required to perform with his own forces at least twenty-five (25) percent of the work, unless written consent to subcontract a greater percentage of the work is first obtained from the City.

#### **ARTICLE 5.02 RESPONSIBILITY**

The approval by the City of a subcontractor shall not relieve the Contractor of any of his responsibilities, duties, and liabilities hereunder. The Contractor shall be solely responsible to the City for the acts or defaults or omissions of his subcontractor and of such subcontractor's officers, agents, and employees, each of whom shall for all purposes be deemed to be the agent or employee of the Contractor. Nothing contained in the Contract Documents shall create any contractual relationship between any subcontractor and the City.

### **SECTION 6 SECURITY AND GUARANTY**

#### **ARTICLE 6.01 CONTRACT SECURITY**

The Contractor shall execute and deliver to the City a Performance Bond on the form as provided herein, in an amount at least equal to one hundred (100) percent of the full Contract price, such Bond to be executed by a surety company acceptable to the City. The surety on such Performance Bond shall be a surety company duly authorized to do business in the State of Florida, and the Bond shall be issued or countersigned by a local resident producing agent of such surety company who is a resident of the State of Florida, regularly commissioned and licensed in said State, and satisfactory evidence of the authority of the person or persons executing such Bond shall be submitted with the Bond. The Performance Bond shall serve as security for the faithful performance of this Contract, including

maintenance and guaranty provisions, and for the payment of all persons performing labor and furnishing materials in connection with the Contract. The premiums on the Performance Bond shall be paid by the Contractor.

If, at any time, the City shall become dissatisfied with any surety or sureties then upon the Performance Bond, or if for any other reason such bond shall cease to be adequate security for the City, the Contractor shall, within five days after notice so to do, substitute an acceptable Bond in such form and sum and signed by such other sureties as may be satisfactory to the City. The premiums on such Bond shall be paid by the Contractor. No further partial payments shall be deemed due or shall be made until the new sureties have qualified.

#### **ARTICLE 6.02 CONTRACTORS INSURANCE**

Insurance required shall be as indicated on Special Instructions pages beginning with "INS-1"

#### **ARTICLE 6.03 AGAINST CLAIMS AND LIENS**

The City may withhold from the Contractor as much as any approved payments to him as may, in the opinion of the City, be necessary to secure (a) just claims of any persons supplying labor or materials to the Contractor or any of his subcontractors for the work then due and unpaid; (b) loss due to defective work not remedied, or (c) liability, damage, or loss due to injury to persons or damages to the work or property of other contractors, subcontractors, or others, caused by the act or neglect of the Contractor or of any of his subcontractors. The City shall have the right, as agent for the Contractor, to apply any such amounts so withheld in such manner as the City may deem proper to satisfy such claims or to secure such protection. Such application of such money shall be deemed payments for the account of the Contractor.

#### **ARTICLE 6.04 MAINTENANCE AND GUARANTY**

The Contractor hereby guarantees all the work furnished under this Contract against any defects in workmanship and materials for a period of one year following the date of final acceptance of the work by the City. Under this guarantee, the Contractor hereby agrees to make good, without delay, at his own expense, any failure of any part of the work due to faulty materials or manufacture, construction, or installation, or the failure of any equipment to perform satisfactorily all the work put upon it within the limits of the Contract Documents, and further, shall make good any damage to any part of the work caused by such failure. It is hereby agreed that the Performance Bond shall fully cover all guarantees contained in this Article.

It is also agreed that all warranties, expressed or implied, inure to the benefit of the City and are enforceable by the City.

### **SECTION 7 CHANGES**

#### **ARTICLE 7.01 MINOR CHANGES**

The City reserves the right to make such additions, deductions, or changes to this Contract from time to time as

it deems necessary and in a manner not materially affecting the substance thereof or materially changing the price to be paid in order to carry out and complete more fully and perfectly the work herein agreed to be done and performed. This Contract shall in no way be invalidated by any such additions, deductions, or changes, and no claim by the Contractor shall be made for any loss of anticipated profits thereby.

Construction conditions may require that minor changes be made in the location and installation of the work and equipment to be furnished and other work to be performed hereunder, and the Contractor when ordered by the Engineer, shall make such adjustments and changes in said locations and work as may be necessary, without additional cost to the City, provided such adjustments and changes do not alter the character, quantity or cost of the work as a whole, and provided further that Plans and Specifications showing such adjustments and changes are furnished to the Contractor by the City within a reasonable time before any work involving such adjustment and changes is begun. The Engineer shall be the sole judge of what constitutes a minor change for which no additional compensation shall be allowed.

#### **ARTICLE 7.02 EXTRA WORK**

The City may at any time by a written order and without notice to the sureties require the performance of such extra work as it may find necessary or desirable. An order for extra work shall be valid only if issued in writing and signed by the Mayor and the work so ordered must be performed by the Contractor.

The amount of compensation to be paid to the Contractor for any extra work as so ordered shall be determined as follows:

(a) By such applicable unit prices, if any, as are set forth in the Proposal; or

(b) If no such unit prices are set forth then by a lump sum or other unit prices mutually agreed upon by the City and the Contractor; or

(c) If no such unit prices are set forth in the Proposal and if the parties cannot agree upon a lump sum or other unit prices then by the actual net cost in money to the Contractor of the extra work performed, which cost shall be determined as follows:

(1) For all labor and foreman in direct charge of the authorized operations, the Contractor shall receive the current local rate of wages to be agreed upon, in writing, before starting such work for each hour that said labor and foremen are actually engaged thereon, to which shall be added an amount equal to 25 percent of the sum thereof which shall be considered and accepted as full compensation for general supervision, FICA taxes, contributions under the Florida Unemployment Compensation Act, insurance, bond, subcontractor's profit and overhead, the furnishing of small tools and miscellaneous equipment used, such as picks, shovels, hand pumps, and similar items.

(2) For all materials used, the Contractor shall receive the actual cost of such materials delivered at the site or previously approved delivery point as established by original receipted bills. No percentage shall be added to this cost.

(3) For special equipment and machinery such as power-driven pumps, concrete mixers, trucks, and tractors, or other equipment, required for the economical performance of the authorized work, the Contractor shall receive payment based on the average local area rental price for each item of equipment and the actual time of its use on the work. No percentage shall be added to this sum.

(4) Records of extra work done under this procedure shall be reviewed at the end of each day by the Contractor or his representative and the Engineer. Duplicate copies of accepted records shall be made and signed by both Contractor or his representative and the Engineer, and one copy retained by each.

Request for payment for approved and duly authorized extra work shall be submitted in the same form as Contract work or in the case of work performed under paragraph (c) (1) above upon a certified statement supported by receipted bills. Such statement shall be submitted for the current Contract payment for the month in which the work was done.

#### **ARTICLE 7.03 DISPUTED WORK**

If the Contractor is of the opinion that any work required, necessitated, or ordered violates the terms and provisions of this Contract, he must promptly notify the Engineer, in writing, of his contentions with respect thereto and request a final determination thereof. If the Engineer determines that the work in question is Contract work and not extra work or that the order complained of is proper, he will direct the Contractor to proceed and the Contractor shall promptly comply. In order, however, to reserve his right to claim compensation for such work or damages resulting from such compliance, the Contractor must, within five (5) days after receiving notice of the Engineer's determination and direction, notify the City in writing that the work is being performed or that the determination and direction is being complied with under protest. Failure of the Contractor to notify shall be deemed as a waiver of claim for extra compensation or damages therefor.

Before final acceptance by the City, all matters of dispute must be adjusted to the mutual satisfaction of the parties thereto. Final determinations and decisions, in case any questions shall arise, shall constitute a condition precedent to the right of the Contractor to receive the money therefor until the matter in question has been adjusted.

#### **ARTICLE 7.04 OMITTED WORK**

The City may at any time by a written order and without notice to the sureties require the omission of such Contract work as it may find necessary or desirable.

An order for omission of work shall be valid only if signed by the Mayor and the work so ordered must be omitted by the Contractor. The amount by which the Contract price shall be reduced shall be determined as follows:

(a) By such applicable unit prices, if any, as are set forth in the Contract; or

(b) By the appropriate lump sum price set forth in the Contract; or

(c) By the fair and reasonable estimated cost to the City

of such omitted work as determined by the Engineer and approved by the City.

## **SECTION 8 CONTRACTOR'S EMPLOYEES**

### **ARTICLE 8.01 CHARACTER AND COMPETENCY**

The Contractor and his subcontractors shall employ upon all parts of the work herein contracted for only competent, skillful, and trustworthy workers. Should the Engineer at any time give notice, in writing, to the Contractor or his duly authorized representative on the work that any employee in his opinion is incompetent, unfaithful, disorderly, careless, unobservant of instructions, or in any way a detriment to the satisfactory progress of the work, such employee shall immediately be dismissed and not again allowed upon the site.

### **ARTICLE 8.02 SUPERINTENDENCE**

The Contractor shall give his personal supervision to the faithful prosecution of the work and in case of his absence shall have a competent, experienced, and reliable supervisor or superintendent, acceptable to the Engineer on the site who shall follow without delay all instructions of the Engineer in the prosecution and completion of the work and every part thereof, in full authority to supply workers, material, and equipment immediately. He shall keep on hand at all times copies of the Contract Documents.

### **ARTICLE 8.03 EMPLOYMENT OPPORTUNITIES**

The Contractor shall, in the performance of the work required to be done under this Contract, employ all workers without discrimination regarding race, creed, color, sex or national origin and must not maintain or provide facilities that are segregated on the basis of race, color, creed or national origin.

### **ARTICLE 8.04 RATES OF WAGES**

On federally assisted projects, the rates of wages to be paid under this Contract shall not be less than the rates of wages set forth in Section 12 of this Agreement.

On other projects, no wage rate determination is included. Florida's Prevailing Wage Law (Section 215.19, Florida Statutes) was repealed effective April 25, 1979.

### **ARTICLE 8.05 PAYROLL REPORTS**

The Contractor and each subcontractor shall, if requested to do so, furnish to the Engineer a duly certified copy of his payroll and also any other information required by the Engineer to satisfy him that the provisions of the law as to the hours of employment and rate of wages are being observed.

Payrolls shall be prepared in accordance with instructions furnished by the City and on approved forms. The Contractor shall not carry on his payroll any persons not employed by him. Subcontractor's employees shall be carried only on the payrolls of the employing subcontractor.

## **SECTION 9 CONTRACTOR'S DEFAULT**

### **ARTICLE 9.01 CITY'S RIGHT AND NOTICE**

It is mutually agreed that: (a) if the Contractor fails to begin work when required to do so, or (b) if at any time during the progress of the work it shall appear to the Engineer that the Contractor is not prosecuting the work with reasonable speed, or is delaying the work unreasonably and unnecessarily, or (c) if the force of workmen or quality or quantity of material furnished are not sufficient to insure completion of the work within the specified time and in accordance with the Specifications hereto attached, or (d) if the Contractor shall fail to make prompt payments for materials or labor or to subcontractors for work performed under the Contract, or (e) if legal proceedings have been instituted by others than the City in such manner as to interfere with the progress of the work and may subject the City to peril of litigation or outside claims of (f) if the Contractor shall be adjudged a bankrupt or make an assignment for the benefit of creditors, or (g) if in any proceeding instituted by or against the Contractor an order shall be made or entered granting an extension of time of payment, composition, adjustment, modification, settlement or satisfaction of his debts or liabilities, or (h) if a receiver or trustee shall be appointed for the Contractor or the Contractor's property, or (i) if the Contract or any part thereof shall be sublet without the consent of the City being first obtained in writing, or (j) if this Contract or any right, monies, or claim thereunder shall be assigned by the Contractor, otherwise than as herein specified, or (k) if the Contractor shall fail in any manner of substance to observe the provisions of this Contract, or (l) if any of the work, machinery, or equipment shall be defective, and shall not be replaced as herein provided, or (m) if the work to be done under this Contract shall be abandoned, then such fact or conditions shall be certified by the Engineer and thereupon the City without prejudice to any other rights or remedies of the City, shall have the right to declare the Contractor in default and so notify the Contractor by a written notice, setting forth the ground or grounds upon which such default is declared and the Contractor must discontinue the work, either as a portion of the work or the whole thereof, as directed.

### **ARTICLE 9.02 CONTRACTOR'S DUTY UPON DEFAULT**

Upon receipt of notice that his Contract is in default, the Contractor shall immediately discontinue all further operations on the work or such part thereof, and shall immediately quit the site or such part thereof, leaving untouched all plant, materials, equipment, tools, and supplies.

### **ARTICLE 9.03 COMPLETION OF DEFAULTED WORK**

The City, after declaring the Contractor in default, may then have the work completed or the defective equipment or machinery replaced or anything else done to complete the work in strict accordance with the Contract Documents by such means and in such manner, by Contract with or without public letting, or otherwise, as it may deem advisable,

utilizing for such purpose without additional cost to the City such of the Contractor's plant, materials, equipment, tools, and supplies remaining on the site, and also such subcontractors as it may deem advisable.

The City shall reimburse all parties, including itself, for the expense of such completion, including liquidated damages, if any, and the cost of reletting. The City shall deduct this expense from monies due or to become due to the Contractor under this Contract, or any part thereof, and in case such expense is more than the sum remaining unpaid of the original contract price, the Contractor and his sureties shall pay the amount of such deficiency to the City.

#### **ARTICLE 9.04 PARTIAL DEFAULT**

In case the City shall declare the Contractor in default as to a part of the work only, the Contractor shall discontinue such part, shall continue performing the remainder of the work in strict conformity with the terms of the Contract, and shall in no way hinder or interfere with any other contractor or person whom the City may engage to complete the work as to which the Contractor was declared in default.

### **SECTION 10 PAYMENTS**

#### **ARTICLE 10.01 PRICES**

For the Contractor's complete performance of the work, the City will pay and the Contractor agrees to accept, subject to the terms and conditions hereof, the lump sum prices or unit prices in the Contractor's Proposal and the award made therein, plus the amount required to be paid for any extra work ordered under Article 7.02 hereof, less credit for any work omitted pursuant to Article 7.04 hereof. Under unit price items, the number of units actually required to complete the work under the Contract may be more than stated in the Proposal. The Contractor agrees that no claim will be made for any damages or for loss of profits because of a difference between the quantities of the various classes of work assumed and stated in the Proposal Form as a basis for comparing Proposals and the quantities of work actually performed.

The sum as awarded for any lump sum Contract or lump sum Contract Item shall represent payment in full for all of the various classes of work, including materials, equipment, and labor necessary or required to complete, in conformity with the Contract Document, the entire work shown, indicated or specified under the lump sum Contract or lump sum Contract Item.

The amount as awarded as a unit price for any unit price Contract Item shall represent payment in full for all the materials, equipment, and labor necessary to complete, in conformity with the Contract Documents, each unit of work shown, specified, or required under the said unit price Contract Item.

No payment other than the amount as awarded will be made for any class of work included in a lump sum Contract Item or a unit price Contract Item, unless specific provision is

made therefor in the Contract Documents.

#### **ARTICLE 10.02 SUBMISSION OF BID BREAKDOWN**

Within fifteen (15) days after the execution of this Contract, the Contractor must submit to the Engineer in duplicate an acceptable breakdown of the lump sums and unit prices bid for items of the Contract, showing the various operations to be performed under the Contract, as described in the progress schedule required under Article 4.02 hereof, and the value of each of such operations, the total of such items to equal the total price bid. The Contractor shall also submit such other information relating to the bid prices as may be required and shall revise the bid breakdown as directed. Thereafter, the breakdown may be used for checking the Contractor's applications for partial payments hereunder but shall not be binding upon the City or the Engineer for any purpose whatsoever.

#### **ARTICLE 10.03 REPORTS, RECORDS AND DATA**

The Contractor shall furnish to the Engineer such schedules of quantities and costs, progress schedules, reports, invoices, delivery tickets, estimates, records, and other data as the Engineer may request concerning work performed or to be performed and the materials furnished under the Contract.

#### **ARTICLE 10.04 PAYMENTS BY CONTRACTOR**

The Contractor shall pay (a) for all transportation and utility services not later than the 20th day of the calendar month following that in which such services are rendered, (b) for all materials, tools, and equipment delivered at the site of the project, and the balance of the cost thereof not later than the 30th day following the completion of that part of the work in or on which such materials, tools, and equipment are incorporated or used, and (c) to each of his subcontractors, not later than the 5th day following each payment to the Contractor, the respective amounts allowed the Contractor on account of the work performed by his subcontractors, to the extent of each subcontractor's interest therein; and proof of such payments or releases therefor shall be submitted to the Engineer upon request.

#### **ARTICLE 10.05 PARTIAL PAYMENTS**

On or about the first of each month, the Contractor shall make and certify an estimate, on forms prescribed by the City, of the amount and fair value of the work done, and may apply for partial payment therefor. The Contractor shall revise the estimate as the Engineer may direct. When satisfactory progress has been made, and shows that the value of the work completed since the last payment exceeds one percent (1%) of the total Contract price in amount, the Engineer will issue a certificate that such work has been completed and the value thereof. The City will then issue a voucher to the Contractor in accordance with the following schedule:

#### **FOR CONTRACT AMOUNTS UNDER \$250,000**

(A) In the amount of ninety percent (90%) of the value of the work completed as certified until construction is one hundred percent (100%) complete (operational or beneficial occupancy), the withheld amount may be reduced below ten percent (10%), at the Engineer's option, to only that amount necessary to assure completion.

**FOR CONTRACT AMOUNTS OVER \$250,000**

(A) In the amount of ninety percent (90%) of the value of the work completed as certified until construction is fifty percent (50%) complete.

(B) When the dollar value, as determined by the Engineer, of satisfactorily completed work in place is greater than fifty percent (50%) of the original contract price, vouchers for partial payment will be issued by the City to the Contractor in the amount of one hundred percent (100%) of the value of the work, above 50%, completed as certified for that payment period.

(C) If the Contractor has performed satisfactorily and the work is substantially complete (operational or beneficial occupancy) the withheld amount may be reduced, at the Engineer's option, to only that amount necessary to assure completion.

In addition to the Conditions set forth in (A), (B), and (C) above, payments will always be less any sums that may be retained or deducted by the City under the terms of any of the contract documents and less any sums that may be retained to cover monetary guarantees for equipment, materials or progress performance.

Payment on estimates made on or about the first of the month may be expected on or about the 20th of the month.

Unless specified otherwise in the Contract Items, the delivered cost of equipment and nonperishable materials suitably stored at the site of the work and tested for adequacy may be included in the Contractor's application for partial payment provided, however, that the Contractor shall furnish evidence satisfactory to the City that the Contractor is the unconditional owner and in possession of such materials or equipment. The amount to be paid will be 90 percent of the invoice cost to the Contractor which cost shall be supported by receipted bills within 30 days of the date of payment by the City to the Contractor. Such payment shall not relieve the Contractor from full responsibility for completion of the work and for protection of such materials and equipment until incorporated in the work in a permanent manner as required by the Contract Documents.

Before any payment will be made under this Contract, the Contractor and every subcontractor, if required, shall deliver to the Engineer a written, verified statement, in satisfactory form, showing in detail all amounts then due and unpaid by such Contractor or subcontractor to all laborers, workmen, and mechanics, employed by him under the Contract for the performance of the work at the site thereof, for daily or weekly wages, or to other persons for materials, equipment, or supplies delivered at the site of the work during the period covered by the payment under consideration.

**ARTICLE 10.06 FINAL PAYMENT**

Under determination of satisfactory completion of the work under this Contract as provided in Article 4.07 hereof, the Engineer will prepare the final estimate showing the value of the completed work. This estimate will be prepared within 30 days after the date of completion or as soon thereafter as the necessary measurements and computations can be made.

All prior certificates and estimates, being approximate only, are subject to correction in the final estimate and payment.

When the final estimate has been prepared and certified by Engineer, he will submit to the Mayor and City Council the final certificate stating that the work has been completed and the amount based on the final estimate remaining due to the Contractor. The City will then accept the work as fully completed and will, not later than 30 days after the final acceptance, as defined in Article 1.02, of the work done under this Contract, pay the Contractor the entire amount so found due thereunder after deduction of all previous payments and all percentages and amounts to be kept and retained under provisions of this Contract; provided, however, and it is understood and agreed that, as a precedent to receiving final payment, the Contractor shall submit to the City a sworn affidavit that all bills for labor, service, materials, and subcontractors have been paid and that there are no suits pending in connection with this work. The City, at its option, may permit the Contractor to execute a separate surety bond in a form satisfactory to the City. The surety bond shall be in the full amount of the suit or suits.

Neither the final payment nor any part of the retained percentage shall be paid until the Contractor, if required, shall furnish the City with a complete release from any should remain unsatisfied after all payments are made, the Contractor shall refund to the City all monies which the City may be compelled to pay in discharging such claim, including incidental costs and attorney's fees.

**ARTICLE 10.07 ACCEPTANCE OF FINAL PAYMENT**

The acceptance by the Contractor, or by anyone claiming by or through him, of the final payment shall operate as and shall be a release to the City and every officer and agent thereof from any and all claims and liability to the Contractor for anything done or furnished in connection with the work or project and for any act or neglect of the Contractor or of any others relating to or affecting the work. No payment, however, final or otherwise, shall operate to release the Contractor or his sureties from any obligations under this Contract or the Performance Bond.

**SECTION 11 MISCELLANEOUS PROVISIONS**

**ARTICLE 11.01 CONTRACTOR'S WARRANTIES**

In consideration of, and to induce the award of this contract to him, the Contractor represents and warrants:

- (a) That he is not in arrears to the City upon debt or contract, and he is not a defaulter, as surety, contractor, or otherwise.
- (b) That he is financially solvent and sufficiently experienced and competent to perform the work.
- (c) That the work can be performed as called for by the Contract Documents.
- (d) That the facts stated in his proposal and the information given by him are true and correct in all respects.
- (e) That he is fully informed regarding all the conditions affecting the work to be done and labor and materials to be

furnished for the completion of this Contract, and that his information was secured by personal investigation and research.

**ARTICLE 11.02 PATENTED DEVICES, MATERIAL AND PROCESSES**

It is mutually understood and agreed that Contract prices include all royalties and costs arising from patents, trademarks, and copyrights in any way involved in the work. Whenever the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, the Contractor shall indemnify and save harmless the City, its officers, agents and employees from any and all claims for infringement by reason of the use of any such patented design, device, tool, material, equipment, or process, to be performed under the Contract, and shall indemnify the said City, its officers, agents, and employees for any costs, expenses, and damages which may be incurred by reason of such infringement at any time during the prosecution or after completion of the work.

**ARTICLE 11.03 SUITS AT LAW**

In case any action at law or suit in equity may or shall be brought against the City or any of its officers, agents, or employees for or on account of the failure, omission, or neglect of the Contractor or his subcontractors, employees, or agents, to do or perform any of the covenants, acts, matters, or things by this Contract undertaken to be done or performed by the Contractor or his subcontractors, employees, or agents, or from any injuries done to property or persons and caused by the negligence or alleged negligence of the Contractor or his subcontractors, employees, or agents, or in any other manner arising out of the performance of this Contract, then the Contractor shall immediately assume and take charge of the defense of such actions or suits in like manner and to all intents and purposes as if said actions or suits have been brought directly against the Contractor, and the Contractor shall also indemnify and save harmless the City, its officers, agents, and employees from any and all loss, cost or damage whatever arising out of such actions or suits, in like manner and to all intents and purposes as if said actions or suits have been brought directly against the Contractor.

The Contractor shall and does hereby assume all liability for and agrees to indemnify the City or its Engineer against any or all loss, costs, damages, and liability for any or by reason of any lien, claims or demands, either for materials purchased or for work performed by laborers, mechanics, and others and from any damages, costs, actions, or causes of action and judgement arising from injuries sustained by mechanics, laborers, or other persons by reason of accidents or otherwise, whether caused by the carelessness or inefficiency or neglect of said Contractor, his subcontractors, agents, employees, workmen or otherwise.

**ARTICLE 11.04 CLAIMS FOR DAMAGES**

If the Contractor shall claim compensation for any damage sustained, other than for extra or disputed work covered by Article 7.02 and 7.03 hereof, by reason of any act or omission of the City, its agents, or any persons, he shall, within five days after sustaining such damage, make and

deliver to the Engineer a written statement of the nature of the damage sustained and of the basis of the claim against the City. On or before the 15th of the month succeeding that in which any damage shall have been sustained, the Contractor shall make and deliver to the Engineer an itemized statement of the details and amounts of such damage, duly verified by the Contractor. Unless such statements shall be made delivered within the times aforesaid, it is stipulated that and all claims for such compensation shall be forfeited and invalidated, and the Contractor shall not be entitled to payment on account of such claims.

**ARTICLE 11.05 NO CLAIMS AGAINST INDIVIDUALS**

No claim whatsoever shall be made by the Contractor against any officer, agent, employee of the City for, or on account of, anything done or omitted to be done in connection with this Contract.

**ARTICLE 11.06 LIABILITY UNAFFECTED**

Nothing herein contained shall in any manner create any liability against the City on behalf of any claim for labor, services, or materials, or of subcontractors, and nothing herein contained shall affect the liability of the Contractor or his sureties to the City or to any workmen or materialsmen upon bond given in connection with this Contract.

**ARTICLE 11.07 INDEMNIFICATION PROVISIONS**

Whenever there appears in this Agreement, or in the other Contract Documents made a part hereof, an indemnification provision within the purview of Chapter 725.06, Laws of Florida, the monetary limitation on the extent of the indemnification under each such provision shall be One Million Dollars or a sum equal to the total Contract price, whichever shall be the greater.

**ARTICLE 11.08 UNLAWFUL PROVISIONS DEEMED STRICKEN**

If this contract contains any unlawful provisions not an essential part of the Contract and which shall not appear to have a controlling or material inducement to the making thereof, such provisions shall be deemed of no effect and shall, upon notice by either party, be deemed stricken from the Contract without affecting the binding force of the remainder.

**ARTICLE 11.09 LEGAL PROVISIONS DEEMED INCLUDED**

Each and every provision of any law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though it were included herein and if, through mistake or otherwise, any such provision is not inserted or is not correctly inserted, then upon application of either party the Contract shall forthwith be physically amended to make such insertion.

**ARTICLE 11.10 DEATH OR INCOMPETENCY OF CONTRACTOR**

In the event of death or legal incompetency of a Contractor who shall be an individual or surviving member of a contracting firm, such death or adjudication of incompetency

shall not terminate the Contract, but shall act as default hereunder to the effect provided in Article 9.01 hereof and the estate of the Contractor and his surety shall remain liable hereunder to the same extent as though the Contractor had lived. Notice of default, as provided in Article 9.01 hereof, shall not be required to be given in the event of such death or adjudication of incompetency.

**ARTICLE 11.11 NUMBER AND GENDER OF WORDS**

Whenever the context so admits or requires, all references herein in one number shall be deemed extended to and including the other number, whether singular or plural, and the use of any gender shall be applicable to all genders.

**ARTICLE 11.12 ACCESS TO RECORDS**

Representatives of Federal Agencies, if applicable, and the State of Florida shall have access to the work whenever it is in preparation of progress. On federally assisted projects the Federal Agency, the Comptroller General of the United States, or any authorized representative shall have access to any books, documents, papers, and records of the Contractor which are pertinent to the project for the purpose of making audit, examination, excerpts, and transcription thereof.

**SECTION 12  
LABOR STANDARDS**

**ARTICLE 12.01 LABOR STANDARDS**

The Contractor shall comply with all of the regulations set forth in "Labor Standards Provisions for Federally Assisted Construction Contracts", which may be attached, and any applicable Florida Statutes.

**ARTICLE 12.02 NOTICE TO LABOR UNIONS**

If required, the Contractor shall provide Labor Unions and other organizations of workers, and shall post, in a conspicuous place available to employees or applicants for employment, a completed copy of the form entitled "Notice to Labor Unions or Other Organizations of Workers" attached to and made a part of this Agreement.

**ARTICLE 12.03 SAFETY AND HEALTH REGULATIONS**

The Contractor shall comply with the Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (PL 91- 596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL 91-54). Nothing in these Acts shall be construed to supersede or in any manner affect any worker's compensation law or statutory rights, duties, or liabilities of employers and employees under any law with respect to injuries, diseases, or death of employees arising out of, or in the course of, employment.

**ARTICLE 12.04 EEO AFFIRMATIVE ACTION REQUIREMENTS**

The Contractor understands and agrees to be bound by the equal opportunity requirements of Federal regulations which shall be applicable throughout the performance of work under this Contract. The Contractor also agrees to similarly

bind contractually each subcontractor. In policies, the Contractor agrees to engage in Affirmative Action directed at promoting and ensuring equal employment opportunity in the work force used under the Contract (and the Contractor agrees to require contractually the same effort of all subcontractors whose subcontractors exceed \$100,000). The Contractor understands and agrees that "Affirmative Action" as used herein shall constitute a good faith effort to achieve and maintain minority employment in each trade in the on-site work force used on the Contract.

**ARTICLE 12.05 PREVAILING RATES OF WAGES**

Florida's prevailing wage law was repealed effective April 25, 1979.

For Federally assisted projects, appropriate prevailing wage rate determinations are indicated on pages beginning with WR-1.

\* \* \* \* \*

IN WITNESS THEREOF, the parties have hereunto set their hands and seals, and such of them as are corporation have caused these present to be signed by their duly authorized officers.

CITY OF TAMPA, FLORIDA

\_\_\_\_\_  
Bob Buckhorn, Mayor  
(SEAL)

ATTEST:

\_\_\_\_\_  
City Clerk

Approved as to Form:

The execution of this document was authorized  
by Resolution No. \_\_\_\_\_

\_\_\_\_\_  
Justin R. Vaske, Assistant City Attorney

Contractor

By: \_\_\_\_\_  
(SEAL)

Title:

ATTEST:

\_\_\_\_\_  
Secretary



TAMPA AGREEMENT (ACKNOWLEDGMENT OF PRINCIPAL)

STATE OF \_\_\_\_\_ )  
 ) SS:  
COUNTY OF \_\_\_\_\_ )

For a Corporation:

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

The foregoing instrument was acknowledged before me this \_\_\_\_ of \_\_\_\_\_, 20\_\_ by \_\_\_\_\_ of \_\_\_\_\_, a \_\_\_\_\_ corporation, on behalf of the corporation. He/she is \_\_\_\_ personally known or has \_\_\_\_ produced \_\_\_\_\_ as identification.

\_\_\_\_\_  
Notary

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

For an Individual:

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

The foregoing instrument was acknowledged before me this \_\_\_\_ of \_\_\_\_\_, 20\_\_ by \_\_\_\_\_ who is \_\_\_\_ personally known to me or has \_\_\_\_ produced \_\_\_\_\_ as identification.

\_\_\_\_\_  
Notary

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

For a Firm:

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

The foregoing instrument was acknowledged before me this \_\_\_\_ of \_\_\_\_\_, 20\_\_ by \_\_\_\_\_ who signed on behalf of the said firm. He/she is \_\_\_\_ personally known or has \_\_\_\_ produced \_\_\_\_\_ as identification.

\_\_\_\_\_  
Notary

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

PUBLIC CONSTRUCTION BOND

Bond No. (enter bond number) \_\_\_\_\_

Name of Contractor: \_\_\_\_\_

Principal Business Address of Contractor: \_\_\_\_\_

Telephone Number of Contractor: \_\_\_\_\_

Name of Surety (if more than one list each): \_\_\_\_\_

Principal Business Address of Surety: \_\_\_\_\_

Telephone Number of Surety: \_\_\_\_\_

Owner is The City of Tampa, Florida

Principal Business Address of Owner: \_\_\_\_\_ 306 E Jackson St, Tampa, FL 33602

\_\_\_\_\_ Contract Administration Department (280A4N)

Telephone Number of Owner: \_\_\_\_\_ 813/274-8456

Contract Number Assigned by City to contract which is the subject of this bond: \_\_\_\_\_

Legal Description or Address of Property Improved or Contract Number is: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

General Description of Work and Services: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS That we, \_\_\_\_\_

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

as Principal, hereinafter called CONTRACTOR, of the State of \_\_\_\_\_, and

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

a corporation organized and existing under and by virtue of the laws of the State of \_\_\_\_\_, and regularly authorized to do business in the State of Florida, as SURETY, are held and firmly bound unto the City of Tampa, a municipal corporation organized and existing under the laws of the State of Florida, hereinafter called Owner, in the penal sum of \_\_\_\_\_ Dollars and \_\_\_\_\_ Cents (\$ \_\_\_\_\_), lawful money of the United States of America, for the payment whereof well and truly to be made, we bind ourselves, our heirs, executors, and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS BOND is that if Principal:

1. Performs the contract dated \_\_\_\_\_, \_\_\_\_\_, 20\_\_\_\_, between Principal and Owner for construction of \_\_\_\_\_, the contract being made a part of this bond by reference, in the time and in the manner prescribed in the contract; and
2. Promptly makes payments to all claimants, as defined in Section 255.05(1) (Section 713.01), Florida Statutes, supplying Principal with labor, materials, or supplies, used directly or indirectly by Principal in the prosecution of the work provided for in the contract; and
3. Pays Owner all losses, damages, expenses, costs, and attorney's fees, including appellate proceedings, that Owner sustains because of a default by Principal under the contract; and
4. Performs the guarantee of all work and materials furnished under the contract for the time specified in the contract, then this bond is void; otherwise it remains in full force.
5. Contractor and Surety acknowledge that the Work for which this bond has been issued may be one of several such contract documents for a group of projects. This bond does not secure covenants to pay for or to perform design services survey or program management services. The Owner/Obligee is expected to reasonably account for damages that are caused to Owner with respect to Principal's (Contractor's) default in performance of the scope of the Work incorporated by reference into the bond, and notwithstanding any contractual or common law remedy permitted to Owner as against Contractor, the obligation of Surety for any damages under this bond shall be determined by the cost of completion of the Work less the contract balance unpaid upon default of Contractor for the Work plus liquidated damages at the rate of \$500.00 per day for delays by the Contractor and/or Surety in reaching substantial completion.
6. The notice requirements for claimants and conditions for entitlement to payment set forth in Section 255.05, Fla. Stat. and the limitations period to actions upon Section 255.05, Fla. Stat. bonds apply to claimants seeking payment from surety under this bond. Any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in Section 255.05, Florida Statutes.
7. The Surety, for value received, hereby stipulates and agrees that no changes, extensions of time, alterations or additions to the terms of the contract documents or other Work to be performed hereunder, or the specifications referred to therein shall in any way affect its obligations under this bond, and it does hereby waive notice of any such changes, extensions of time, alterations or additions to the terms of the Contract or to Work or to the specifications.

8. The above SURETY states that it has read all of the Contract Documents made by the CONTRACTOR with the CITY, hereto attached, and the terms and conditions of the contract and work, and is familiar therewith and in particular those portions of the Agreement concerning the guaranty of such CONTRACTOR for a period of one year following the date of the final acceptance of the completed work under the Contract by the CITY, all of which this BOND includes.

DATED ON \_\_\_\_\_, 20\_\_

\_\_\_\_\_  
(Name of Principal)

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

\_\_\_\_\_  
(Principal Business Address)

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

By \_\_\_\_\_

By \_\_\_\_\_  
(As Attorney in Fact)\*

Title \_\_\_\_\_

\_\_\_\_\_  
Telephone Number of Surety

\_\_\_\_\_  
Telephone Number of Principal

**Accepted by City of Tampa:**

**Countersignature:**

By \_\_\_\_\_  
Bob Buckhorn, Mayor

\_\_\_\_\_  
(Name of Local Agency)

Date: \_\_\_\_\_ 20\_\_

\_\_\_\_\_  
(Address of Resident Agent)

By \_\_\_\_\_

Approved as to legal sufficiency:

Title \_\_\_\_\_

By \_\_\_\_\_  
Assistant City Attorney

\_\_\_\_\_  
Telephone Number of Local Agency

Date: \_\_\_\_\_, 20\_\_

\*(As Attorney in Fact) attach Power of Attorney and Current Certificate with Original Signature

# SPECIFICATIONS GENERAL PROVISIONS

## SECTION 1 SCOPE AND INTENT

### **G-1.01 DESCRIPTION**

The work to be done consists of the furnishing of all labor, materials and equipment, and the performance of all work included in this Contract.

### **G-1.02 WORK INCLUDED**

The Contractor shall furnish all labor, superintendence, materials, plant, power, light, heat, fuel, water, tools, appliances, equipment, supplies, and other means of construction necessary or proper for performing and completing the work. He shall obtain and pay for all required permits. He shall perform and complete the work in the manner best calculated to promote rapid construction consistent with safety of life and property and to the satisfaction of the Engineer, and in strict accordance with the Contract Documents. The Contractor shall clean up the work and maintain it during and after construction, until accepted, and shall do all work and pay all costs incidental thereto. He shall repair or restore all structures and property that may be damaged or disturbed during performance of the work.

The cost of incidental work described in these General Provisions, for which there are no specific Contract Items, shall be considered as part of the overhead cost of doing the work and shall be included in the prices for the various Contract Items. No additional payment will be made therefor.

The Contractor shall provide and maintain such modern plant, tools, and equipment as may be necessary, in the opinion of the Engineer, to perform in a satisfactory and acceptable manner all the work required by this Contract. Only equipment of established reputation and proven efficiency shall be used. The Contractor shall be solely responsible for the adequacy of his plant and equipment, prior approval of the Engineer notwithstanding.

### **G-1.03 PUBLIC UTILITY INSTALLATIONS AND STRUCTURES**

Public utility installations and structures shall be understood to include all poles, tracks, pipes, wires, conduits, house service connections, vaults, manholes, and all other appurtenances and facilities pertaining thereto whether owned or controlled by the City, other governmental bodies or privately owned by individuals, firms, or corporations, and used to serve the public with transportation, traffic control, gas, electricity, telephone, sewerage, drainage, water or other public or private property which may be affected by the work.

The Contract Documents contain data relative to existing public utility installations and structures above and below the ground surface. These data are not guaranteed as to their completeness or accuracy and it is the responsibility of the Contractor to make his own investigations to inform himself

fully of the character, condition and extent of all such installations and structures as may be encountered and as may affect the construction operations.

The Contractor shall protect all public utility installations and structures from damage during the work. Access across any buried public utility installation or structure shall be made only in such locations and by means approved by the Engineer. The Contractor shall so arrange his operations as to avoid any damage to these facilities. All required protective devices and construction shall be provided by the Contractor at his expense. All existing public utilities damaged by the Contractor which are shown on the Plans or have been located in the field by the utility shall be repaired by the Contractor, at his expense, as directed by the Engineer. No separate payment shall be made for such protection or repairs to public utility installations or structures.

Public utility installations or structures owned or controlled by the City or other governmental body which are shown on the Plans to be removed, relocated, replaced or rebuilt by the Contractor shall be considered as a part of the general cost of doing the work and shall be included in the prices bid for the various Contract Items. No separate payment shall be made therefor.

Where public utility installations or structures owned or controlled by the City or other governmental body are encountered during the course of the work, and are not indicated on the Plans or in the Specifications, and when, in the opinion of the Engineer, removal, relocation, replacement or rebuilding is necessary to complete the work under this Contract, such work shall be accomplished by the utility having jurisdiction or such work may be ordered, in writing by the Engineer, for the Contractor to accomplish. If such work is accomplished by the utility having jurisdiction it will be carried out expeditiously and the Contractor shall give full cooperation to permit the utility to complete the removal, relocation, replacement or rebuilding as required. If such work is accomplished by the Contractor, it will be paid for as extra work as provided for in Article 7.02 of the Agreement.

The Contractor shall, at all times in performance of the work, employ approved methods and exercise reasonable care and skill so as to avoid unnecessary delay, injury, damage or destruction of public utility installations and structures; and shall, at all times in the performance of the work, avoid unnecessary interference with, or interruption of, public utility services, and shall cooperate fully with the owners thereof to that end.

All City and other governmental utility departments and other owners of public utilities, which may be affected by the work, will be informed in writing by the Engineer within two weeks after the execution of the Contract or Contracts covering the work. Such notice will set out, in general, and direct attention to, the responsibilities of the City and other governmental

utility departments and other owners of public utilities for such installations and structures as may be affected by the work and will be accompanied by one set of Plans and Specifications covering the work under such Contract or Contracts.

In addition to the general notice given by the Engineer, the Contractor shall give written notice to all City and other governmental utility departments and other owners of public utilities of the location of his proposed construction operations, at least forty-eight (48) hours in advance of breaking ground in any area or on any unit of the work. This can be accomplished by making the appropriate contact with the "Underground Utility Notification Center for Excavators (Call Candy)".

The maintenance, repair, removal, relocation, or rebuilding of public utility installations and structures, when accomplished by the Contractor as herein provided, shall be done by methods approved by the Engineer.

## **SECTION 2 PLANS AND SPECIFICATIONS**

### **G-2.01 PLANS**

The Plans referred to in the Contract Documents bear the general project name and number as shown in the Notice To Bidders.

When obtaining data and information from the Plans, figures shall be used in preference to scaled dimensions, and large scale drawings in preference to small scale drawings.

### **G-2.02 COPIES FURNISHED TO CONTRACTOR**

After the Contract has been executed, the Contractor will be furnished with five sets of paper prints, the same size as the original drawings, of each sheet of the Plans and five copies of the Specifications. Additional copies of the Plans and Specifications, when requested, may be furnished to the Contractor at cost of reproduction.

The Contractor shall furnish each of the subcontractors, manufacturers, and material suppliers such copies of the Contract Documents as may be required for his work.

### **G-2.03 SUPPLEMENTARY DRAWINGS**

When, in the opinion of the Engineer, it becomes necessary to explain more fully the work to be done or to illustrate the work further or to show any changes which may be required, drawings known as Supplementary Drawings, with specifications pertaining thereto, will be prepared by the Engineer and five paper prints thereof will be given to the Contractor.

The Supplementary Drawings shall be binding upon the Contractor with the same force as the Plans. Where such Supplementary Drawings require either less or more than the estimated quantities of work, credit to the City or compensation therefor to the Contractor shall be subject to the terms of the Agreement.

### **G-2.04 CONTRACTOR TO CHECK PLANS AND DATA**

The Contractor shall verify all dimensions, quantities, and details shown on the Plans, Supplementary Drawings, Schedules, Specifications, or other data received from the Engineer, and shall notify him of all errors, omissions, conflicts, and discrepancies found therein. Failure to discover or correct errors, conflicts or discrepancies shall not relieve the Contractor of full responsibility for unsatisfactory work, faulty construction or improper operation resulting therefrom nor from rectifying such conditions at his own expense. He will not be allowed to take advantage of any errors or omissions as full instructions will be furnished by the Engineer, should such errors or omissions be discovered. All schedules are given for the convenience of the Engineer and the Contractor and are not guaranteed to be complete. The Contractor shall assume all responsibility for the making of estimates of the size, kind, and quality of materials and equipment included in work to be done under the Contract.

### **G-2.05 SPECIFICATIONS**

The specifications consist of four parts, the General Provisions, the Technical Specifications, the Special Provisions and the Contract Items. The General Provisions and Technical Specifications contain general requirements which govern the work. The Special Provisions and the Contract Items modify and supplement these by detailed requirements for the work and shall always govern, whenever there appears to be conflict.

### **G-2.06 INTENT**

All work called for in the Specifications applicable to this Contract, but not shown on the Plans in their present form, or vice versa, shall be of like effect as if shown or mentioned in both. Work not specified in either the Plans or in the Specifications, but involved in carrying out their intent or in the complete and proper execution of the work, is required and shall be performed by the Contractor as though it were specifically delineated or described.

The apparent silence of the Specifications as to any detail, or the apparent omission from them of a detailed description concerning any work to be done and materials to be furnished, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of the best quality is to be used, and interpretation of these Specifications shall be made upon that basis.

## **SECTION 3 WORKING DRAWINGS**

### **G-3.01 SCOPE**

The Contractor shall promptly prepare and submit layout, detail and shop drawings to insure proper construction, assembly, and installation of the work using those materials and methods as hereafter specified under the Technical Specifications, Special Provisions and Contract Items.

These drawings shall accurately and distinctly present the following:

- a. All working and erection dimensions.
- b. Arrangements and sectional views.
- c. Necessary details, including complete information for making connections between work under this Contract and work under other Contracts.
- d. Kinds of materials and finishes.
- e. Parts listed and description thereof.

Drawings for mechanical equipment shall present, where applicable, such data as dimensions, weight and performance characteristics. These data shall show conformance with the performance characteristics and other criteria incorporated in the Plans and Specifications.

Each drawing shall be dated and shall contain the name of the project, Division number and description, the technical specifications section number, names of equipment or materials and the location at which the equipment or materials are to be installed. Location shall mean both physical location and location relative to other connected or attached material. The Engineer will return unchecked any submittal which does not contain complete data on the work and full information on related matters.

Stock or standard drawings will not be accepted for review unless full identification and supplementary information is shown thereon in ink or typewritten form.

The Contractor shall review all working drawing submittals before transmitting them to the Engineer to determine that they comply with requirements of the Specifications. Drawings which are incomplete or are not in compliance with the Contract Documents shall not be submitted for processing by the Engineer. The Contractor shall place his stamp of approval on all working drawings submitted to the Engineer to indicate compliance with the above.

#### **G-3.02 APPROVAL**

If the working drawings show departures from the Contract requirements, the Contractor shall make specific mention thereof in his letter of submittal; otherwise approval of such submittals shall not constitute approval of the departure. Approval of the drawings shall constitute approval of the subject matter thereof only and not of any structure, material, equipment, or apparatus shown or indicated.

The approval of drawings will be general and shall not relieve the Contractor of responsibility for the accuracy of such drawings, nor for the proper fitting and construction of the work, nor for the furnishing of materials or work required by the Contract and not indicated on the drawings. No work called for by working drawings shall be done until such drawings have been approved by the Engineer.

The procedure in seeking approval of the working drawings shall be as follows:

1. The Contractor shall submit four complete sets of drawings

and other descriptive data together with one copy of a letter of transmittal to the Engineer for approval. The letter of transmittal shall contain the name of the project, contract number, technical specifications section number, the name of the Contractor, a list of drawings with numbers and titles, and any other pertinent information.

2. Drawings or descriptive data will be stamped "Approved", "Approved Subject to Corrections Marked", or "Examined and Returned for Correction" and one copy with a letter of transmittal will be returned to the Contractor.

3. If a drawing or other data is stamped "Approved", the Contractor shall insert the date of approval on five additional copies of the document and transmit the five copies to the Engineer together with one copy of a letter of transmittal containing substantially the same information as described in Instruction 1. above.

4. If a drawing or other data is stamped "Approved Subject to Corrections Marked", the Contractor shall make the corrections indicated and proceed as in Instruction 3., above.

5. If a drawing or data is stamped "Examined and Returned for Correction", the Contractor shall make the necessary corrections and resubmit the documents as set forth in Instruction 1., above. The letter of transmittal shall indicate that this is a resubmittal.

The Contractor shall revise and resubmit the working drawings as required by the Engineer, until approval thereof is obtained.

## **SECTION 4 MATERIALS AND EQUIPMENT**

### **G-4.01 GENERAL REQUIREMENTS**

All materials, appliances, and types or methods of construction shall be in accordance with the Specifications and shall, in no event, be less than that necessary to conform to the requirements of any applicable laws, ordinances, and codes.

All materials and equipment shall be new, unused, and correctly designed. They shall be of standard first grade quality, produced by expert personnel, and intended for the use for which they are offered. Materials or equipment which, in the opinion of the Engineer, are inferior or of a lower grade than indicated, specified, or required will not be accepted.

The quality of Workmanship and Materials entering into the work under this Contract shall conform to the requirements of the pertinent sections, clauses, paragraphs, and sentences, both directly and indirectly applicable thereto, of that part of the Technical Specifications, whether or not direct reference to such occurs in the Contract Items.

Equipment and appurtenances shall be designed in conformity with ANSI, ASME, IEEE, NEMA and other

generally accepted standards and shall be of rugged construction and of sufficient strength to withstand all stresses which may occur during fabrication, testing, transportation, installation, and all conditions of operation. All bearings and moving parts shall be adequately protected against wear by bushings or other approved means and shall be fully lubricated by readily accessible devices. Details shall be designed for appearance as well as utility. Protruding members, joints, corners, gear covers, and the like, shall be finished in appearance. All exposed welds shall be ground smooth and the corners of structural shapes shall be mitered.

Equipment shall be of the approximate dimensions as indicated on the Plans or as specified, shall fit the spaces shown on the Plans with adequate clearances, and shall be capable of being handled through openings provided in the structure for this purpose. The equipment shall be of such design that piping and electrical connections, ductwork, and auxiliary equipment can be assembled and installed without causing major revisions to the location or arrangement of any of the facilities.

Machinery parts shall conform exactly to the dimensions shown on the working drawings. There shall be no more fitting or adjusting in setting up a machine than is necessary in assembling high grade apparatus of standard design. The equivalent parts of identical machines shall be made interchangeable. All grease lubricating fittings on equipment shall be of a uniform type. All machinery and equipment shall be safeguarded in accordance with the safety codes of the ANSI and applicable state and local codes.

#### **G-4.02 MANUFACTURER**

The names of proposed manufacturers, suppliers, material, and dealers who are to furnish materials, fixtures, equipment, appliances or other fittings shall be submitted to the Engineer for approval, as early as possible, to afford proper investigation and checking. Such approval must be obtained before shop drawings will be checked. No manufacturer will be approved for any materials to be furnished under this Contract unless he shall be of good reputation and have a plant of ample capacity. He shall, upon the request of the Engineer, be required to submit evidence that he has manufactured a similar product to the one specified and that it has been previously used for a like purpose for a sufficient length of time to demonstrate its satisfactory performance.

All transactions with the manufacturers or subcontractors shall be through the Contractor, unless the Contractor shall request, in writing to the Engineer, that the manufacturer or subcontractor deal directly with the Engineer. Any such transactions shall not in any way release the Contractor from his full responsibility under this Contract.

Any two or more pieces of material or equipment of the same kind, type or classification, and being used for identical types of service, shall be made by the same manufacturer.

#### **G-4.03 REFERENCE TO STANDARDS**

Whenever reference is made to the furnishing of materials or

testing thereof to conform to the standards of any technical society, organization or body, it shall be construed to mean the latest standard, code, specification or tentative specification adopted and published at the date of advertisement for proposals, even though reference has been made to an earlier standard, and such standards are made a part hereof to the extent which is indicated or intended.

Reference to a technical society, organization or body may be made in the Specifications by abbreviations, in accordance with the following list:

AASHTO for American Association of State Highway and Transportation Officials (formerly AASHO)  
ACI for American Concrete Institute  
AGMA for American Gear Manufacturer's Association  
AFBMA for Anti-Friction Bearing Manufacturer's Association  
AISC for American Institute of Steel Construction  
AISI for American Iron and Steel Institute  
ANSI for American National Standards Institute  
ASCE for American Society of Civil Engineers  
ASTM for American Society for Testing and Materials  
ASME for American Society of Mechanical Engineers  
AWS for American Welding Society  
AWWA for American Water Works Association  
AWPA for American Wood Preservers Association  
CEMA for Conveyor Equipment Manufacturers Association  
CIPRA for Cast Iron Pipe Research Association  
IEEE for Institute of Electrical and Electronic Engineers  
IPCEA for Insulated Power Cable Engineers Association  
NEC for National Electrical Code  
NEMA for National Electrical Manufacturers Association  
SAE for Society of Automotive Engineers  
SHBI for Steel Heating Boiler Institute  
Fed.Spec. for Federal Specifications  
Navy Spec. for Navy Department Specifications  
U.L.,Inc. for Underwriters' Laboratories, Inc.

When no reference is made to a code, standard or specification, the Standard Specifications of the ANSI, the ASME, the ASTM, the IEEE, or the NEMA shall govern.

#### **G-4.04 SAMPLES**

The Contractor shall, when required, submit to the Engineer for approval typical samples of materials and equipment. The samples shall be properly identified by tags and shall be submitted sufficiently in advance of the time when they are to be incorporated into the work, so that rejections thereof will not cause delay. A letter of transmittal, in duplicate, from the Contractor requesting approval must accompany all such samples.

#### **G-4.05 EQUIVALENT QUALITY**

Whenever, in the Contract Documents, an article, material, apparatus, equipment, or process is called for by trade name or by the name of a patentee, manufacturer, or dealer or by reference to catalogs of a manufacturer or dealer, it shall be understood as intending to mean and specify the article, material, apparatus, equipment or process designated, or any



equal thereto in quality, finish, design, efficiency, and durability and equally serviceable for the purposes for which it is intended.

Whenever material or equipment is submitted for approval as being equal to that specified, the decision as to whether or not such material or equipment is equal to that specified shall be made by the Engineer.

Upon rejection of any material or equipment submitted as the equivalent of that specifically named in the Contract, the Contractor shall immediately proceed to furnish the designated material or equipment.

Neither the approval by the Engineer of alternate material or equipment as being equivalent to that specified nor the furnishing of the material or equipment specified, shall in any way relieve the Contractor of responsibility for failure of the material or equipment, due to faulty design, material, or workmanship, to perform the functions required of them by the Specifications.

#### **G-4.06 DELIVERY**

The Contractor shall deliver materials in ample quantities to insure the most speedy and uninterrupted progress of the work so as to complete the work within the allotted time. The Contractor shall also coordinate deliveries in order to avoid a delay in, or impediment of, the progress of the work of any related Contractor.

#### **G-4.07 CARE AND PROTECTION**

The Contractor shall be solely responsible for properly storing and protecting all materials, equipment, and work furnished under the Contract from the time such materials and equipment are delivered at the site of the work until final acceptance thereof. He shall, at all times, take necessary precautions to prevent injury or damage by water, freezing, or by inclemencies of the weather to such materials, equipment and work. All injury or damage to materials, equipment, or work resulting from any cause whatsoever shall be made good by the Contractor.

The Engineer shall, in all cases, determine the portion of the site to be used by the Contractor for storage, plant or for other purposes. If, however, it becomes necessary to remove and restack materials to avoid impeding the progress of any part of the work or interference with the work to be done by any other Contractor, the Contractor shall remove and restack such materials at his own expense.

#### **G-4.08 TOOLS AND ACCESSORIES**

The Contractor shall, unless otherwise stated in the Contract Documents, furnish with each type, kind or size of equipment, one complete set of suitably marked high grade special tools and appliances which may be needed to adjust, operate, maintain, or repair the equipment. Such tools and appliances shall be furnished in approved painted steel cases, properly labeled and equipped with good grade cylinder locks and duplicate keys.

Spare parts shall be furnished as specified.

Each piece of equipment shall be provided with a substantial nameplate, securely fastened in place and clearly inscribed with the manufacturer's name, year of manufacture, serial number, weight and principal rating data.

#### **G-4.09 INSTALLATION OF EQUIPMENT**

The Contractor shall have on hand sufficient proper equipment and machinery of ample capacity to facilitate the work and to handle all emergencies normally encountered in work of this character.

Equipment shall be erected in a neat and workmanlike manner on the foundations at the locations and elevations shown on the Plans, unless directed otherwise by the Engineer during installation. All equipment shall be correctly aligned, leveled and adjusted for satisfactory operation and shall be installed so that proper and necessary connections can be made readily between the various units.

The Contractor shall furnish, install and protect all necessary anchor and attachment bolts and all other appurtenances needed for the installation of the devices included in the equipment specified. Anchor bolts shall be as approved by the Engineer and made of ample size and strength for the purpose intended. Substantial templates and working drawings for installation shall be furnished.

The Contractor shall, at his own expense, furnish all materials and labor for, and shall properly bed in non-shrink grout, each piece of equipment on its supporting base that rests on masonry foundations. Grout shall completely fill the space between the equipment base and the foundation.

#### **G-4.10 OPERATING INSTRUCTIONS**

The Contractor, through qualified individuals, shall adequately instruct designated employees of the City in the operation and care of all equipment installed hereunder, except for equipment that may be furnished by the City.

The Contractor shall also furnish and deliver to the Engineer three complete sets for permanent files, identified in accordance with Subsection G-3.01 hereof, of instructions, technical bulletins and any other printed matter, such as diagrams, prints or drawings, containing full information required for the proper operation, maintenance, and repair, of the equipment installed and the ordering of spare parts, except for equipment that may be furnished by the City.

In addition to the above three copies, the Contractor shall furnish any additional copies that may be required for use during construction and start-up operations.

#### **G-4.11 SERVICE OF MANUFACTURER'S ENGINEER**

The Contract prices for equipment shall include the cost of furnishing a competent and experienced engineer or superintendent who shall represent the manufacturer and shall assist the Contractor, when required, to install, adjust, test and place in operation the equipment in conformity with the Contract Documents. After the equipment is placed in

permanent operation by the City, such engineer or superintendent shall make all adjustments and tests required by the Engineer to provide that such equipment is in proper and satisfactory operating condition, and shall instruct such personnel as may be designated by the City in the proper operation and maintenance of such equipment.

## **SECTION 5 INSPECTION AND TESTING**

### **G-5.01 GENERAL**

The Contractor's attention is hereby directed to Article 3.03 of the Agreement.

Inspection and testing of materials will be performed by the City unless otherwise specified.

For tests specified to be made by the Contractor, the testing personnel shall make the necessary inspections and tests and the reports thereof shall be in such form as will facilitate checking to determine compliance with the Contract Documents. Five copies of the reports shall be submitted and authoritative certification thereof must be furnished to the Engineer as a prerequisite for the acceptance of any material or equipment.

If, in the making of any test of any material or equipment, it is ascertained by the Engineer that the material or equipment does not comply with the Contract, the Contractor will be notified thereof and he will be directed to refrain from delivering said material and equipment, or to remove it promptly from the site or from the work and replace it with acceptable material, without cost to the City.

Tests of electrical and mechanical equipment and appliances shall be conducted in accordance with recognized test codes of the ANSI, ASME, or the IEEE, except as may otherwise be stated herein.

The Contractor shall be fully responsible for the proper operation of equipment during tests and instruction periods and shall neither have nor make any claim for damage which may occur to equipment prior to the time when the City formally takes over the operation thereof.

### **G-5.02 COSTS**

All inspection and testing of materials furnished under this Contract will be performed by the City or duly authorized inspection engineers or inspection bureaus without cost to the Contractor, unless otherwise expressly specified.

The cost of shop and field tests of equipment and of certain other tests specifically called for in the Contract Documents shall be borne by the Contractor and such costs shall be deemed to be included in the contract price.

Materials and equipment submitted by the Contractor as the equivalent to those specifically named in the Contract may be tested by the City for compliance. The Contractor shall reimburse the City for the expenditures incurred in making

such tests on materials and equipment which are rejected for noncompliance.

### **G-5.03 INSPECTIONS OF MATERIALS**

The Contractor shall give notice, in writing to the Engineer, sufficiently in advance of his intention to commence the manufacture or preparation of materials especially manufactured or prepared for use in or as part of the permanent construction. Such notice shall contain a request for inspection, the date of commencement and the expected date of completion of the manufacture or preparation of materials. Upon receipt of such notice the Engineer will arrange to have a representative present at such times during the manufacture as may be necessary to inspect the materials or he will notify the Contractor that inspection will be made at a point other than the point of manufacture, or he will notify the Contractor that inspection will be waived. The Contractor must comply with these provisions before shipping any material. Such inspection shall not release the Contractor from the responsibility for furnishing materials meeting the requirements of the Contract Documents.

### **G-5.04 CERTIFICATE OF MANUFACTURE**

When inspection is waived or when the Engineer so requires, the Contractor shall furnish to him authoritative evidence in the form of Certificates of Manufacture that the materials to be used in the work have been manufactured and tested in conformity with the Contract Documents. These certificates shall be notarized and shall include copies of the results of physical tests and chemical analyses, where necessary, that have been made directly on the product or on similar products of the manufacturer.

### **G-5.05 SHOP TESTS OF OPERATING EQUIPMENT**

Each piece of equipment for which pressure, duty, capacity, rating, efficiency, performance, function, or special requirements are specified shall be tested in the shop of the maker in a manner which shall conclusively prove that its characteristics comply fully with the requirements of the Contract Documents. No such equipment shall be shipped to the work until the Engineer notifies the Contractor, in writing, that the results of such tests are acceptable.

Five copies of the manufacturer's actual test data and interpreted results thereof, accompanied by a certificate of authenticity sworn to by a responsible official of the manufacturing company, shall be forwarded to the Engineer for approval.

The cost of the shop tests and of furnishing manufacturer's preliminary and shop test data of operating equipment shall be borne by the Contractor.

### **G-5.06 PRELIMINARY FIELD TESTS**

As soon as conditions permit, the Contractor shall furnish all labor, materials, and instruments and shall make preliminary field tests of equipment. If the preliminary field tests disclose any equipment furnished under this Contract which does not comply with the requirements of the Contract Documents, the Contractor shall, prior to the acceptance tests, make all changes, adjustments, and replacements required.

## TEMPORARY STRUCTURES

### G-5.07 FINAL FIELD TESTS

Upon completion of the work and prior to final payment, all equipment and appliances installed under this Contract shall be subjected to acceptance tests as specified or required to prove compliance with the Contract Documents.

The Contractor shall furnish labor, fuel, energy, water and all other materials, equipment, and instruments necessary for all acceptance tests, at no additional cost to the City.

### G-5.08 FAILURE OF TESTS

Any defects in the materials and equipment or their failure to meet the tests, guarantees or requirements of the Contract Documents shall be promptly corrected by the Contractor by replacements or otherwise. The decision of the Engineer as to whether or not the Contractor has fulfilled his obligations under the Contract shall be final and conclusive. If the Contractor fails to make those corrections or if the improved materials and equipment, when tested, shall again fail to meet the guarantees or specified requirements, the City, notwithstanding its partial payment for work, and materials and equipment, may reject the materials and equipment and may order the Contractor to remove them from the site at his own expense.

In case the City rejects any materials and equipment, then the Contractor shall replace the rejected materials and equipment within a reasonable time. If he fails to do so, the City may, after the expiration of a period of thirty calendar days after giving him notice in writing, proceed to replace such rejected materials and equipment, and the cost thereof shall be deducted from any compensation due or which may become due the Contractor under this Contract.

The City agrees to obtain other equipment within a reasonable time and the Contractor agrees that the City may use the equipment furnished by him without rental or other charges until the new equipment is obtained.

Materials or work in place that fails to pass acceptability tests shall be retested at the direction of the construction engineer all such retests shall be at the Contractor's expense. The rates charged shall be in accordance with the Department of Public Works current annual inspection contract which is available for inspection at the offices of the Department of Public Works.

### G-5.09 FINAL INSPECTION

The procedures for final inspection shall be in accordance with the provisions of Article 4.07 of the Agreement. During such final inspections, the work shall be clean and free from water. In no case will the final estimate be prepared until the Contractor has complied with all the requirements set forth and the Engineer has made his final inspection of the entire work and is satisfied that the entire work is properly and satisfactorily constructed in accordance with the requirements of the Contract Documents.

## SECTION 6

### G-6.01 GENERAL

All false work, scaffolding, ladders, hoistways, braces, pumping plants, shields, trestles, roadways, sheeting, centering forms, barricades, drains, flumes, and the like, any of which may be needed in the construction of any part of the work and which are not herein described or specified in detail, must be furnished, maintained and removed by the Contractor, and he shall be responsible for the safety and efficiency of such works and for any damages that may result from their failure or from their improper construction, maintenance, or operation.

### G-6.02 PUBLIC ACCESS

At all points in the work where public access to any building, house, place of business, public road, or sidewalk would be obstructed by any action of the Contractor in executing the work required by this Contract, the Contractor shall provide such temporary structure, bridges or roadway as may be necessary to maintain public access at all times. At least one lane for vehicular traffic shall be maintained in streets in which the Contractor is working. Street closure permits are required from the Department of Public Works.

The Contractor shall provide suitable temporary bridges, as directed by the Engineer, at street intersections when necessary for the maintenance of vehicular and pedestrian traffic.

Prior to temporarily cutting of access to driveways and garages, the Contractor shall give twelve (12) hours notice to affected property owners. Interruptions to use of private driveways shall be kept to a minimum.

### G-6.03 CONTRACTOR'S FIELD OFFICE

The Contractor shall erect, furnish and maintain a field office with a telephone at the site during the entire period of construction. He or an authorized agent shall be present at this office at all times while his work is in progress. Readily accessible copies of both the Contract Documents and the latest approved working drawings shall be kept at this field office.

### G-6.04 TEMPORARY FENCE

If, during the course of the work, it is necessary to remove or disturb any fence or part thereof, the Contractor shall, at his own expense, if so ordered by the Engineer, provide a suitable temporary fence which shall be maintained until the permanent fence is replaced. The Engineer shall be solely responsible for the determination of the necessity for providing a temporary fence and the type of temporary fence to be used.

### G-6.05 RESPONSIBILITY FOR TEMPORARY STRUCTURES

In accepting the Contract, the Contractor assumes full responsibility for the sufficiency and safety of all temporary structures or work and for any damage which may result from their failure or their improper construction, maintenance, or operation and will indemnify and save harmless the City from

all claims, suits or actions and damages or costs of every description arising by reason of failure to comply with the above provisions.

## **SECTION 7 TEMPORARY SERVICES**

### **G-7.01 WATER**

The Contractor shall provide the necessary water supply at his own expense. He shall, if necessary, provide and lay necessary waterlines from existing mains to the place of using, shall secure all necessary permits and pay for all taps to water mains or hydrants and for all water used at the established rates.

### **G-7.02 LIGHT AND POWER**

The Contractor shall provide, at his own expense, temporary lighting and power facilities required for the proper prosecution and inspection of the work. If, in the opinion of the Engineer, these facilities are inadequate, the Contractor will not be permitted to proceed with any portion of the work affected thereby.

### **G-7.03 SANITARY REGULATIONS**

The Contractor shall prohibit and prevent the committing of nuisances on the site of the work or on adjoining property and shall discharge any employee who violates this rule.

Ample washrooms and toilet facilities and a drinking water supply shall be furnished and maintained in strict conformity with the law by the Contractor for use by his employees.

### **G-7.04 ACCIDENT PREVENTION**

Precautions shall be exercised at all times for the protection of persons and property. The safety provisions of applicable laws, building and construction codes shall be observed. The Contractor shall comply with the U. S. Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (PL 91-596), and under Section 107 of the Contract Work. Hours and Safety Standards Act (PL 91-54), except where state and local safety standards exceed the federal requirements and except where state safety standards have been approved by the Secretary of Labor in accordance with provisions of the Occupational Safety and Health Act.

### **G-7.05 FIRST AID**

The Contractor shall keep upon the site, at each location where work is in progress, a completely equipped first aid kit and shall provide ready access thereto at all times when men are employed on the work.

### **G-7.06 HEATING**

The Contractor shall provide temporary heat, at his own expense, whenever required on account of work being carried on during cold weather and to prevent freezing of water pipes and other damage to the work.

## **SECTION 8**

## **LINES AND GRADES**

### **G-8.01 GENERAL**

All work done under this Contract shall be constructed in accordance with the lines and grades shown on the Plans, or as given by the Engineer. The full responsibility for keeping alignment and grade shall rest upon the Contractor.

The Engineer will establish bench marks and base line controlling points. Reference remarks for lines and grades as the work progresses will be located to cause as little inconvenience to the prosecution of the work as possible. The Contractor shall so place excavation and other materials as to cause no inconvenience in the use of the use of the reference marks provided. He shall remove any obstructions placed by him contrary to this provision.

### **G-8.02 SURVEYS**

The Contractor shall furnish and maintain, at his own expense, stakes and other such materials, and give such assistance, including qualified helpers, as may be required by the Engineer for setting reference marks. The Contractor shall check such reference marks by such means as he may deem necessary and, before using them, shall call the Engineer's attention to any inaccuracies. The Contractor shall, at his own expense, establish all working or construction lines and grades as required from the reference marks set by the Engineer, and shall be solely responsible for the accuracy thereof. He shall, however, be subject to the check and review of the Engineer.

The Contractor shall keep the Engineer informed a reasonable time in advance as to his need for line and grade reference marks, in order that they may be furnished and all necessary measurements made for record and payment with the minimum of inconvenience to the Engineer or of delay to the Contractor.

It is the intention not to delay the work for the establishment of reference marks but, when necessary, working operations shall be suspended for such reasonable time as the Engineer may require for this purpose.

### **G-8.03 SAFEGUARDING MARKS**

The Contractor shall safeguard all points, stakes, grade marks, monuments and bench marks made or established on the work, bear the cost of reestablishing them if disturbed, and bear the entire expense of rectifying work improperly installed due to not maintaining or protecting or to removing without authorization such established points, stakes and marks.

The Contractor shall safeguard all existing and known property corners, monuments and marks adjacent to but not related to the work and, if required, shall bear the cost of reestablishing them if disturbed or destroyed.

### **G-8.04 DATUM PLANE**

All elevations indicated or specified refer to the Mean Sea Level Datum of the U.S.C. & G.S. (N.O.S.) which is 0.80 feet above the Mean Low Water Datum of the U. S. Army

Corps of Engineers.

## **SECTION 9 ADJACENT STRUCTURES AND LANDSCAPING**

### **G-9.01 RESPONSIBILITY**

The responsibility for removal, replacement, relocation, repair, rebuilding or protection of all public utility installations, including poles, tracks, pipes, wires, conduits, house service connections, vaults, manholes, sewers, traffic control and fire alarm signal circuit installations and other appurtenances and facilities shall be in accordance with G-1.02 and G-1.03.

The Contractor shall also be entirely responsible and liable for all damage or injury as a result of his operations to all other adjacent public and private property, structures of any kind and appurtenances thereto met with during the progress of the work. The cost of protection, replacement in their original locations and conditions or payment of damages for injuries to such adjacent public and private property and structures affected by the work, whether or not shown on the Plans, and the removal, relocation, and reconstruction of such items called for on the Plans or specified shall be included in the various Contract Items and no separate payment will be made therefor. Where such public and private property, structures of any kind and appurtenances thereto are not shown on the Plans and when, in the opinion of the Engineer, removal or relocation and reconstruction is necessary to avoid interference with the work, payment therefor will be made as provided for extra work in Article 7.02 of the Agreement.

### **G-9.02 PROTECTION OF TREES**

All trees and shrubs shall be adequately protected by the Contractor with boxes or otherwise and, within the City of Tampa, in accordance with ordinances governing the protection of trees. No excavated materials shall be placed so as to injure such trees or shrubs. Trees or shrubs destroyed by negligence of the Contractor or his employees shall be replaced by him with new stock of similar size and age, at the proper season, and at the sole expense of the Contractor.

Beneath trees or other surface structures, where possible, pipelines may be built in short tunnels, backfilled with excavated materials, except as otherwise specified, or the trees or structures carefully supported and protected from damage.

The City may order the Contractor, for the convenience of the City, to remove trees along the line of trench excavation. If so ordered, the City will obtain any permits required for removal of trees. Such tree removal ordered shall be paid for under the appropriate Contract Items.

### **G-9.03 LAWN AREAS**

Lawn areas shall be left in as good condition as before the starting of the work. Where sod is to be removed, it shall be carefully removed and later replaced, or the area where sod has been removed shall be restored with new sod in the

manner described in the Technical Specifications section.

### **G-9.04 RESTORATION OF FENCES**

Any fence, or part thereof, that is damaged or removed during the course of the work shall be replaced or repaired by the Contractor and shall be left in as good a condition as before the starting of the work. The manner in which the fence is repaired or replaced and the materials used in such work shall be subject to the approval of the Engineer. The cost of all labor, materials, equipment, and work for the replacement or repair of any fence shall be deemed included in the appropriate Contract Item or Items, or if no specific Item is provided therefor, as part of the overhead cost of the work, and no additional payment will be made therefor.

## **SECTION 10 PROTECTION OF WORK AND PUBLIC**

### **G-10.01 TRAFFIC REGULATIONS**

The Contractor shall arrange his work to comply with Article G-6.02. The work shall be done with the least possible inconvenience to the public and to that end the work may be confined by the Engineer to one block at a time.

### **G-10.02 BARRIERS AND LIGHTS**

During the prosecution of the work, the Contractor shall put up and maintain at all times such barriers, and lights, as will effectually prevent accidents. The Contractor shall provide suitable barricades, red lights, "danger" or "caution" or "street closed" signs and watchmen at all places where the work causes obstructions to the normal traffic or constitutes in any way a hazard to the public. Such barriers and signs shall be constructed to State of Florida Department of Transportation standards and placed as recommended by the Traffic Division of the City's Department of Public Works.

No open fires will be permitted.

### **G-10.03 SMOKE PREVENTIONS**

The Contractor shall use hard coal, coke, oil or gas as fuel for equipment generating steam. A strict compliance with ordinances regulating the production and emission of smoke will be required.

### **G-10.04 NOISE**

The Contractor shall eliminate noise to as great an extent as practicable at all times. Air compressing plants shall be equipped with silencers and the exhaust of all gasoline motors or other power equipment shall be provided with mufflers. In the vicinity of hospitals and schools, special care shall be used to avoid noise or other nuisances. The Contractor shall strictly observe all local regulations and ordinances covering noise control.

Except in the event of an emergency, no work shall be done between the hours of 7:00 p.m. and 7:00 a.m., or on Sundays.

If the proper and efficient prosecution of the work requires operations during the night, the written permission of the Engineer shall be obtained before starting such items of the work.

**SECTION 13  
CLEANING**

**G-10.05 ACCESS TO PUBLIC SERVICES**

Neither the materials excavated nor the materials or plant used in the construction of the work shall be so placed as to prevent free access to all fire hydrants, valves or manholes.

**G-10.06 DUST PREVENTION**

The Contractor shall prevent dust nuisance from his operations or from traffic by keeping the streets sprinkled with water at all times.

**G-10.07 PRIVATE PROPERTY**

The Contractor shall so conduct the work that no equipment, material, or debris will be placed or allowed to fall upon private property in the vicinity of the work unless he shall have obtained the owner's written consent thereto and shall have shown this consent to the Engineer.

**SECTION 11  
SLEEVES AND INSERTS**

**G-11.01 COORDINATION**

When the Contract requires the placing of conduits, saddles, boxes, cabinets, sleeves, inserts, foundation bolts, anchors, and other like work in floors, roofs, or walls of buildings and structures, they shall be promptly installed in conformity with the construction program. The Contractor who erects the floors, roofs, and walls shall facilitate such work by fully cooperating with the Contractors responsible for installing such appurtenances. The Contractor responsible for installing such appurtenances shall arrange the work in strict conformity with the construction schedule and avoid interference with the work of other contractors.

**G-11.02 OPENINGS TO BE PROVIDED**

In the event timely delivery of sleeves and other materials cannot be made and to avoid delay, the affected Contractor may arrange to have boxes or other forms set at the locations where the appurtenances are to pass through or into the floors, roofs, walls, or other work. Upon the subsequent installation of these appurtenances, the Contractor erecting the structure shall fill around them with materials as required by the Contract. The necessary expenditures incurred for the boxing out and filling in shall be borne by the Contractor or Contractors required to furnish the sleeves and inserts. Formed openings and later installation of sleeves will not be permitted at locations subject to hydrostatic pressure.

**SECTION 12  
CUTTING AND PATCHING**

**G-12.01 GENERAL**

The Contractor shall do all cutting, fitting, or patching of his portion of the work that may be required to make the several parts thereof join and coordinate in a manner satisfactory to the Engineer and in accordance with the Plans and Specifications. The work must be done by competent workmen skilled in the trade required by the restoration.

**G-13.01 DURING CONSTRUCTION**

During construction of the work, the Contractor shall, at all times, keep the site of the work and adjacent premises as free from material, debris, and rubbish as is practicable and shall remove the same from any portion of the site if, in the opinion of the Engineer, such material, debris, or rubbish constitutes a nuisance or is objectionable.

The Contractor shall remove from the site all of his surplus materials and temporary structures when no further need therefor develops.

**G-13.02 FINAL CLEANING**

At the conclusion of the work, all erection plant, tools, temporary structures and materials belonging to the Contractor shall be promptly taken away, and he shall remove and promptly dispose of all water, dirt, rubbish or any other foreign substances.

The Contractor shall thoroughly clean all equipment and materials installed by him and shall deliver such materials and equipment undamaged in a bright, clean, polished, and new appearing condition.

**SECTION 14  
MISCELLANEOUS**

**G-14.01 PROTECTION AGAINST SILTATION AND BANK EROSION**

The Contractor shall arrange his operations to minimize siltation and bank erosion on construction sites and on existing or proposed watercourses and drainage ditches.

**G-14.02 EXISTING FACILITIES**

The work shall be so conducted to maintain existing facilities in operation insofar as is possible. Work shall be scheduled to minimize bypassing during construction. Requirements and schedules of operations for maintaining existing facilities in service during construction shall be as described in the Special Provisions.

**G-14.03 USE OF CHEMICALS**

All chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant or of other classification, must show approval of either EPA or USDA. Use of all such chemicals and disposal of residues shall be in strict conformance with instructions.

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SUPPLEMENTARY GENERAL PROVISIONS

1.0 GENERAL:

- 1.1 This Section sets forth modifications to the "General Provisions" of the Contract Documents which are referred to as Specifications, General Provisions.
- 1.2 Paragraph numbers and titles used herein refer to similarly numbered and titled articles in the General Provisions.
- 1.3 Only those paragraphs contained herein shall be assumed to be modified. Paragraphs not appearing herein shall apply as written in the General Provisions.
- 1.4 Any portion of the General Provisions, whether or not modified herein, may be further modified in Special Conditions and in the Instructions to Bidders of these Specifications.
- 1.5 Where the Supplementary General Provisions, Special Conditions and Instructions to Bidders conflict with the General Provisions, the Supplementary General Provisions, Special Conditions and the Instructions to Bidders shall take precedence.

2.0 MODIFICATIONS TO THE GENERAL PROVISIONS AS FOLLOWS:

2.1 SECTION 1 SCOPE AND INTENT

G-1.02 WORK INCLUDED

The first paragraph shall be deleted in its entirety and replaced by the following paragraph:

"The Contractor shall furnish all labor, superintendence, materials, plant, power, light, heat, fuel, water, tools, appliances, equipment, supplies, and other means of construction necessary or proper for performing and completing the work. He shall obtain all required permits. He shall perform and complete the work in the manner best calculated to promote rapid construction consistent with safety of life and property and to the satisfaction of the Engineer, and in strict accordance with the Contract Documents. The Contractor shall clean up the work and maintain it during and after construction, until incidental thereto. He shall repair or restore all during performance of the work."

2.2 SECTION 3 WORKING DRAWINGS

- a. Change to read as follows:

SECTION 3 SHOP DRAWINGS

- b. Replace the existing paragraphs in their entirety with the following paragraphs:

G-3.01 SCOPE

Shop drawings, schedules, etc., shall be submitted to the Engineer and/or Architect in quadruplet, accompanied by a letter of transmittal. Subcontractors and suppliers shall submit shop drawings and make requests for approvals through their respective prime Contractors.

The drawings shall be numbered consecutively and shall accurately and distinctly present the following:

- (1) Names of equipment or materials, and the locations at which the equipment or materials are to be installed in the work.
- (2) All working and erection dimensions.
- (3) Arrangement and sectional views.
- (4) Necessary details, including complete information for making connections between work under this contract and work under other contracts.
- (5) Kinds of materials and finishes.
- (6) Parts list and description thereof.

The Engineer and/or Architect may decline to consider any shop drawing that does not contain complete data on the work and full information of related matters.

Fax submittals will not be reviewed.

G-3.02 APPROVAL:

Shop drawings shall be examined by the Contractor prior to his transmitting them to the Engineer and/or Architect. Shop drawings submitted to the Engineer and/or Architect shall bear the Contractor's stamp of approval evidencing that he has examined and checked each drawing and that he has found said drawings to be in accordance with the Contract requirements. Any drawings submitted without this stamp will not be considered by the Engineer and/or Architect and will be returned to the Contractor for re- submission.

If the shop drawings show departures from the Contract requirements, the Contractor shall make specific mention thereof in his letter of submittal and the following shall be submitted:

- (1) Each request shall include a complete description of the proposed substitute and the name of the material or equipment for which it is to be substituted.
- (2) Furnish drawings, cut, manufacturer's printed specifications, performance and test data and any other data or information necessary for a complete evaluation of both the item specified and the proposed substitute item.

Approval of the drawings shall constitute approval of the subject matter thereof only and not of any structure, material, equipment or apparatus shown or indicated.

Approval of the drawings shall be general and shall not relieve the Contractor of responsibility for the accuracy of such drawings, nor for the quantities of materials and equipment, nor for the proper fitting and construction of the work, nor for the furnishing of materials, tools, equipment, etc., required by this contract and not indicated on the drawings.

No work called for by Shop Drawings shall be done until the said drawings have been approved by the Engineer and/or Architect.



The Contractor shall revise and resubmit the shop drawings as required by the Engineer and/or Architect until approval thereof is obtained.

The City shall retain four (4) copies of all submittals unless the Engineers and/or Architect makes a specific request for additional copies.

<u>Items</u>	<u>Submittals</u>	<u>*Approval</u>
All trade	Fourteen (14) Days	Fourteen (14) Days

\*From date of receipt of submittal.

Delays on account of tardy or untimely submittals will not be considered as causes of extension of time of the Contract or increases to the Contract Sum.

### G-3.03 JOB SITE:

One (1) copy of all approved submittals SHALL BE available at the Contractor's Office at the job site.

## 2.3 SECTION 4 MATERIALS AND EQUIPMENT

### G-4.01 GENERAL REQUIREMENTS

In the first paragraph, second line, delete the word "specifications" and substitute the words "Contract Documents".

### G4.03 REFERENCE TO STANDARDS

The following paragraph shall be added in its entirety:

"Compliance with the Standard Building Code, latest edition, and all local electrical and plumbing codes shall be required. In the event of a conflict in code requirements, the most stringent code or standard shall apply."

### G-4.05 EQUIVALENT QUALITY

Add the following sentence to paragraph two: "Any professional fees associated with shop drawing review of materials or equipment submitted for approval as equivalent to that specified shall be borne by the Contractor.

## 2.4 SECTION 5 INSPECTION AND TESTING

### G-5.01 GENERAL AND G-5.02 COSTS

Testing of materials will not be performed by the City.

### G-5.07 FINAL FIELD TEST

A. Add the following sentence to BOTH of the above paragraphs:

The Contractor shall provide, at NO EXTRA COST to the City, ALL labor, tools, equipment, materials, etc., for the Engineer and/or Architect to make any field test that may be required in the judgment of the Engineer and/or Architect.

2.5 SECTION 6 TEMPORARY STRUCTURES

G-6.03 CONTRACTOR'S FIELD OFFICE

A. Delete this paragraph G-6.03 in its entirety.

2.6 SECTION 7 TEMPORARY SERVICES

G-7.01 WATER, G-7.02 LIGHT AND POWER, AND G-7.03 SANITARY REGULATIONS

The City of Tampa shall provide, at no cost to the Contractor, water, and electricity for installation of this project. All water and electricity shall be applied and/or connected by the Contractor.

G-7.07 TELEPHONE

The Contractor shall furnish the Engineer with a telephone number(s) by which the Engineer may contact the site.

2.7 SECTION 14 MISCELLANEOUS

G-14.04 USE OF EXPLOSIVES:

Explosives will not be used on the work except when authorized by the Engineer and/or Architect. The use of same, if authorized, shall conform to laws or ordinances which may pertain to the use of same and the utmost care will be exercised by the Contractor so as not to endanger life or property. The Contractor will assume full responsibility in connection with use of any explosives even though authorized. Explosives will not be stored within the City limits.

G-14.05 OWNERSHIP OF MATERIALS:

The removal of any underground and surface structures as required shall be performed in a careful manner to permit salvaging of as much material, such as pipe and brick, also broken section of sidewalk, as practical for use in repair and maintenance of City-owned facilities.

Such acceptable salvaged material remains the property of the City and shall be placed in stock piles so as not to interfere with new construction work but accessible for loading and hauling by the City or by the Contractor within the free haul limit of six (6) miles. The Engineer and/or Architect shall direct the Contractor as to the location of stockpile.

The paving material, such as vitrified brick, asphalt block and other paving materials removed from the excavated areas and suitable for reuse but not reused in the work, shall also be considered the property of the City. The handling of such materials shall be as set forth elsewhere in the Specifications or Special Provisions.

G-14.06 NOTICE OR SERVICE THEREOF:

All notices, which shall include demands, instructions, requests, approvals and claims, shall be in writing.

Any notice to or demand upon the Contractor shall be sufficiently given if delivered to the office of the Contractor specified in the bid (or to such other office as the Contractor may, from time to time, designate to the City in writing), or if deposited in the United States mail in a sealed, postage-prepaid envelope, or delivered, with charges case addressed to such office.

All notices required to be delivered to the City shall, unless otherwise specified in writing to the Contractor, be delivered to the Contract Administration Department – Construction Management Division, 3808 East 26<sup>th</sup> Avenue, Tampa, Florida 33605, and any notice to or demand upon the City shall be sufficiently given if delivered to the office of the said Engineer and/or Architect, or if deposited in the United States mail in a sealed, postage- prepaid envelope, or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to said Engineer and/or Architect or to such other representative of the City or to such other address as the City may subsequently specify in writing to the Contractor or to its representative at the construction site for such purposes.

Any such notice or demand shall be deemed to have been given or made as of the time of actual delivery or (in the case of mailing) when the same should have been received in due course of post or (in the case of telegram) at the time of actual receipt, as the case may be.

#### G-14.07 REQUIREMENTS FOR CONTROL OF THE WORK:

Prior to the start of the work included in this contract, a Preconstruction Conference will be held by the Engineer and/or Architect to be attended by the Contractor and representatives of the various utilities and others for the purpose of establishing a schedule of operations which will coordinate the work to be done under this contract with all related work to be done by others within the limits of the project. The Contractor shall be prepared for this meeting and shall present a comprehensive construction schedule for all items of work to be accomplished by him, which will be used as the basis for the development of an overall operational schedule and a list of subcontractors to be used on this work.

All items of work on this contract shall be coordinated so that progress on each related work item will be continuous from week to week. The progress of the work will be reviewed by the Engineer and/or Architect at the end of each week, and if the progress on any item of work during that week is found to be unsatisfactory, the Contractor shall be required to adjust the rate of progress on that item or other items as directed by the Engineer and/or Architect.

The Contractor shall conduct his operations in such a manner as will result in a minimum of inconvenience to occupants of adjacent homes and business establishments and shall provide temporary access as directed or as conditions in any particular location may require.

#### G-14.08 WORK DIRECTIVE CHANGE:

"A Work Directive Change is a written directive to the Contractor, issued on or after the date of the execution of the Agreement, and signed by the Engineer on behalf of the City, ordering an addition, deletion or revision in the work, or responding to an emergency. A Work Directive Change will not change the contract price or the time for completion, but is evidence that the parties expect that the change directed or documented by a Work Directive Change will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the contract price or the time for completion. "Without invalidating the Agreement, additions, deletions or revisions in the Work may, at any time or from time to time, be authorized by a Change Order or a Work Directive Change. Upon receipt of any such document, the Contractor shall promptly proceed with the work involved."

#### G-14.09 RESERVED PARKING SIGNS IN PARKING METER AREAS

The Contractor shall reimburse the Department of Logistics and Asset Management, Parking Division, located at 107 N. Franklin Street, Tampa, Florida 33602, for any and all metered parking spaces occupied or made unusable or unavailable as a result of, or because of, construction activity by the Contractor. Private automobiles may not be parked in any reserved space, unless clearly marked as associated with the project.

In order to receive temporary or permanent reserved signs in parking areas which are required by parking meters, there shall first be paid to the Parking Revenue Fund for the elimination of each such meter a charge based on the following schedules:

1. Meter Removal: The charge for removing a meter is ten (10) times the hourly meter fee, with a minimum charge of \$12.50. Such charge will be assessed for each day a meter is removed, excluding Saturdays, Sundays, and City holidays.
2. Reservation of Parking Metered Spaces During Hours of City Parking Division Operation: The charge for reservation of a metered space is ten (10) times the hourly meter fee. Such charge will be assessed for each day a meter is reserved. The minimum total charge per rental agreement is \$12.50.
3. Reservation of Parking Metered Spaces During Hours of City Parking Division Non- Operation: The charge for reservation of a metered space during hours of non-operation shall be \$2.00. Such charge will be assessed for each day a meter is reserved. The minimum charge per rental agreement is \$12.50.
4. Reservation of Parking Metered Spaces During Hours of City of Tampa Parking Division Operation and Non-Operation: Meter reservation periods, which include both operation and non-operational hours, shall be charged the operational rate.

In the event that an entire block or area of parking meters are reserved for a period of 90 days or longer, the Contractor may arrange a payment schedule with the Department of Logistics and Asset Management, Parking Division. Said payment schedule will be paid on a monthly basis after a deposit equivalent to the first and last month rental charges has been received by the Parking Division prior to commencement of construction.

Any meter or meters which may sustain damage due to construction activities in the immediate area must be removed. The meter removal/installation charge is \$7.50 per meter. Failure to have a meter(s) removed will result in the Contractor being held liable for damage occurring to said meter(s) and further, the Contractor will be required to reimburse the Department of Logistics and Asset Management, Parking Division for meter(s) repaired or replaced.

G-14.10 EROSION AND SEDIMENT CONTROL:

During construction, the Contractor shall provide adequate erosion and sediment controls to prevent adverse effects to the environment and public and private property. He shall construct and maintain control structures necessary to prevent erosion and sediment. He shall conduct and schedule construction operations to avoid, prevent, and minimize erosion and sediment. He shall comply with City, County, State, and Federal codes, laws, and regulations and the plans and specifications for this project pertaining to erosion and sediment prevention and control.

At the Preconstruction Conference, the Contractor shall present a plan for erosion and sediment prevention and control. This plan shall include the operations methods, also temporary and permanent control measures and structures to be used on this project.

G-14.11 ENGINEER'S FIELD OFFICE:

Not Applicable.

G-14.12 PROJECT SIGNS:

The Contractor shall furnish and install, as directed by the Engineer and/or Architect, a project sign of design, size, color, etc., as per drawing page SIGN-1 and SIGN-2.

G-15.0 NOTIFICATION TO CONTRACTORS:

All Contractors working in City of Tampa buildings and facilities that contain ACM will be provided with a written notice, including contract custodial firms. The notice when applicable will advise Contractors about the possibility of encountering ACM while working for the City and will require Contractors to become familiar with locations of ACM within their work areas. The Contractor Notice shall include the name and phone number of the designated Building Asbestos Contact Person assigned to that building/facility. This notice is provided in Appendix C.

Appendix C

Contractor Notification

Asbestos-Containing Material (ACM) may be present in the facility. The presence of ACM does not necessarily mean that a hazard exists; however, a hazard may be created when ACM is disturbed and asbestos fibers become airborne. The best way to maintain a safe environment is to avoid the disturbance of ACM.

It is possible that you may encounter ACM while working in the facility. On the bulletin board, there is a summary of known locations of ACM in that building. The summary may or may not be all inclusive. Therefore, workers must exercise caution and be watchful for materials that might contain asbestos. Avoid disturbing ACM or suspected ACM as you carry out your work.

If your work necessitates the disturbance of ACM you shall take whatever precautions that are necessary to protect human health and the environment from asbestos fibers. At minimum, you will comply with all Federal, State, and Local responsible for assuring that you are medically certified, trained, and equipped with the proper personal protective devices for safe handling of ACM. You must notify the designated Building Asbestos Contact Person before disturbing any asbestos-containing materials in City-Owned buildings. The designated Building Asbestos Contract Person is listed on the bulletin board with the asbestos location summary.

If you need additional information regarding ACM in a particular building or would like to see a copy of the Operations and Maintenance Plan, contact the Building Asbestos Contact Person responsible for the building for which you will be working.

Comply with all regulatory requirements for removal and disposal.

END OF SECTION SGP

## SPECIAL CONDITIONS

### 1.0 PRECONSTRUCTION BRIEFING:

The Contractor, upon receiving notice that he has been awarded the contract for the construction of the project, shall make an appointment with the Engineer and/or Architect for said briefing. The Contractor shall bring to this meeting the following:

1. Contract Documents not yet submitted.
2. A detailed Job Progress Schedule.
3. Samples, questions, etc., he feels necessary.
4. List of subcontractors.

Failure to bring the above items to the meeting will result in cancellation of meeting. Once items have been submitted, meeting will be rescheduled by the City. Site access and commencement of work will not be allowed during period between meetings.

Contractor shall have representatives present at meeting that are familiar with, and conversant on, the scope of the work and Contract Document requirements. Failure to have such persons present will also result in cancellation and rescheduling of meeting until such a time when condition is corrected.

Elapsed time as a result of the Contractor's failure to comply with above will not result in an extension of contract time.

### 2.0 SITE REVIEW:

Before submitting Proposals, Bidders shall carefully examine the entire site of the proposed work and adjacent premises and the various means of approach and access to the site, and make all necessary investigations to inform themselves thoroughly as to the facilities for delivering, placing and operating the necessary construction equipment, and for delivering and handling materials at the site, and inform themselves thoroughly as to all difficulties involved in the completion of all the work in accordance with the Contract Documents.

The Contractor shall immediately, upon entering project site for the purpose of beginning work, review project site with the Engineer and/or Architect for the purpose of selecting area(s) to place materials for storage.

The Contractor must exercise proper precaution to verify all figures shown or indicated on the drawings, all existing trees, paved areas; utilities, etc., shall be located before beginning any work, and he shall be held responsible for any error resulting from his failure to exercise such precaution.

### 2.1 LAYING OUT WORK:

The Contractor shall locate all general reference points and take necessary action to prevent their destruction; lay out his own work and be responsible for all lines, elevations, measurements, grading, trenching, backfilling, utilities and other work to be executed by him for a complete project under this contract.

The Contractor shall lay out all work and have final approval by the Engineer and/or Architect before installation begins. Contractor shall be held responsible for any error resulting from his failure to exercise such approval. Said errors shall be corrected by the Contractor at NO EXTRA COST to the City.

The Contractor shall coordinate with the Parks Department and shall identify each and every tree to remain prior to the start of work. The specific trees to remain shall be approved by the Parks Department.

The final location of all work to be performed shall be made jointly by the Engineer and/or Architect and the Contractor at the project site.

3.0 SAFETY AND HEALTH STANDARDS:

The performance of all construction under this contract shall conform to ALL Local, State, Federal Occupation Safety and Health Act Standards.

At the end of each work day, all work areas shall be left in a safe condition. Barricades and/or warning devices shall be provided for at any open excavations or barriers on the project site.

The Contractor's attention is directed to paragraphs Article 3.07 (page A-10) and Article 12.03 (page A-31) of the Agreement, and paragraph G-7.04 (page G-18) of the General Provisions.

4.0 INFORMATION FOR COLOR SCHEDULES:

Not later than thirty (30) calendar days after authorization to proceed with contract work, the Contractor shall submit to the Engineer and/or Architect the names of all manufacturers and trade names for all materials involving selection based upon color or texture or other design appearance features which are to be used in this project. Where samples are necessary for such selection, furnish same.

If such information is not furnished by Contractor within thirty (30) day period, the Engineer and/or Architect will select colors and textures from products named in the Contract Documents.

5.0 RESPONSIBILITY OF CONTRACTOR:

The Contractor shall take all necessary precautions to protect all project surfaces and adjoining areas from mechanical damage from tools, equipment, materials, supports, etc., and shall provide adequate protection from leaking lubricants or fluids from his equipment.

Damage to said project surfaces and adjoining areas caused by a lack of protection or negligence by the Contractor shall be repaired and/or replaced at NO EXTRA COST to the City and to the full satisfaction of the Engineer and/or Architect.

The Contractor and all subcontractors are charged with the protection of the work and property, but the final responsibility for these provisions rests with the Contractor who shall take complete charge of the project site from start to finish of work.

The Contractor shall take particular precautions to protect existing trees and plant material. All trees and other plant material to remain shall be marked by the City prior to start of work.

Excavation, earthwork or sitework within the drip line of existing trees shall be done either manually or by methods approved by the City of Tampa Parks Department.

If the Contractor damages any tree or plant material in any way he shall be required to replace the damaged tree or plant material as follows:

1. Trees
  - a. Replace a 6" caliper or less with a 6" caliper of the same species.
  - b. Replace a 7"-10" caliper with two (2) 6" caliper of the same species.
  - c. Replace a 10"-15" caliper with three 6" caliper of the same species.
  - d. Replace a 16"-20" caliper with five (5) 6" caliper of the same species.



e. Replace a 21"-36" caliper with ten (10) 6" caliper of the same species.

2. Plant Material

Replace any damaged plant material with an equal size and quantity of the same material.

The replaced trees and plant material shall be guaranteed by the Contractor for a period of six (6) months.

6.0 COORDINATION WITH N.I.C. ITEMS:

The Contractor shall give to the Engineer and/or Architect, in writing, a time schedule for the installation or removal of all N.I.C. items at the beginning of the project. Failure of the Contractor to supply the Engineer and/or Architect with said schedule shall not be used for reason of time extension by the Contractor.

7.0 ELECTRICAL SERVICE LOCATION:

The Contractor shall verify and coordinate the service location with the local power company and the Engineer and/or Architect.

The Contractor shall coordinate with the local power company and shall include in his bid all costs for electrical service to work area(s) under this Contract, including but not limited to new service, connections from existing and/or new service and all required labor, equipment, materials etc. and all other associated electrical work.

8.0 SCHEDULING:

The Contractor shall provide the City with a detailed schedule prior to start of work.

Contract activities shall not interfere with the daily operations and use of the facility, including but not limited to the parking garage and drives, walks, etc. Contractor shall provide barricades, etc., as needed to comply with this requirement. Schedules and other documents that the Contractor will be requested to bring to the Pre-Construction meeting shall clearly define their intent to comply with the above requirements.

The schedule shall be a fully developed, horizontal bar-chart type Contractor's construction schedule. Provide a separate time bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week. Use the same breakdown of units of the Work as indicated in the "Schedule of Values".

Unless otherwise directed or approved, prepare schedule on a single 8-1/2" X 14" sheet of plain bond white paper.

Secure time commitments for performing critical elements of the Work from parties involved. Coordinate each element on the schedule with other construction activities; include minor elements involved in the sequence of the Work. Show each activity in proper sequence. Indicate graphically the sequences necessary for completion of related portions of the Work.

Contractor shall also prepare schedule in accordance with applicable portions of Section 4.02 of the Agreement and Section 01040 – Project Coordination.

9.0 ASSIGNMENT OF CONTRACT: Not applicable.

10.0 WORKMANSHIP AND MATERIALS:

Workmanship and materials shall be installed in accordance with accepted standards of the specific trade, as defined by the applicable recognized trade association(s). In the event of a conflict between these trade standards and the Contract Documents, the conflict shall be brought to the Engineer's and/or Architect's attention writing and the final decision shall be made by the Engineer and/or Architect.

11.0 RECORD DRAWINGS:

During the course of the work, Contractor shall maintain, at the site, a clean undamaged set of the Contract Documents. Contractor shall mark set, on a daily basis, with location and progress of all contract work, including but not limited to:

1. Sewer, water, stormwater and irrigation fabrication drawings showing to scale all manholes, all distances and angles between manholes, line dimension, grid co-ordinates, trunk lines, inverts and cleanouts,
2. Fencing, roadway, parking and sleeving,
3. Electrical service, and
4. General building location.

Drawings shall be on site at all times and available for review by the City. Failure of Contractor to have drawings on site and/or up to date may result in suspension of work until situation is corrected. Extension of contract will not be granted for such condition.

At conclusion of work, the Contractor shall provide the City with one complete set of Electronic Record Drawings incorporating changes described above; also, four marked hard copy sets of as-built record drawings, clean and damage free shall be submitted to the City at the same time. Electronic files will be issued to the Contractor by the City of Tampa. These files will be AutoCAD DWG, AutoCAD DWF or Adobe PDF latest versions.

12.0 ON SITE RECYCLABLE CRITERIA:

Contractor shall make reasonable attempts to recycle and/or salvage at least 50% of non-hazardous construction and demolition debris. Contractor shall develop and implement a Construction Waste Management Plan that identifies the materials that are to be diverted from disposal by weight or volume and be directed to a recycling facility. Specific area(s) on the construction site shall be designated for collection and tracking of the designated materials as needed. Location of the recycling area on site shall be coordinated with the project owner's representative on site prior to construction start. The intent of this section is to encourage recycling where practical in the context of the scope of work.

Contractor shall submit the following but not limited to items related to this section:

1. Provide a submittal of the contractor's plan of action to recycle
2. Contractor is required to document all activities with above requirements and provide to the city upon request items that are recyclable, documentation of the quantity of material disposed at a recycling facility.

END OF SECTION SC



**Page 1 of 2 –DMI Payment**  
**City of Tampa – DMI Sub-(Contractors/Consultants/Suppliers) Payments**  
**(FORM MBD-30)**

[ ] Partial [ ] Final

Contract No.: \_\_\_\_\_ WO#, (if any): \_\_\_\_\_ Contract Name: \_\_\_\_\_

Contractor Name: \_\_\_\_\_ Address: \_\_\_\_\_

Federal ID: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_

GC Pay Period: \_\_\_\_\_ Payment Request/Invoice Number: \_\_\_\_\_ City Department: \_\_\_\_\_

Total Amount Requested for pay period: \$ \_\_\_\_\_ Total Contract Amount (including change orders): \$ \_\_\_\_\_

Type of Ownership - (F=Female M=Male), BF BM = African Am., HF HM = Hispanic Am., AF AM = Asian Am., NF NM = Native Am., CF CM = Caucasian S = SLBE

Type	Company Name Address Phone & Fax	Total Sub Contract Or PO Amount	Amount Paid To Date	Amount To Be Paid For This Period
Trade/Work Activity			Amount Pending Previously Reported	Sub Pay Period Ending Date
[ ] Sub [ ] Supplier				
Federal ID				
			\$	\$
			\$	\$
			\$	\$
			\$	\$
			\$	\$
			\$	\$

**(Modifying This Form or Failure to Complete and Sign May Result in Non-Compliance)**

Certification: I hereby certify that the above information is a true and accurate account of payments to sub – contractors/consultants on this contract.

Signed: \_\_\_\_\_ Name/Title: \_\_\_\_\_ Date: \_\_\_\_\_



**Page 2 of 2 – DMI Payment**  
**Instructions for completing The DMI Sub-(Contractors/Consultants/ Suppliers) Payment Form**  
**(Form MBD-30)**

This form must be submitted with all invoicing or payment requests where there has been subcontracting rendered for the pay period. If applicable, after payment has been made to the subcontractor, “Waiver and Release of Lien upon Progress Payment”, “Affidavit of Contractor in Connection with Final Payment”, or an affidavit of payment must be submitted with the amount paid for the pay period. The following will detail what data is required for this form. The instructions that follow correspond to the headings on the form required to be completed. **(Modifying or omitted information from this form my result in non-compliance).**

- **Contract No.** This is the number assigned by the City of Tampa for the bid or proposal.
- **W.O.#** If the report covers a work order number (W.O.#) for the contract, please indicate it in that space.
- **Contract Name.** This is the name of the contract assigned by the City of Tampa for the bid or proposal.
- **Contractor Name.** The name of your business.
- **Address.** The physical address of your business.
- **Federal ID.** A number assigned to a business for tax reporting purposes.
- **Phone.** Telephone number to contact business.
- **Fax.** Fax number for business.
- **Email.** Provide email address for electronic correspondence.
- **Pay Period.** Provide start and finish dates for pay period. (e.g. 05/01/13 – 05/31/13)
- **Payment Request/Invoice Number.** Provide sequence number for payment requests. (ex. Payment one, write 1 in space, payment three, write 3 in space provided.)
- **City Department.** The City of Tampa department to which the contract pertains.
- **Total Amount Requested for pay period.** Provide all dollars you are expecting to receive for the pay period.
- **Total Contract Amount (including change orders).** Provide expected total contract amount. This includes any change orders that may increase or decrease the original contract amount.
- **Signed/Name/Title/Date.** This is your certification that the information provided on the form is accurate.
- **See attached documents.** Check if you have provided any additional documentation relating to the payment data. Located at the bottom middle of the form.
- **Partial Payment.** Check if the payment period is a partial payment, not a final payment. Located at the top right of the form.
- **Final Payment.** Check if this period is the final payment period. Located at the top right of the form.

The following instructions are for information of any and all subcontractors used for the pay period.

- **(Type) of Ownership.** Indicate the Ethnicity and Gender of the owner of the subcontracting business or SLBE.
- **Trade/Work Activity.** Indicate the trade, service, or material provided by the subcontractor.
- **SubContractor/SubConsultant/Supplier.** Please indicate status of firm on this contract.
- **Federal ID.** A number assigned to a business for tax reporting purposes. This information is critical in proper identification of the subcontractor.
- **Company Name, Address, Phone & Fax.** Provide company information for verification of payments.
- **Total Subcontract Amount.** Provide total amount of subcontract for subcontractor including change orders.
- **Amount Paid To Date.** Indicate all dollars paid to date for the subcontractor.
- **Amount Pending, Previously Reported.** Indicate any amount previously reported that payments are pending.
- **Amount To Be Paid for this Period.** Provide dollar amount of dollars requested for the pay period.
- **Sub Pay Period Ending Date.** Provide date for which subcontractor invoiced performed work.

*Forms must be signed and dated or will be considered incomplete. The company authorized representative must sign and certify the information is true and accurate. Failure to sign this document or return the document unsigned can be cause for determining a company is in non-compliance of Ordinance 2008-89.*

If any additional information is required or you have any questions, you may call the Minority Business Development Office at (813) 274-5522.

0 1 2 3 4 5 6 7 8

**Sign Information**

**Building a Better Tampa**

**Downtown Riverwalk**

Creates a waterfront pedestrian walkway connecting the south edge of the CapTrust building with MacDill Park.

\$1.5 Million investment  
Scheduled for completion in October, 2012

**Orion Marine Construction, Inc.**

**Improvement Project**



Mayor Bob Buckhorn

Project Contact:  
Jim Hudock, P.E.  
Contract Administration  
City of Tampa  
jim.hudock@tampagov.net



For information call:  
(813) 635-3400

**Building a Better Tampa**

**Downtown Riverwalk**

*Creates a waterfront pedestrian walkway connecting the south edge of the CapTrust building with MacDill Park.*

\$1.5 Million investment  
Scheduled for completion in October 2012

Orion Marine Construction, Inc.

**Colors**

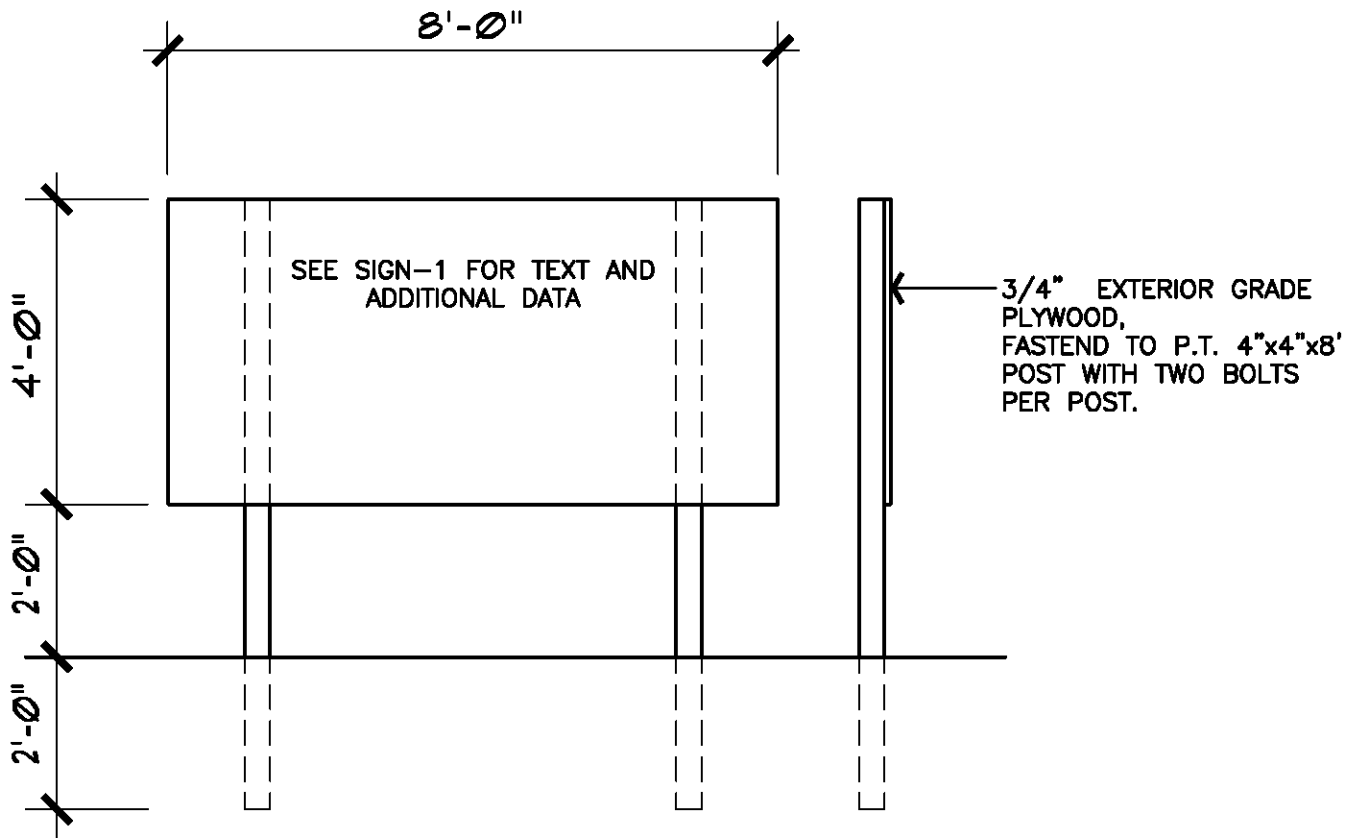
Blue: Sherwin Williams Naval SW6244  
Green: Sherwin Williams Center Stage SW6920  
White: Sherwin Williams Pure White SW7005

**Font**

Franklin Gothic

**SIGN EXAMPLE ONLY GRAPHIC TO BE DEVELOPED BY CONTRACTOR**

scale: 3"  3"



SECTION 01010 - SUMMARY OF WORK

1.0 GENERAL:

The work shall consist of furnishing all materials, labor, equipment, tools, and all items and services required for the complete construction in conformity with Contract Documents of:

Ft. Brooke Parking Garage Elevator Improvements  
at  
107 North Franklin Street  
for the  
City of Tampa

All construction work and materials, in addition to complying with requirements of Contract Documents, shall fully comply with all requirements of local building codes, all ordinances, and regulations of other Federal, State and public authorities having jurisdiction over this type of work in the given area.

2.0 SCOPE:

The work shall include but not be limited to, replacement of portions of eight (8) elevators (4 in each north and south core), including traction machines, operation systems (installation of Owner purchased controllers and selectors), car finishes, ceilings and lighting, handrails, car and hoistway doors, signal equipment, wiring and cables, related electrical, etc.; also, related fire alarm system, including control unit (installation of Owner purchased unit) and printer, annunciator, signal initiation and notification devices, manual devices, wiring, etc., with all associated work required for a complete project, as shown and indicated on the Drawings and in the Specifications.

3.0 LEGAL DESCRIPTION OF PROJECT SITE:

Legal description as shown on the drawings, Sheet No. A-1.

4.0 VERIFICATION OF OWNER'S SURVEY DATA:

Prior to commencing any work, the Contractor shall satisfy himself as to accuracy of all survey data which shall affect his work as indicated in these plans and specifications and/or provided by the City.

Should the Contractor discover any inaccuracies or errors which will affect his work, he shall notify the Engineer and/or Architect in order that proper adjustments can be ordered.

The exact location of the building and related items shall be determined on site jointly by the Contractor and the Engineer and/or Architect. NO work shall commence until said final approval of the locations is made by the Engineer and/or Architect.

5.0 CONTRACT DOCUMENTS:

- a. BIDDING REQUIREMENTS
- b. CONTRACT FORMS
- c. GENERAL PROVISIONS, SUPPLEMENTARY GENERAL PROVISIONS, AND SPECIAL CONDITIONS

6.0 SPECIFICATIONS: (DATED: March 2015)

Divisions: 1, 2, 9, 14, and 16.

7.0 DRAWINGS: (DATED: March 2015)

Sheets:

Cover Sheet, A-1, A-2, A-2.1, A-2.2, A-3, E-1 thru E-12.

8.0 ADDENDA AND LETTERS OF CLARIFICATION:

All addenda and letters of clarification issued prior to bid opening time date.

END OF SECTION 01010



SECTION 01017 - ALTERNATES

1.0 GENERAL:

All applicable provisions of the General and Supplementary General Provisions, Special Conditions and other Division 1 Specification Sections, are a part of this section.

This section consists of including all labor tools, equipment, materials, appliances, etc., in connection with the following Alternates.

A separate bid amount shall be submitted for each Alternate in the space provided on the Proposal Form.

2.0 SELECTION OF ALTERNATES:

The City reserves the right to accept or reject any or all alternates.

3.0 ALTERNATES:

3.1 ALTERNATE NO. 1 (ADDITIVE):

To provide replacement of four (4) south core elevators, including traction machines, operation systems, car finishes, ceilings and lighting, rails, car and hoistway doors, signal equipment, wiring and cables, and electrical modifications, with all associated work required for a complete project.

3.2 ALTERNATE NO. 2 (ADDITIVE):

To provide additional scope of work for four (4) items related to the fire alarm system as described in the boxed note on the plans (Sheet No. E-9), with all associated work required for a complete project.

END OF SECTION 01017

SECTION 01020 - ALLOWANCES

PART 1 - GENERAL

RELATED DOCUMENTS

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

SUMMARY

This Section includes administrative and procedural requirements governing allowances.

Types of allowances include the following:

Contingency allowances.

SELECTION AND PURCHASE

SUBMITTALS

Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

Submit invoices or delivery slips to show the actual quantities of materials delivered to the site for use in fulfillment of each allowance.

CONTINGENCY ALLOWANCES

Use the contingency allowance only as directed by the Owner.

The Contractor's related costs for services, products and equipment ordered by the Owner under the contingency allowance include delivery, installation, taxes, insurance, equipment rental, and similar costs.

Work Directive Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit margins.

At Project closeout, credit unused amounts remaining in the contingency allowance to the Owner by Change Order.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

EXAMINATION

Examine products covered by an allowance promptly upon delivery for damage or defects.

PREPARATION

Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

SCHEDULE OF ALLOWANCES

Allowance No. 1: Include a contingency allowance of \$40,000 for use according to the Owner's instructions. **THE ALLOWANCE SHALL BE INCLUDED IN THE BASE BID.**

END OF SECTION 01020

## SECTION 01040 - PROJECT COORDINATION

### PART 1 - GENERAL

#### RELATED DOCUMENTS

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

#### SUMMARY

This Section specifies administrative and supervisory requirements necessary for Project coordination including, but not necessarily limited to:

- Coordination.
- Administrative and supervisory personnel.
- General installation provisions.
- Cleaning and protection.

#### COORDINATION

Coordination: Coordinate construction activities included under various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections of the Specifications that are dependent upon each other for proper installation, connection, and operation.

Where installation of one part of the Work is dependent on installation of other components, either before or after its own installation, schedule construction activities in the sequence required to obtain the best results.

Where availability of space is limited, coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.

Make adequate provisions to accommodate items scheduled for later installation.

Where necessary, prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.

Prepare similar memoranda for the Owner and separate Contractors where coordination of their Work is required.

Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

- Preparation of schedules.
- Installation and removal of temporary facilities.
- Delivery and processing of submittals.
- Progress meetings.
- Project Close-out activities.

Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

Salvage materials and equipment involved in performance of, but not actually incorporated in, the Work. Refer to other sections for disposition of salvaged materials that are designated as Owner's property.

## SUBMITTALS

Coordination Drawings: Prepare and submit coordination Drawings where close and careful coordination is required for installation of products and materials fabricated off-site by separate entities, and where limited space availability necessitates maximum utilization of space for efficient installation of different components.

Show the interrelationship of components shown on separate Shop Drawings.

Indicate required installation sequences.

Refer to Division-15 Section "Basic Mechanical Requirements" and Division-16 Section "Basic Electrical Requirements" for specific coordination Drawing requirements for mechanical and electrical installations.

Staff Names: At the Preconstruction Conference, submit a list of the Contractor's principal staff assignments, including the Superintendent and other personnel in attendance at the site; identify individuals, their duties and responsibilities; list their addresses and telephone numbers.

Post copies of the list in the Project meeting room, the temporary field office, and each temporary telephone, or as directed by the City.

## PART 2 - PRODUCTS (Not Applicable).

## PART 3 - EXECUTION

### GENERAL INSTALLATION PROVISIONS

Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

Manufacturer's Instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.

Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.

Provide attachment and connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.

Visual Effects: Provide uniform joint widths in exposed Work. Arrange joints in exposed Work to obtain the best visual effect. Refer questionable choices to the Architect for final decision.

Recheck measurements and dimensions, before starting each installation.

Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.

Coordinate temporary enclosures with required inspections and tests, to minimize the necessity of uncovering completed construction for that purpose.

Mounting Heights: Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Architect for final decision.

## CLEANING AND PROTECTION

During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

Clean and maintain completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

Limiting Exposures: Supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:

- Excessive static or dynamic loading.
- Excessive internal or external pressures.
- Excessively high or low temperatures.
- Thermal shock.
- Excessively high or low humidity.
- Air contamination or pollution.
- Water or ice.
- Solvents.
- Chemicals.
- Light.
- Radiation.
- Puncture.
- Abrasion.
- Heavy traffic.
- Soiling, staining and corrosion.
- Bacteria.
- Rodent and insect infestation.
- Combustion.
- Electrical current.
- High speed operation,
- Improper lubrication,
- Unusual wear or other misuse.
- Contact between incompatible materials.
- Destructive testing.
- Misalignment.
- Excessive weathering.
- Unprotected storage.
- Improper shipping or handling.
- Theft.
- Vandalism.

## FACILITY OPERATIONS DURING CONSTRUCTION

The Contractor shall perform all work in recognition of, and coordination with, ongoing facility (garage) activities. Adhere to approved sequence/layout plan and project schedule. Please note the following:

**Regular work hours for the Project (including deliveries) shall be limited to the hours between 7:00 a.m. and 6:00 p.m., Monday through Friday**, in order to restrict project noise and disruption to daytime hours for the surrounding area. No work shall be performed at night and shall normally be discontinued on Saturdays, Sundays, and all State and City designated holidays. Contractor shall submit request to the City Representative in writing at least 2 working days in advance, for permission to work beyond regular work hours.

Workers shall confine access to work areas only, all personnel shall wear uniforms clearly identifying employer and possess valid picture identification. Personnel discovered in areas not directly related to the work or without proper identification are subject to removal from the project. **Parking garage elevators designated for public use will NOT be available.**

A temporary street closure permit will be required for closure of a street, lane, or sidewalk within Rights-of-Way under the jurisdiction of the City of Tampa, and will establish the requirements for the closure related to number of lanes and/or time of day lanes or street may be closed. The Contract shall adhere to the requirements as described in the permit(s). The fee for temporary street closure permits shall be waived. It is required that the construction and maintenance of the traffic conform to the Manual of Uniform Minimum Standards (Green Book), the Standard Index and Specifications 2010 Edition, The M.U.T.C.D., and all other current guidelines, rules and procedures, including any particular Supplemental Specifications.

Provide and install barricades, signage, etc. as needed to designate work areas, as well as protection for persons and existing materials to remain, in and adjacent to work areas. Maintain protections as needed throughout the course of the work. Provide signage as needed to direct the public to and from operable elevators.

Contractor shall perform work in a manner to minimize noise, vibration, dust and debris. Radios or similar devices shall not be played during work hours.

Contractor shall coordinate with the facility in advance of operations producing excessive noise and/or vibration and the use of non-designated areas to avoid disruption or interference with facility operations.

Deliveries or other use of non-designated areas around the perimeter of the facility shall be coordinated in advance with the City.

Use of the facility dumpster shall not be allowed. Trash and debris shall be removed from the site by the Contractor on a regular basis.

Following each and every work session, leave site in clean and orderly fashion with site protections in place.

Failure to adhere to approved sequencing/layout plan and/or failure to have supervisory personnel present and/or failure to maintain appropriate site conditions will be cause for work stoppage without additional Contract time.

Staging areas shall be as designated by the City, unless adjustments requested by the Contractor are pre-approved by the City. The Contractor shall provide temporary fencing to secure areas accessible to the public. City of Tampa inspector shall be issued a key to these areas for emergency purposes.

The Contractor shall not load or permit any part of structure to be loaded with weight that will endanger structural integrity or safety of facility. The Contractor shall limit axle loads to maximum 4000 lb. per axle and

gross weight of 8000 lb., or stockpiling of materials and equipment to 50 lbs. per sq. ft. The Contractor to note existing height restrictions within parking structure.

Access to work areas shall be as designated by the City, unless adjustments requested by the Contractor are pre-approved by the City. The Contractor shall provide appropriate temporary protection for existing materials to remain.

The Contractor shall have a supervisor on-site with Contract related personnel at all times. The Contractor's supervisor (or designated representative) shall meet with the City's Parking Garage Supervisor at the beginning of each work day to review the daily work schedule and its potential impact on garage activities.

The Contractor shall maintain work and adjacent areas in a clean and safe condition and provide appropriate protection to prevent damage to surfaces and finishes (remove at end of work – patch and repair damage to be equal to or better than pre-construction conditions as determined by the City). Maintain free and clear access in all means of egresses, including but not limited to walks, stairs, exit doors, etc.

END OF SECTION 01040



## SECTION 01045 - CUTTING AND PATCHING

### PART 1 - GENERAL

#### RELATED DOCUMENTS

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

#### SUMMARY

This Section specifies administrative and procedural requirements for cutting and patching.

Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

Demolition of selected portions for alterations is included in Section "Selective Demolition."

#### QUALITY ASSURANCE

Requirements for Structural Work: Do not cut and patch structural elements in a manner that would reduce their load-carrying capacity or load-deflection ratio.

Obtain approval of cutting and patching before cutting:

- Foundation construction.
- Bearing and retaining walls.
- Structural concrete.
- Structural steel.
- Lintels.
- Structural decking.
- Miscellaneous structural metals.
- Equipment supports.
- Piping, ductwork, vessels and equipment.

Operational and Safety Limitations: Do not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety.

Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces, in a manner that would, in the Architect's opinion, reduce the building's aesthetic qualities, or result in visual evidence of cutting and patching. Remove and replace Work cut and patched in a visually unsatisfactory manner.

### PART 2 - PRODUCTS

#### MATERIALS

Use materials that are identical to existing materials. If identical materials are not available or cannot be used where exposed surfaces are involved, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect. Use materials whose installed performance will equal or surpass that of existing materials.

## PART 3 - EXECUTION

### INSPECTION

Before cutting existing surfaces, examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. Take corrective action before proceeding, if unsafe or unsatisfactory conditions are encountered.

### PREPARATION

Temporary Support: Provide temporary support of Work to be cut.

Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.

Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

Take all precautions necessary to avoid cutting existing pipe, conduit or ductwork serving the building, but scheduled to be removed or relocated until provisions have been made to bypass them.

### PERFORMANCE

General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.

Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.

Cutting: Cut existing construction using methods least likely to damage elements to be retained or adjoining construction. Where possible review proposed procedures with the original installer; comply with the original installer's recommendations.

In general, where cutting is required use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots neatly to size required with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.

Cut through concrete and masonry using a cutting machine such as a carborundum saw or diamond core drill.

Comply with requirements of applicable Sections of Division-2 where cutting and patching requires excavating and backfilling.

By-pass utility services such as pipe or conduit, before cutting, where services are shown or required to be removed, relocated or abandoned. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.

Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.

Where feasible, inspect and test patched areas to demonstrate integrity of the installation.

Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

Where removal of walls or partitions extends one finished area into another, patch and repair floor and wall surfaces in the new space to provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary to achieve uniform color and appearance.

Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing the patch, after the patched area has received primer and second coat.

#### CLEANING

Thoroughly clean areas and spaces where cutting and patching is performed or used as access. Remove completely paint, mortar, oils, putty and items of similar nature. Thoroughly clean piping, conduit and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.

END OF SECTION 01045

SECTION 02070 – SELECTIVE DEMOLITION

PART 1 - GENERAL:

RELATED-DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary General Provisions, Special Conditions and Division-1 Specification sections, apply to work of this section.

DESCRIPTION-OF WORK:

Extent of selective demolition work is indicated on drawings.

Types-of Selective Demolition Work: Demolition requires the selective removal and subsequent offsite disposal of the following:

Portions of parking garage elevators and fire alarm system, including but not limited to as indicated on drawings and in the specifications, and as required to accommodate new construction.

Removal and protection of existing fixtures and equipment items indicated "salvage".

JOB CONDITIONS:

Occupancy: Owner will be continuously occupying areas of the building immediately adjacent to areas of selective demolition. Conduct selective demolition work in manner that will minimize need for disruption of Owner's normal operations. Provide minimum of 72 hours advance notice to Owner of demolition activities which will severely impact Owner's normal operations.

Condition of Structures: Owner assumes no responsibility for actual condition of items or structures to be demolished.

Conditions existing at time of commencement of contract will be maintained by Owner insofar as practicable. However, variations within structure may occur by Owner's removal and salvage operations prior to start of selective demolition work.

Partial Demolition and Removal: Items indicated to be removed but of salvable value to Contractor may be removed from structure as work progresses. Transport salvaged items from site as they are removed.

Storage or sale of removed items on site will not be permitted.

Protections: Provide temporary barricades and other forms of protection as required to protect Owner's personnel and general public from injury due to selective demolition work.

Provide protective measures as required to provide free and safe passage of Owner's personnel and general public to and from occupied portions of building, including but not limited to the exterior perimeter areas.

Protect from damage existing finish work that is to remain in place and becomes exposed during demolition operations.

Protect floors with suitable coverings when necessary.

Provide temporary weather protection during interval between demolition and removal of existing construction on exterior surfaces, and installation of new construction to insure that no water leakage or damage occurs to structure or interior areas of existing building.

Remove protections at completion of work.

Damages: Promptly repair damages caused to adjacent facilities by demolition work at no cost to Owner.

Traffic: Conduct selective demolition operations and debris removal in a manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.

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

Explosives: Use of explosives will not be permitted.

Utility Services: Maintain existing utilities indicated to remain, keep in service, and protect against damage during demolition operations.

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

Environmental Controls: Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in air to lowest practical level. Comply with governing regulations pertaining to environmental protection.

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

PART 2 - PRODUCTS (Not Applicable).

PART 3 - EXECUTION

INSPECTION:

Prior to commencement of selective demolition work, inspect areas in which work will be performed. Photograph existing conditions to structure surfaces, equipment or to surrounding properties which could be misconstrued as damage resulting from selective demolition work; file with Owner's Representative prior to starting work.

PREPARATION:

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

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

DEMOLITION:

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

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

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

SALVAGE MATERIALS:

Salvage Items: Where indicated on Drawings as "Salvage-Deliver to Owner", carefully remove indicated items, clean, store and turn over to Owner and obtain receipt.

Historic artifacts, including cornerstones and their contents, commemorative plaques and tablets, antiques, and other articles of historic significance remain the property of the Owner. Notify Owner's Representative if such items are encountered and obtain acceptance regarding method of removal and salvage for Owner.

DISPOSAL OF DEMOLISHED MATERIALS:

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

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

Burning of removed materials is not permitted on project site.

CLEAN-UP AND REPAIR:

Upon completion of demolition work, remove tools, equipment and demolished materials from site. Remove protections and leave interior areas broom clean.

Repair demolition performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of selective demolition work. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

END OF SECTION 02070

## **SECTION 09251**

## **GYPSUM DRYWALL CONSTRUCTION**

### PART 1: GENERAL

1.0 RELATED DOCUMENTS: Drawings and General Provisions of the Contract, including General and Supplementary General Provisions, Special Conditions and Division 1 sections, apply to the work of this section.

1.1 DESCRIPTION: The work of this section consists of furnishing and installing gypsum wallboard to replace or repair demolished.

1.2 SUBMITTALS: Submit certification from manufacturer attesting that all gypsum drywall material used is asbestos free.

1.3 PROJECT CONDITIONS:

- A. Minimum temperature in space shall be 55 degrees F. Preferable minimum is 70 degrees F. Provide ventilation and heat as required to remove excess moisture.

Surfaces to which gypsum board is to be applied shall be straight, even, smooth, all in the same plane, thoroughly clean and dry, and free from all defects that might affect proper application. Report unsatisfactory surfaces to the Owner's representative or correct defective surfaces.

1.4 QUALITY ASSURANCE:

- A. A copy of Gypsum Association's Recommended Specifications GA-216-85, shall be available for reference on the job site.
- B. All material used under this section shall be asbestos free.
- C. The products named in this section are made by the U.S. Gypsum Company (USG). Equivalent products of other manufacturers may be substituted if approved as equal by the Owner's Representative.
- D. For all conditions not covered by this section, follow the recommendations in U.S. Gypsum Company's technical literature.

1.5 PRODUCT HANDLING: Stockpile gypsum board flat on raised supports in piles. Leave in original wrappings or containers until ready for actual use. Protect gypsum board from wetting.

### PART 2: PRODUCTS

2.1 GYPSUM WALLBOARD: Where thickness is not specified, use 5/8-inch-thick material. Exposed finish material shall have long edges tapered and the taper shall culminate in a rounded profile characteristic of USG Smooth Wall system.

- A. Regular Board: ANS I/ASTM C36-80.

## 2.2 FASTENERS:

- A. Screws: USG Hi-Lo, bugle head, Type S. Size as recommended by USG.

## 2.3 JOINT TREATMENT MATERIALS:

- A. Tape: USG Perf-a-Tape Reinforcement.
- B. Joint Compound: USG Durabond 90.
- C. Tape Bedding Compound: USG Durabond Joint Compound Taping.
- D. Topping Compound: USG Crater Free Ready to Use Joint Compound All Purpose.

2.4 METAL ACCESSORIES: USG Dura-Bead for all exterior corners and USG No. 200 and No. 701 Series for metal trim. Accessories shall be hot dipped galvanized steel.

## PART 3: EXECUTION

3.1 GENERAL INSTALLATION: Apply gypsum boards to walls.

### 3.2 INSTALLATION:

- A. Install in maximum practical lengths.
- B. Install fasteners no closer than 3/8 inch to end or edge.
- C. Screws: Follow Gypsum Association's recommendations for fastener spacing.

3.3 METAL ACCESSORIES: Install in maximum practicable lengths.

- A. Corner Bead: Reinforce all vertical and horizontal exterior corners.
- B. Metal Trim: Apply over gypsum panels where partitions or ceiling terminate against dissimilar materials.

### 3.4 JOINT TREATMENT:

- A. Embedding Tape: Center tape reinforcement and press it down into fresh tape bedding compound. Immediately after embedding apply a skim coat of compound.
- B. Spotting Fastener Heads: Apply coat of tape bedding compound or joint



compound over all fastener heads.

- C. Second Coat Application: After embedding and covering coat has hardened, apply second coat, using topping compound, feathered approximately 2 inches beyond edges of first coat. Spot fastener heads with similar coat. Allow to dry.
- D. Third Coat Application: After second coat is dry, sand lightly. Apply a thin finishing coat, using topping compound, feathered approximately 2 inches beyond edges of first coat. Spot fastener heads with a similar coat. Allow to dry.
- E. Apply joint treatment to butt and end joints, feathering approximately 18 inches.
- F. Finishing Inside Corners: Fold tape along center crease. Butter both sides of corner with joint compound and apply tape. Apply second and third coats.

### 3.5 FINISHING BEADS AND TRIMS:

- A. Apply joint compound to all bead and trim and properly feather out from high point to plane of surface. Allow to harden.
- B. Apply second coat in same manner as first coat, extending topping compound slightly beyond onto face of panel.
- C. Apply finish coat to all bead and trim, extending topping compound slightly beyond the second coat and properly feathering from high point to plane of surface. Sand finish coat as necessary when dry to provide a flat, smooth surface ready for decoration.

- 3.6 PATCHING: Correct all surface damage and defects, leaving work smooth, uniform, without observable blemishes which will show through the surface finish, and ready for painting.

END OF SECTION 09251

## **SECTION 09900**

## **PAINTING**

### **PART 1: GENERAL**

#### **1.1 RELATED DOCUMENTS:**

- A. Drawings and General Provisions of the Contract, including General and Supplementary General Provisions, Special Conditions and Division 1 sections, apply to the work of this section.

#### **1.2 SCOPE**

- A. Furnish all labor, materials, scaffolding, tools and equipment necessary to complete painting, sealing and filling requirements of the project as indicated on the drawings and described in these specifications.
- B. Interior Items (not limited to:)
  - 1. Remarks and notes on Architectural drawings for general areas requiring painting.
  - 2. Drywalls walls, bulkheads, and ceilings.
  - 3. Access doors and panels, electrical panels, miscellaneous trim and surfaces not pre-furnished or excluded specifically.
  - 4. Mechanical grilles, registers, diffusers, electrical panels, etc., furnished in prime coats. Paint to match adjacent surfaces.

#### **1.3 LIST OF PROPOSED MATERIALS**

- A. No claim by the Contractor as to the unsuitability or unavailability of any materials specified, or his unwillingness to use same, or his inability to produce first class work with same, will be entertained.

#### **1.4 RELATED WORK**

- A. The following items of related work are specified and included in other sections of these specifications:
  - 1. Section 09251 - Gypsum Drywall
- B. Painting is not required on prefinished items, finished metal surfaces, concealed surfaces, operating parts, and labels. Items not included in this specification are:
  - 1. Fixture items, except as noted on drawings.
  - 2. Anodized aluminum surfaces.

## **1.5 SUBMITTALS**

- A. Samples: Prepare duplicate 12" x 12" samples for each color selection for each type of paint per schedules for this section. One approved sample of each color shall be kept at the job office.
- B. Manufacturer's Literature: Submit for approval manufacturer's complete descriptive data on all materials to be used.

## **1.6 DELIVERY AND STORAGE**

- A. Deliver in manufacturer's original unopened containers, labeled with product description and instructions.
- B. Store flammable materials in tightly closed containers set in well ventilated spaces.

## **1.7 PROTECTION OF OTHER WORK**

- A. The Painting Contractor shall furnish and lay drop cloths in all areas where painting is being done to protect floors and other work from damage. He shall be responsible for any damage to other work and shall replace any materials which have been damaged to such an extent that they cannot be restored to their original condition. All damage must be repaired to the satisfaction of the Architect.

## **1.8 JOB CONDITIONS**

- A. Apply exterior paint only when temperature exceeds 50 degrees F. and drying conditions are good and predicted to remain so for at least 24 hours.
- B. Apply interior paint only when inside temperature exceeds 60 degrees F. and will be maintained above the point until paint has dried.
- C. Ventilate interior during application and drying.
- D. Before painting is started in any area, the area shall be broom cleaned and excessive dust shall be removed from all areas to be painted. All painting operations begin in a given area, clean only with commercial vacuum cleaning equipment.
- E. Adequate illumination shall be provided in all areas where painting operations are in progress.

## **1.9 INSPECTION OF SURFACES**

- A. Before starting any work, surfaces to receive paint finish shall be examined carefully for defects which cannot be corrected by the procedures specified herein under "Preparation of Surfaces" and which might prevent satisfactory painting results. Work shall not proceed until such damages are corrected.
- B. The commencing of work in a specific area only shall be construed as acceptance of the surfaces, and thereafter this Contractor shall be fully responsible for satisfactory work as required herein.

## **1.10 COOPERATION WITH OTHER TRADES**

- A. This work shall be scheduled and coordinated with other trades and shall not proceed until other work and/or job conditions are as required to achieve satisfactory results.
- B. The Contractor shall examine the specifications for the various other trades and shall thoroughly familiarize himself with all their provisions regarding painting. All surfaces that are left unfinished by the requirements of other sections except "Items not Included" in this Section, shall be painted or finished as part of the work covered by this Section.

## **PART 2: PRODUCTS**

### **2.1 PAINT SCHEDULE**

- A. Materials shall be manufacturer's best grade of respective types. Indicated along side of a few manufacturers are some examples of "Best Grade" . Grade level shall be applicable to all types of paints specified hereinafter.
- B. Interior Paint Systems:
  - 1. Interior Gypsum Wallboard:
    - 1 coat Latex Wall Primer
    - 1 coat Latex Semi-Gloss Enamel
  - 2. Interior Concrete a Masonry Units:
    - 1 coat Surface Filler
    - 1 coat Latex Emulsion
    - 1 coat Latex Semi-Gloss Enamel (Apply filler coat at a rate to ensure complete coverage with pores filled.
  - 3. Interior Metal:
    - 2 coats Alkyd Satin

4. Interior Wood (painted):
  - 1 coat Enamel Undercoat
  - 2 coats Alkyd Semi-Satin Enamel
5. Cast- In- Place Concrete:
  - 1 coat of Latex Masonry Block Filler
  - 2 tinted coats of Acrylic Latex Semi-Gloss Enamel
6. Ferrous Metals:
  - Touch up Prime Coat
  - 2 tinted coats of Alkyd Enamel Semi- Gloss
7. Concrete Floor:
  - 1 Coat Concrete Conditioners
  - 2 Coats Polyurethane Coatings

#### C. Exterior Paint Systems

1. Galvanized Metals:
  - Touch up Prime Coat
  - 2 tinted coats Exterior Alkyd Enamel High-Gloss Enamel
2. Ferrous Metals:
  - Touch up Prime Coat
  - 2 tinted coats Exterior Alkyd Enamel High-Gloss Enamel
3. Aluminum:
  - 1 Coat Zinc Chromatic Primes
  - 2 Coats High Gloss Alkyd Enamel
4. Concrete, Stucco and Masonry
  - 1 Coat Acrylic Emulsion
  - 1 Coat Acrylic Emulsion (not less than 2.5 mils dry film thickness)

#### D. Acceptable Manufacturers are:

1. Benjamin Moore, 51 Chestnut Ridge Road, Montvale, NJ 07645
2. Devoe and Reynolds, 4000 Dupont Circle, Louisville, KY
3. Porter Paints
4. Glidden, 925 Euclid Avenue, Cleveland, OH 44115
5. Pittsburg Paints, One PPG Place, Pittsburg, PA 15272
6. Pratt & Lambert, P.O. Box 1505, Buffalo, NY 14240

7. Sherwin-Williams, Cleveland, OH 44101

E. Gloss levels for paints required are as follows (ref. National Paint & Coating Association - NPCA):

<u>Sheen Level</u>	<u>Test Method</u>	<u>Gloss Range</u>
Flat	85 degree meter	Below 15
Eggshell	60 degree meter	5 to 20
Satin	60 degree meter	15 to 35
Semi-Gloss	60 degree meter	30 to 65
Gloss	60 degree meter	Over 65

F. Mixing or tinting shall be done at factory.

## 2.2 APPLICATION EQUIPMENT

A. Provide all required ladders, scaffolding, drop cloths, maskings, scrapes, tools, sandpaper, dusters, cleaning solvents, and waste as required to perform the work and achieve the results specified herein.

## PART 3: EXECUTION

### 3.1 METHODS:

- A. It is the intent that the above brand names and types of materials will give complete coverage with uniform appearance. If any additional coat is necessary for complete coverage and appearance, it shall be done at no additional cost to the Owner.
- B. All paints, new stock, delivered to job unopened. Prepare surfaces properly for receiving paint, protect adjacent surfaces not to be painted.
- C. Use of brushes, rollers or sprays is permissible, where applicable, upon approval by Architect.
- D. Surfaces clean, dry, and in proper condition for painting. All work carefully done by skilled mechanics. Finished surfaces uniform in coverage, gloss, finish and color, and free from brush marks. All coats shall be thoroughly dry before applying succeeding coats.

**END OF SECTION 09900**

## **SECTION 14210 - ELECTRIC TRACTION ELEVATORS**

### **PART 1 GENERAL**

#### **1.0 RELATED DOCUMENTS:**

Drawings and General Provisions of the Contract, including General and Supplementary General Provisions, Special Conditions and Division 1 sections, apply to the work of this section.

#### **1.1 SCOPE OF WORK**

This project covers the furnishing and installing of labor and materials to modernize eight existing traction elevators in two four-car group operations, located at Ft. Brooke Parking Garage, 107 N. Franklin Street, Tampa Florida.

- A. Work to be coordinated so that each elevator remains out-of-service for building patron for the minimum possible time. Two elevators in each group to be completed and approved for public use prior to removing an additional elevators from service.
- B. Remove all existing equipment listed to be replaced for each elevator.
- C. Removal includes but not limited to, traction machines (for cars 1,2,5,6 only), governors (for cars 1,2,5,6 only), controllers, fixtures, wiring, door operators, hatch and car door equipment, car operating panels, car and counterweight buffers(for cars 1,2,5,6 only) and hatch switches.
- D. Owner to provide Controllers, Tractions Motors, Leveling System, Contractor to install. Obtain owner provided materials from City/Storage Facility, 1550 N. Grady Avenue, Tampa, Florida, 33607, and load, deliver to the site, unload, etc.
- E. Provide: guide rollers assemblies, governors, controllers, fixtures, wiring, door operators, hatch and car door equipment, position indicators, inspection stations, car operating panels, car and counterweight buffers, hatch switches, labor to install/adjust traction machine drive motors, labor to install/adjust controllers, labor to install/adjust leveling system (including selector tape), and all other components required to produce complete elevator systems.
- F. Cab controls, audible signals, lights, Braille signage, and communication equipment shall be installed in accordance with the Uniform Florida Accessibility Code.
- G. The required permits shall be obtained from the State of Florida Bureau of Elevator Safety. Contractor is responsible for coordinating with licensed inspectors for the alteration inspections when work is complete prior to releasing equipment for Owners use.
- H. The contractor shall supply and install a complete elevator system, fully functional and operational and suitable in every way for the service required and intended use.
- I. Perform demolition in such a manner as to eliminate hazards to persons or property, provide safeguards including un-perforated barricades, warning signs and other items needed to protect personnel throughout this contract. Three elevators in each group shall be operational for use by the public at all times, except for a prescheduled time for final cross-wiring.

## 1.2 RELATED WORK

- A. A licensed Fire Alarm Company shall install the required fire alarm initiating devices in the lobbies, machine room and/or hoistway as mandated by code. The elevator contractor is responsible for coordinating with the Fire Alarm Contractor for any work they are required to perform in elevator spaces.
- B. A licensed Electrical Contractor shall provide any necessary upgrades to or relocation of electrical disconnecting means or electrical service wiring. The elevator contractor is responsible for coordinating with the electrical contractor for any work required in elevator spaces.

## 1.3 QUALITY ASSURANCE

### A. Manufacturer qualifications

- 1. Electric elevator shall be pre-engineered system provided by a company that is currently and regularly engaged in manufacturing elevator systems.
- 2. The manufacturer must be a firm whose name is listed as an approved manufacturer.
- 3. Approval will not be given to any elevator contractor or manufacturer who has established on prior projects either government, municipal or commercial, a record of unsatisfactory elevator installations or has repeatedly failed to complete contracts awarded to him within the contract time or has no requisite record of satisfactorily performing elevator installations of similar type and magnitude. Elevator Company shall provide a minimum of four references, include contact person and telephone numbers.
- 4. Only new components shall be utilized on this project during the modernization. No rebuilt, reconditioned or used equipment is allowed other than existing components that are not specified for replacement. Rebuilt or repaired components may be used for repair during the 12 month maintenance period after acceptance inspection of the modernization work.

### B. Installer qualifications

- 1. The elevator manufacturer or a certified installer approved by elevator manufacturer with no less than ten (10) years of satisfactory experience installing and servicing elevator equipment equal to the material, design and extent to that indicated for this Project and with a record of successful in-service performance.
- 2. All installation mechanics for this project must have a current certificate of competency card issued by the State of Florida. (A minimum of one mechanic and one helper must be on site at any time work is in progress)
- 3. Only service mechanics having a current certificate of competency card issued by the State of Florida shall be permitted to service this project.

### C. Regulatory Requirements

- 1. In addition to local governing regulations, comply with applicable provisions in ASME A17.1b, "Safety Code for Elevators and Escalators", the 2009 edition or the latest



- edition adopted by the State of Florida at the time of permit application.
2. Florida Uniform Building Code, 2010 edition
  3. NFPA 70, National Electric Code, 2011 edition
  4. NFPA 72, National Fire Alarm Code, 2011 edition
  5. ASME A17.5 Code for Electrical Equipment
  6. Florida Statute Chapter 399
  7. Florida Administrative Code Chapter 61-C5
  8. Accessibility Requirements: comply with Section 4.10 in the "Americans with Disabilities Act (ADA), Accessibility Guidelines (ADAAG)."

#### 1.4 SUBMITTALS

- A. Product Data. Provide three bound copies of descriptive data, technical literature, performance charts, catalogue cuts, brochures; show capacities, performance operations and features.
- B. Samples of exposed finishes of signal equipment; 3-inch- (75-mm-) square samples of sheet materials for owner's approval.
- C. Manufacturers Certificates (provide three copies): Signed by elevator contractor certifying that hoistway, pit, and machine room layout and dimensions, and electrical service, including emergency generator requirements (if applicable), are adequate for elevator equipment being provided.
- D. Maintenance Manuals: Include three bound copies of operation and maintenance instructions, parts listing with sources indicated, recommended parts inventory listing, complete wiring diagrams and control diagrams, and emergency instructions. Include diagnostic, routine maintenance procedures and repair information available to manufacturer's and installer's maintenance personnel. Supply one set reproducible wiring diagrams and one set of wiring diagrams laminated in clear plastic and bound in a folder.

#### 1.5 FIELD MEASUREMENTS

The contractor shall become familiar with all details of the work, verify all dimensions in the field and advise the Project Manager of any discrepancy before performing any work.

#### 1.6 WARRANTY

- A. Warranty: Submit a written warranty, signed by manufacturer agreeing to repair, restore or replace defective elevator work within specified warranty period at no cost to owner; this includes labor and parts or material.
  1. Warranty Period: 12 months from Final Acceptance as determined by satisfaction of the terms and conditions of this specification **and** releasing the equipment for the Owner's use.
  2. Contractor will warranty parts manufactured by others that are incorporated into this project.

#### 1.7 MAINTENANCE SERVICES

- A. Initial Maintenance Service: Beginning at Final Completion, provide 12 months' full maintenance

service by certified, fully trained employees of the elevator installer. Include monthly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper elevator operation at rated speed and capacity. Provide parts and supplies as used in the manufacture and installation of original equipment.

1. Perform maintenance, including emergency callback service, during normal working hours.
2. Interim maintenance is to be provided on the group system from the date the first unit is removed from service for modernization work until the date of final acceptance of the of the completed group.
3. Emergency callback service after normal working hours will be performed at no additional cost to the owner:
  - a. Response Time: 60 minutes or less from the time the call is placed until the service technician arrives at the building.
4. Certify that all parts used in connection with maintenance and callback service are new parts from the original equipment manufacturer, or rebuilt/remanufactured parts by approved repair facilities.
5. Elevator installer shall certify that it has a service office with a staff of full-time, certified employees within 30 miles of the project site.
6. Elevator Contractor shall perform all of the annual tests required by ASME A17.1b, 2009 as well as elevator equipment performance tests again prior to the end of the 12 months warranty and service period. These tests shall be performed in the presence of representatives of the Owner and/or the Owner's agent including a QEI certified elevator inspector. Any corrective action required to correct deficiencies or make adjustments will be at the expense of the Elevator Contractor.
7. Elevator contractor shall provide a minimum of (1) one examination per elevator per month, with a minimum total of (1.5) one and one-half hours maintenance time per elevator per month.
8. During the initial twelve month period, the elevator contractor shall offer the owner a standard maintenance contract with the same number and frequency of examinations as required during the initial period. This maintenance contract shall contain provisions to ensure that this equipment remains in first class condition.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

Available Manufacturers: Subject to compliance with requirements, manufacturers offering electric traction elevator components that may be incorporated into the Work include but are not limited to, the following:

1. Kone Elevator.
2. Oracle Elevator Co.
3. Otis Elevator Co.
4. Schindler Elevator Corp.

5. Thyssen Elevator Group North America
6. Motion Control Engineering **only** (controller and floor selector equipment - City wide standardization to Motion Control Engineering (MCE).
7. Holliser Whitney - Traction Elevator Machines
8. Imperial – Traction Elevator Machines
9. Elevator Safety Company (ELSCO) – (roller guides)
10. G.A.L. Manufacturing Corp. (door equipment)
11. Magnetek (motor drive systems for elevator machine motors)
12. Janus Elevator Products, Tri-Tronics Company, T.L. Jones (electronic door detectors only)
13. General Electric, Lincoln Electric, Imperial Electric, Reuland (hoisting machine motors only)
14. Elevator Products Corp., Innovation industries and PTL. (signal fixtures only)
15. Rust-o-leum, Sherwin-Williams, Martin Semour (paint and coatings)

## 2.2 MATERIALS AND COMPONENTS

General: Provide manufacturer's standard elevator systems. Where components are not otherwise indicated, provide standard components, published by manufacturer as included in standard pre-engineered elevator components and as required for a complete system. Items listed singular shall be considered as plural when multiple elevators are specified.

1. Constituent parts, which are alike, shall be the product of a single manufacturer.
  2. Manufacturers of equipment assemblies, which include components made by others, shall assume complete responsibility for the final assembled unit.
- A. CONTROLLER - See Section 2.3 “OPERATING SYSTEMS”
- B. TRACTION MACHINE
- Traction machines to be retained for Elevators #3,4,7,8.** New alternating current traction machine drive motors, shall be provided by The City of Tampa, **but installed (including any necessary crane services) and adjusted by the elevator contractor.** The traction machine drive motors shall include the installation of an auxiliary brake meeting the code requirements for ascending car overspeed and unintended movement protection. **Traction machines to be replaced for Elevators #1,2,5,6.** Provide new Hollister Whitney geared traction machines for Elevators #1,2,5,6. The machines shall be properly sized for the application and coordinated to ensure the motor size and voltage is correct. All removed traction machine drive equipment will be disposed of by the elevator contractor.
- C. Suspension Ropes
- Ropes are to be retained on Elevators #3,4,7,8. Ropes are to be replaced on Elevators #1,2,5,6 by the elevator contractor with new wire rope designed for elevator service matching the original specifications. Attachment shall be with new wedge-type shackles meeting and installed per A17.1.
- D. RAILS – Retain Existing - Rails to be cleaned and file smooth any damaged guide surfaces.
- E. CAR SLING- Retain Existing.
- F. CAB – See Section 2.5 “PASSENGER ELEVATOR ENCLOSURE”
- G. FIXTURES – See Section 2.4 “SIGNAL EQUIPMENT”
- H. CAR ROLLER GUIDES – Replace existing guides with new roller guide assemblies by Hollister-

Whitney, ELSCO, ELPRO or as approved by Elevator Consultant.

- I. CAR SAFTIES - Existing safety assemblies to be cleaned, inspected and properly adjusted for correct operation and clearances.
- J. PLATFORM - reuse existing.
- K. BUFFERS - Retain existing car and counterweight buffers for Elevators #3,4,7,8. Replace the existing car and counterweight buffers for Elevators #1,2,5,6 with new buffers properly sized for the application. The buffers pit channels and all pit equipment shall be cleaned and painted with high-grade industrial enamel.
- L. OVER-SPEED GOVERNOR – For Elevators #3,4,7,8 retain the governor, governor rope and tailsheave. For Elevators #1,2,5,6 governor and governor rope to be replaced with new governor, governor rope, and tailsheave designed for the capacity and speed of each elevator.
- M. CAR TOP OPERATING STATION

The elevator shall be equipped with a new car top operating station located on the front side of the cross-head, in a location that does not require elevator maintenance personnel to step onto the top of the elevator in order to operate the inspection switch. The car top station shall include the following:

- 1. UP/DOWN buttons, with safety button, all properly marked
  - 2. Run/Stop toggle or push-pull type switch
  - 3. Automatic/Inspection switch.
  - 4. Work light, with non-conducting guard. Include light switch.
  - 5. Grounded GFCI type duplex 115 volts AC power receptacle for tools, etc.
  - 6. Replace counterweight guides with new roller guide assemblies by Hollister-Whitney, ELPRO ELSCO, or as approved by Elevator Consultant.
- N. COUNTERWEIGHTS – Retain Existing, re-balance as necessary.
  - O. PIT SWITCH – Replace with code compliant assembly of manufacturer’s standard offering.
  - P. PIT LADDER –Retain Existing
  - Q. ENTRANCES – See Section 2.6 “PASSENGER ELEVATOR HOISTWAY ENTRANCES”

## 2.3 OPERATION SYSTEMS

- A. Elevator Controllers:
  - 1. The new controllers from Motion Control Engineering shall be supplied by the City of Tampa, but installed and adjusted by the elevator contractor. Removed controllers shall be disposed of by the elevator contractor.
  - 2. The new controller shall be digital drive. Propriety based systems will not be acceptable. The software for programming shall be non-proprietary. All software must be stored on an EPROM; battery backup must not be required. If a tool is required to adjust, program, or maintain the system, one such tool shall be provided to, and will become the property of, the building owner. Tools that require periodic reprogramming are not acceptable.

The Elevator Consultant will make any necessary determinations on whether equipment is to be considered "proprietary".

3. The elevator controller shall utilize a microprocessor based logic system and shall comply with ASME 17.1b, Safety Code for Elevators, 2009 Edition. The system shall provide comprehensive means to access the computer memory for elevator diagnostic purposes, and shall have permanent indicators to indicate important elevator statuses as an integral part of the controller.
4. Dedicated permanent status indicators shall be provided on the controller to indicate when the safety string is open, when the door locks are open, when the elevator out of service timer has elapsed, and when the elevator has failed to successfully complete its intended movement. In addition, provide means of displaying the other special or error conditions that are detected by the microprocessor.
5. An out of service timer (TOS) shall be provided which will automatically take a car, and all equipment for that car, out of service if the car is delayed in the building, the car shall not respond to hall calls while in this mode of operation. The TOS is designed to prevent equipment damage and passenger delay.
6. Door protection timer shall be provided for both the open and close directions which will protect the door motor and which will help prevent the car from getting stuck at a landing. The door open protection timer shall cease attempting to open the door after a predetermined time in the event that the doors are prevented from reaching the open position. The door close protection timer shall reopen the doors for a short time in the event that the doors closing attempt fails to make up the door locks after a predetermined time.
8. A minimum of three different door standing open times shall be provided. A car call time value shall predominate when a car call is canceled. A hall call time value shall predominate whenever a hall call is canceled. In the event of a door reopen from the proximity edge, door open button, etc., a separate short door time value shall predominate.
9. A buzzer shall sound while nudging operation is occurring.
10. Fireman's Phase I emergency recall operation, alternate level phase I emergency recall operation, and phase II emergency in-car operation, and flashing light feature for machine room smoke detector shall be provided according to ASME A17.1 and NFPA-72, National Fire Alarm Code.
11. Independent service operation shall be provided such that actuation of a key switch in the car operating panel will cancel any existing car calls, and hold the doors open at the landing. The car will then respond only to car calls and will ignore hall calls. Car and hoistway doors will only close by constant pressure on car call buttons or a door close button until the car starts to move. While on independent service, hall arrival lanterns or jamba mounted arrival lanterns and gongs shall be inoperative.
12. If only hall calls set for the opposite direction of travel of the elevator exist ahead of the car, the car shall proceed to the most distant car call, reverse direction, and start collecting the calls.
13. The car shall be equipped with two-way leveling to automatically bring the car within

plus or minus 1/4 inch of floor level at any landing regardless of load.

14. A test switch shall be provided. In the "test" position, this switch shall allow independent operation of the elevator without door open functioning for purposes of adjustment or testing the elevator. The elevator shall not respond to hall calls and shall not interfere with the other car.
  15. A timer shall be provided to limit the amount of time a car is held at a floor due to defective hall call or car call including stuck push buttons. Call demand another floor shall cause the car to eventually ignore the defective call and continue to provide service in the building.
  16. The control equipment shall have all control parameters stored permanently on erasable programmable read only memories (EPROM).
  17. The new VVVF power control shall be a closed feedback loop design. It shall be a compact, self-contained unit that will provide smooth step-less acceleration and deceleration and provide regulation at all speeds. The controller shall provide the required electrical operation of the elevator control system, including the automatic application of the brake, which shall bring the car to rest upon failure of power. In addition, the power control shall be arranged to continuously monitor actual elevator speed signal from the tachometer and to compare it with the hoist motor armature voltage, current, and intended speed signal, to verify proper and safe operation of the elevator.
  18. During operation of the elevator with over hauling load (empty car up or loaded car down), precision speed control shall be obtained by the regulation system utilized in the power control. The power control shall have the capability to drive the generator field, positive or negative, to a degree required to maintain regulation under varying loads. The automatic leveling zone shall not extend more than 12" above or below the landing level nor shall the doors begin to open until the car is within 12" of the landing. In addition, the inner leveling zone shall extend no more than 3" above or below the landing. The car shall not move if it stops outside the inner leveling zone unless the doors are fully closed.
  19. Group operation shall be provided for each four-car bank of traction cars. This group configuration will include a computer for each controller and shall assign cars on a real time basis using estimated time of arrival (ETA). Should one computer lose power or become inoperative in any way, the other computers shall be capable of accepting and answering all hall calls. When all computers are in operation, only one shall assume the role of dispatching the hall calls to all elevators.
- B. Landing System: A new Leveling system including selector tape shall be supplied by The City of Tampa and installed by the elevator contractor. It shall utilize a device to establish incremental car position to an accuracy of .1875" or better using a signal for the entire length of hoistway. Absolute floor number encoding with parity shall be provided at each floor in order to establish exact floor position to the computer. The system shall not require movement to a terminal landing for the purpose of finding the correct car position. The system shall utilize an automatic 2-way leveling device to control leveling of the car within 1/4" above or below landing sill. Over travel, under travel or rope stretch shall be compensated and car brought level to landing sill. Individual car controller shall be capable of learning the position of each floor in building to an accuracy of +/- .1875". **Stainless steel selector tape** shall be utilized where required.

- C. Limit Switches - New mechanical terminal limit switches and final terminal limit switches shall be supplied and installed.

## 2.4 SIGNAL EQUIPMENT

### A. Hall-Call Stations

1. Hall-Call operating devices shall consist of new fixtures at each landing. There shall be "UP" push-buttons at bottom landing, "DOWN" push-buttons at top landing and "UP" and "DOWN" push-buttons at all other landings. Push-buttons shall be manufacturer's standard design, with light to indicate when a call is registered. New hall position and directional signals may be incorporated into the new fixtures at each landing or provided separately.
2. A Fire service switch shall be provided, and located at the bottom landing in the hall station. The switch nomenclature shall be RESET, OFF and ON with the key removable only in the OFF or ON positions. Phase I operating instructions shall be permanently engraved into the hall station cover. The key switch used shall be compliant with the State of Florida Regional Fire Key requirements. New remote panels for each group shall be provided at the Fire Control Station and shall include communications means required.
3. Provide an illuminated emergency power indicator in the designated floor call station.

### B. Car Station

The car operating panels shall be replaced with new panels incorporating the car controls. They shall be provided with the necessary .030" markings for the handicapped, with floor numbers engraved into the car panel and backfilled with enamel. Braille plates mounted from the back of the panel and flush with the panel surface would be acceptable, surface mounted plates are not acceptable. Panels shall include a series of push-buttons numbered to correspond to the floor served and various additional switches, buttons and light jewels. All push buttons shall be 3/4" diameter minimum. Operating buttons shall be manufacturer's standard design. Fireman's service controls and instructions shall be provided under a locked cover to meet new code requirements. The state serial number along with all required markings on the new car operating panels (manufacture, capacity, "No Smoking", etc) shall be permanently engraved and back-filled with enamel. The key switch used shall be compliant with the State of Florida Regional Fire Key requirements. Fire Operation instructions shall be within the Fire Control Panel. Provide color coded numbers to match colors assigned to each landing. Car operating panel shall consist of the following operating devices:

1. "DOOR OPEN" button
2. Means of two-way communication
3. Keyed in-car stop switch
4. Emergency alarm bell button
5. Illuminated call buttons
6. Emergency light (may be mounted in ceiling above car station)
7. Position indicator
8. Fire Control indicator light
9. Fire Operation panel as outlined in ASME A17.1 rule 2.27.3.3.7 containing:
  - a. Key-operated fire service switch, indicator light, and buzzer
  - b. Call cancel button
  - c. Stop switch

- d. "DOOR OPEN" button
- e. "DOOR CLOSE" button

10. A lockable service panel containing:

- a. Key-operated light switch
- b. Key-operated fan switch
- c. Key-operated independent service switch
- d. Key-operated hoistway access enable switch

C. Emergency Phone

1. A two-way communications system shall be provided meeting the requirements for passenger elevators. It shall be a "hands-free" system incorporated into the car station, with visible signals to indicate that the prerecorded message has been received.
2. An additional device shall be provided at the fire control station to communicate in to each car in accordance with A17.1, Rule 2.27.1.1.4.
3. The emergency phone shall include a means for verification of telephone line operability in accordance with ASME A17.1 rule 2.27.1.1.6. Required signals and instructions shall be incorporated into or adjacent to the designated floor call station and shall be permanently engraved and back filled with enamel.

D. Car Position Indicator

1. Indicator numerals and directional arrows for passenger elevators shall be minimum 1 1/2" high mounted in the swing car station panel. As car travels through the hoistway the car position shall be indicated by illumination of a number corresponding to landing at which car is stopped or passing. A position indicator of the digital-readout or dot-matrix type shall be provided in car station. Numbers corresponding to car position shall remain indicated when motor drive is shut down.
2. A voice enunciator shall be provided to announce the floor and direction of travel coincident with the directional lantern illumination indicator. The audible signal shall be no less than 20 decibels with a frequency no higher than 1500 Hz. Directional arrows shall be a minimum of 1/2" high. Landing direction arrows, etc. shall protrude so as to be viewable from side.

E. Hall Position Indicator

A new digital read-out position indicator for each elevator shall be in the lobby hall where currently provided. As the elevator travels in hoistway, elevator position shall be indicated by illumination in alpha-numeric characters corresponding to the landing where elevator is stopped or passing. Numbers corresponding to position of car shall remain indicated when the drive is shut down.

**F. All fixtures within the elevator cabs and in the hall lobbies to be supplied in stainless steel #4 finish.**

- G. The elevator contractor shall provide the owner three sets of keys for each keyed switch utilized in the car operation station.



## 2.5 PASSENGER ELEVATOR ENCLOSURE

- A. Cab - Provide all labor and materials necessary to upgrade car interior finishes. The work will include but not be limited to new car finishes (vandal, scratch resistant), drop ceiling with solid type translucent panels, handrails on the rear walls and new CVT car flooring. Any raised panels shall be permanently attached with fasteners to the car walls in such a manner to provide permanent mounting.

New energy efficient LED lighting fixtures and drop ceilings will be of manufacturers standard offering with solid type translucent panels. Care shall used when attaching the new ceiling frame to the car enclosure to avoid electrical boxes and cartop fixtures.

New handrails shall be supplied and installed on the rear walls only. The handrails shall be stainless steel with a #4 brushed finish. Handrails shall be installed in accordance with Chapter 399.035 Florida Statutes.

**The elevator contractor is also required to rebalance the counterweights to compensate for any finish cab weight change as a result of the cab renovations.**

- B. Car Doors – The car doors shall be replaced on Elevators #1,2,5,6 with new doors with #4 stainless steel finish.
- C. Car door operator - Provide and install new door operators of closed loop operation, and all related equipment including car header, door hangers, clutch, linkage, etc. If a programming tool is used or required for setup and adjustment of the door operator, one such tool capable of functioning on all units shall be delivered to, and shall become property of, the building owner.
- A door restrictor device conforming to A17.3 shall be supplied, installed, and properly adjusted.
- D. Door reopening device – Retain Existing or replace at the option of the successful proposer.

## 2.6 PASSENGER ELEVATOR HOISTWAY ENTRANCES

- A. Hoistway Doors – Replace the hoistway doors on Elevators #1,2,5,6 on floors 1-6. The new doors shall have a #4 stainless finish. All hoistway doors are to be painted on the hoistway side, and stenciled with the floor numbers at top and bottom in minimum 3” numerals.
- B. Hoistway Frames – Reuse existing. All doorframes will have all door bumpers replaced with bumpers mounted by an attaching means through the frame. The frames are to be drilled (if necessary) and the bumpers are to penetrate or have screws or other attaching means allowing replacement of the bumpers as required.
- C. Door hangers – Each door panel shall have new hanger roller assemblies with not less than 2 sheave-type hangers designed for proper door operation. Hanger assemblies shall have auxiliary retaining devices properly installed and adjusted. Doors shall be adjusted for proper door-to-frame, door-to-sill gap and gibb penetration into sill. New door gibbs and bottom door auxiliary retaining devices shall be installed. New door closures shall be provided and correctly adjusted.
- D. Hanger Tracks – New hoistway door tracks shall be provided and properly installed.

- E. Interlocks –Existing interlocks and linkages shall be replaced. Interlocks, linkages and pick-up roller assemblies shall be of a style to work correctly with the new door equipment. New interlocks shall be checked and properly adjusted.

## 2.7 ELEVATOR WIRING

- A. Hoistway Wiring

New wiring will be provided in the hoistway, adequately sized and constructed for the proper operation of the equipment. Multi-conductor type wiring for light and signal circuits shall be used in the elevator hoistway. All conductors will be copper and the minimum size of conductors, excluding those which form an integral part of control devices, shall be No. 14 for lighting circuits and No. 18 for operating, control and signal circuits.

- B. Traveling Cable

New traveling cables designed for elevator service shall be installed. The cables will be sufficiently flexible to readily adapt to all changes in the position of the elevator car and hang straight without twist. The open loop will show no tendency to twist upon itself. Traveling cables will have non-metallic fillers and will be suspended per NEC-70. The traveling cables will include shielded telecommunication cabling and will terminate in a terminal box located on the car. The terminal boxes will have approved terminal strips for connecting conductors and will be provided with approved strain devices required to connect the supporting strand and relieve the traveling cable conductors strain. The swing of the traveling cables will be checked when the elevator is running and any shields and pads necessary to prevent chafing will be installed. The traveling cables and the corresponding groups of conductors connecting these cables to the controller, signal, and car operating panels will each contain at least 10 percent spare conductors, but not less than two spare conductors of the same size and type. Terminal blocks will have indelible identification marking for each terminal connection. Flat travel cable may be used if tight clearances require.

- C. Grounding

Equipment grounding shall be provided. Ground all conductors, supports, controller enclosure, and other non-current conducting metal enclosures for electrical equipment, in accordance with NEC. The ground wires shall be copper, and sized as required by NEC.

## 2.8 PASSENGER ELEVATOR, SPEED CAPACITY AND LOAD

- A. Regulatory Requirements

Design and fabrication shall be in accordance with ASME A17.1. Each car shall have the capacity to lift a live load, exclusive of the car and cable at a speed as specified in the following schedule.

The approximate travel, terminal floors, number of stops and openings, and the car sizes shall be as shown in the schedule. The elevators shall serve the floors with stops and openings in accordance with the requirements indicated. Counterweights shall be adjusted to balance the load to the appropriate percentage as required by new drive system and altered cab weights.

- B. Elevator Schedule:

Quantity and Type      South Group- 4 Passenger Traction Elevators (#1,2,3,4)

Capacity	3000lb
Speed	350 fpm
Travel	1-10
Landings	1-10
Openings	All in line
Entrance Size	42" x 84"
Hall Entrances Type	Side Opening
Power Supply	480 VAC 3 Phase 60 Hertz (field verify)
Signals	Illuminated Car and Hall Call buttons Car Position Indicators Directional Lanterns Hall Position Indicators
Operation	4-car group operation
Additional Features	Fireman Service, Phase I & II NEII Handicap Requirements Ascending Car Over-Speed Protection Unintended Movement Protection Hoistway Access Independent Service Load Weighing
Quantity and Type	North Group- 4 Passenger Traction Elevators (#5,6,7,8)
Capacity	Capacity 3000lb
Speed	350 fpm
Travel	1-10
Landings	1-10
Openings	All in line
Entrance Size	42" x 84"
Hall Entrances Type	Side Opening
Power Supply	480 VAC 3 Phase 60 Hertz (field verify)
Signals	Illuminated Car and Hall Call buttons Car Position Indicators Directional Lanterns Hall Position Indicators
Operation	4-car group operation
Additional Features	Fireman Service, Phase I & II NEII Handicap Requirements Ascending Car Over-Speed Protection Unintended Movement Protection Hoistway Access Independent Service Load Weighing

C. The contractor shall maintain Passenger Elevator equipment operating performance as follows. These performance criteria can be achieved by much of the equipment provided by the elevator industry. These criteria are guidelines and are to be improved where possible. When these performance guidelines cannot be met, the Contractor is to provide written explanation to the Project Manager.

1. Floor-to-Floor Times -- start to stop one floor run: a.  
 Speeds 200 - 350 f.p.m.; 6.0 seconds max.

Variations of up to 1 second in either direction will be allowed to maintain passenger-riding comfort. Floor to floor times are based on typical floor heights of 12' 0". Maximum time the elevator requires to start moving, once the elevator interlock circuit has been established shall not exceed 0.2 second.

2. Door Operating Times	(Maximum)	(Minimum)
a. Door Open:		
b. Side Opening speed 42" wide	3.0 seconds	2.5 seconds
b. Door Close		
b. Side Opening speed 42" wide	4.2 seconds	3.8 seconds

Other factors may impact the door closing time such as distance from the call stations. The door closing times shall be compliant with all regulations including ADA.

- c. Long door and short door "hold open" times, shall be set initially at 6.0 and 3.0 seconds respectively.
- d. Door opening times to be measured 1" from fully closed to 1" from fully open, and closing times to be measured 1" from fully open to 1" from fully closed.

3. The door closing force shall be set for a maximum of 20 foot-pounds.

#### D. Designated Landing

For the purposes of firefighter's service and emergency operations, as required by Section 2.27, ASME A17.1, the designated landing or level shall be the first floor. The alternate landing or level shall be the second floor, unless otherwise dictated by local fire authorities.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

Examine elevator areas, with installer present, for compliance with requirements for installation tolerances and other conditions affecting performance. Examine hoistways, hoistway openings, pits and machine rooms as constructed; verify critical dimensions; and examine supporting structure and other conditions under which elevator work is to be installed. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 WORKMANSHIP

- A. General: The installation of materials and equipment shall be performed in a neat, workmanlike and timely manner by an adequate number of craftsmen knowledgeable of the requirements of the Contract Documents. They shall be skilled in the methods and craftsmanship needed to produce a quality level of workmanship. Personnel who install materials and equipment shall be qualified by training and experience to perform their assigned tasks.
- B. Acceptable Workmanship: Acceptable workmanship is characterized by first-quality appearance and function, conforming to applicable standards of building system construction, and exhibiting a high degree of quality and proficiency which is judged by the Project Manager as equivalent as or better than ordinarily produced by qualified industry tradesmen.

- C. Performance: Personnel shall not be used in the performance of the installation of material and equipment that, in the opinion of the Project Manager, are deemed to be careless or unqualified to perform the assigned tasks. Material and equipment installations not in compliance with the Contract Documents, or installed with substandard workmanship and not acceptable to the Project Manager, shall be removed and reinstalled by qualified craftsmen, at no change in the contract price.

### 3.3 PAINTING

1. All metal surfaces within the hoistway will, upon completion of installation and prior to final inspection, be thoroughly cleaned of rust, grease, oil and other debris and be painted with one coat of oil based paint. Any rusting steel within the hoistway shall be scaled, brushed or sanded to removed the rust, then primed with a white mastic, two part epoxy and finished with a urethane top coat. The governors, safeties and related equipment shall not be painted in such a way to interfere with their operation.
2. All new equipment shall be factory painted with manufacturer's standard finish and color. Any damage to this finish shall be touched up with matching paint or finish.
3. Machine room and pit floors to be cleaned and then painted with floor and deck enamel.
4. All painting to be done prior to inspection.

### 3.4 TESTING

Testing shall be in accordance with requirements of ASME A17.1 and ASME A17.2 and as specified herein. Contractor shall conduct a complete test of the system. The Project Manager and/or Owner Rep. shall be present at all testing. Contractor is to give Project Manger and owner/owner's rep 5 day notice of any test.

A. Testing Period

Each elevator shall be tested with the specified rated-load in car continuously for a period of 35 percent of the duty time. During the test run the car shall be stopped at all floors in both directions of travel for a standing period of 10 seconds per floor. A manual test of the final limits (UP and DOWN over-travel) shall also be performed. Equipment shall be checked for excess heat build-up in machines, motors, and drives.

B. Speed Load Testing

The actual speed of elevator car in both direction of travel shall be determined with the rated-load and with no-load in the elevator car. Actual measured speed of car with the rated-load in the UP direction shall be within 2 percent of rated speed. The maximum difference in actual measured speeds obtained under the various conditions outlined shall not exceed 5 percent of the total difference between the UP and DOWN speeds.

C. Car Leveling Testing

Elevator cars leveling devices shall be tested for accuracy of landing at all floors with no-load in car, with symmetrical load in car and with the rated-load in car in both directions of travel.

### 3.5 SUMMARY

- A. The work consists of modernizing two groups of four traction passenger elevators. This includes all work as may be required to comply fully with ANSI A17.1 and all other applicable codes for a

fully functional elevator system. The following list is for convenience and all renovations may not be listed.

1. Provide, install, replace, or refurbish the following:
  - a) Replace traction machines (#1,2,5,6)
  - b) Replace governor, rope and tail sheave assembly (#1,2,5,6)
  - c) Replace Suspension Ropes (#1,2,5,6)
  - d) Provide ascending car overspeed and unintended movement protection
  - e) Replace selector & leveling system
  - f) Replace controllers (Owner provided/Contractor installed)
  - g) Replace Traction Motors (Owner provided/Contractor installed)
  - h) Replace Leveling System/Selector Tape (Owner provided/Contractor installed)
  - i) Replace cartop Inspection station
  - j) Replace all hoistway wiring including travel cables
  - k) Replace limit switches
  - l) Replace door operators and equipment
  - m) Replace hatch door equipment including hanger assemblies
  - n) Replace fixtures (pushbuttons, PI's, etc)
  - o) Upgrade car interiors

END OF SECTION 14210

## **SECTION 16050 — BASIC ELECTRICAL REQUIREMENTS**

### **PART 1: GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary General Provisions and Special Conditions, and Division 1 Specification sections, apply to work of this section.

Bidders of work in Sections under Division 16 are expected to have read the above requirements and, upon subcontracting for work called for in such Sections, shall be responsible for compliance with such Sections.

#### **1.2 REQUIREMENTS OF REGULATORY AGENCIES**

- A. All work under Division 16 shall comply with requirements of National Electrical Code, Florida Building Code, Life Safety Code, and to other pertinent codes made a part of such code by reference.

#### **1.3 INTENT**

- A. It is the intention of these specifications and drawings to call for finished work, tested, and ready for operation. Wherever the word "provide" is used, it shall mean "furnish and install complete and ready for use."
- . Minor details not usually shown or specified, but necessary for the proper installation and operation, shall be included in the work, the same as if herein specified or shown.

#### **1.4 SURVEYS AND MEASUREMENTS**

- A. Base all measurements, both horizontal and vertical from established bench marks. All work shall agree with these established lines and levels. Verify all measurements at site and check the correctness of same as related to the work. All material take-offs for the site shall be field measured prior to bids.

#### **1.5 DRAWINGS**

- A. Drawings are diagrammatic and indicate the general arrangement of systems and work included in the contract. Drawings are not to be scaled.

#### **1.6 REFERENCES**

- A. ANSI/NFPA 70—National Electrical Code.
- B. Florida Building Code.
- C. NFPA 101 - Life Safety Code.
- D. Florida Fire Protection Code. **1.7**

## **SUBSTITUTIONS**

- A. The intention of the terms of these Contract Documents is for the Contractor to furnish and the Owner to receive the exact materials and equipment specified or approved by owner and engineer equals.

## **1.8 SUBMITTALS**

- A. Proposed Products List: Include Products specified in the following Sections, but not limited to:
  - 1. Section 16060 Grounding and Bonding
  - 2. Section 16070 Supporting Devices
  - 3. Section 16075 Electrical Identification
  - 4. Section 16100 Building Wire & Cable
  - 5. Section 16128 Boxes
  - 6. Section 16129 Conduit and Raceways.
  - 7. Section 16411 Disconnect Switches
  - 8. Section 16721 Fire Alarm System
- . It shall be understood that review of shop drawings by the Engineer does not supersede the requirement to provide a complete and functioning system in compliance with the Contract Documents.
- C. Test and Certifications:
  - 1. Provide insulation resistance at ground continuity tests for all feeders, branch circuits, or other equipment.
    - a. In no case shall the insulation resistance be less than 50,000 ohms at 600 volts.
  - 2. Written test results and certification shall be required for proper fire alarm operation from the installer of the fire alarm equipment.
  - 3. Optimum phase balance under full load conditions shall be obtained. Special care shall be taken to prevent reverse rotation of motors during these adjustments.

## **1.9 COOPERATION WITH OTHER TRADES**

- A. Give full cooperation to other trades and furnish in writing to the General Contractor, with copies to the Owner and Engineer, any information necessary to permit the work of all trades to be installed satisfactorily and with the least possible interference or delay.



## **1.10 PROTECTION**

- A. Protect all work and material provided under this Division from damage. All damaged equipment work or material provided under this Division shall be replaced with new. Rebuilds are not acceptable.

## **1.11 SCAFFOLDING, RIGGING, AND HOISTING**

- A. Provide all scaffolding, rigging, hoisting, and services necessary for erection and delivery into the premises of any equipment and apparatus furnished. Remove same from premises when no longer required.

## **1.12 REMOVAL OF RUBBISH**

- A. The Contractor shall at all time keep premises free from accumulations of waste materials or rubbish caused by his employees or work. At completion of work he shall remove all his tools, scaffolding, materials, and rubbish from the building and site. He shall leave the premises and his work in a clean, orderly, and acceptable condition.

## **1.13 SAFETY**

- A. This Contractor shall comply with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.333), Title 29—Labor, Chapter XIII, Bureau of Standards, Department of Labor, Part 1518—Safety and Health Regulations for Construction; and that his housekeeping and equipment be maintained in such a manner that they comply with the Florida Industrial Commission Safety Code and Regulations of the Federal Williams—Steiger Occupational Safety and Health Act of 1970 (OSHA), wherein it states that the Contractor shall not require any laborer or mechanic employed in the performance of the contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety.

## **1.14 SUPERVISION**

- A. This Contractor shall provide a competent, experienced, full time superintendent who is acceptable to the Engineer and Owner, and who is authorized to make decisions on behalf of the Contractor.

## **1.15 MATERIAL AND WORKMANSHIP**

- A. All materials and apparatus required for the work, except as specifically specified otherwise, shall be new, of first-class quality, and shall be furnished, delivered, erected, connected and finished in every detail, and shall be so selected and arranged as to fit properly into the building spaces. Where no specific kind or quality of material is given, a first-class standard article as approved by the Engineer shall be furnished. Refer to substitutions in this Section.
- . Unless otherwise specifically indicated on the plans or specifications, all equipment and materials shall be installed with the approval of the Owner and Engineer in accordance with the

recommendations of the manufacturer. This includes the performance of such tests as the manufacturer recommends.

### **1.16 FOUNDATIONS, SUPPORTS, PIERS, ATTACHMENTS**

- A. This Contractor shall furnish and install all necessary foundations, supports, pads, bases and piers required for all equipment furnished under this Division, and shall submit drawings to the Owner and Engineer for approval before purchase, fabrication, or construction of same.

### **1.17 PROJECT CONDITIONS**

- A.. The Contractor shall inform the Engineer of any work or materials which conflict with any of the applicable codes, standards, laws and regulations before submitting his bid.
- B. The scope of the work included under this Division of the Specifications shall include complete electrical systems as shown on the plans and as specified herein.

### **1.18 ELECTRICAL CONNECTIONS**

- A. Each Subcontractor under Division 16 shall provide and install all electrical work and connections except those specifically set forth below as being provided and installed by the Mechanical Subcontractor under Division 15.

### **1.19 CONDUITS**

- A. When conduit is required for low voltage wiring, the Electrical Subcontractor shall provide and install same under Division 16.

### **1.20 QUALITY ASSURANCE**

- A. Standards: Certain standard materials and installation requirements are described by reference to standard specifications. These standards include the following:
  - 1. ASA American Standards Association.
  - 2. ASTM American Society for Testing and Materials.
  - 3. ASME American Society of Mechanical Engineers - Code of Unfired Pressure Vessels.
  - 4. NFPA National Fire Protection Association.
  - 5. NEMA National Electrical Manufacturers Association.
  - 6. UL Underwriters Laboratories.
  - 7. ANSI American National Standards Institute.
  - 8. ASHRAE American Society of Heating, Refrigerating, and Air Conditioning Engineers.
  - 9. SMACNA Sheet Metal and Air Conditioning Contractors' National Association.

10. AMCA Air Moving and Conditioning Association.
11. ARI Air Conditioning and Refrigeration Institute.
12. AMA Acoustical Materials Association.
13. NEC National Electrical Code.
14. IEEE Institute of Electrical and Electronic Engineers.
15. EIA Electric Industries Associates.
16. IES Illuminating Engineering Society.

Codes and Rules:

1. All material furnished and all work installed shall comply with the following codes as they apply to this project:
  - NFPA 70, 72 and NFPA 101.
  - Florida Building Code/SREF, Current Edition.
  - Regulations of the Florida Industrial Commission Concerning Safety.
  - Applicable County, State and Local Building Codes.
  - Local and State Fire Marshal Rules and Regulations.
  - Chapter 4A-47, Florida Administrative Code—Uniform Fire Safety Standards for Elevators.
  - Occupational Safety and Health Agency Standards (OSHA).
  - Florida State Board of Health Rules and Regulations.

Applicable codes shall be those adopted by the authority having jurisdiction at the time project is bid.

## 1.21 ORGANIZATION OF THE WORK

- A. Each Subcontractor in Division 16 (i.e., this Contractor) shall put his work in place as fast as possible to meet all construction schedules, but only after coordinating his own work and the work priorities of other Subcontractors and the General Contractor.

## 1.22 CHASE, CUTTING AND PATCHING

- A. Provide and place required sleeves, forms and inserts before walls, ceilings, partitions, floors or roofs are built. The cost of cutting and patching of walls, partitions, ceilings, roofs and floors necessary for reception of this Contractor's work caused by his failure to provide or properly locate sleeves, forms and inserts, or caused by incorrect location of his Work, shall be borne by the offending Contractor.

### 1.23 LUBRICATION AND PACKING

- A. Equipment furnished under Sections in Division 16 shall be lubricated by the Contractor furnishing such equipment, using manufacturer's recommended lubricants, with correct type and quantity of lubricant before placing into service. Damage caused by not providing proper lubrication shall be repaired at this Contractor's expense.

### 1.24 QUIET OPERATION AND VIBRATION

- A. Scope:

All equipment provided under Sections in this Division 16 shall operate (under all conditions of load), free of noise levels higher than specified in the pertinent. Sound and vibration conditions considered objectionable by the Owner/Engineer shall be corrected by whatever additional work is required in an approved manner at no cost to the Owner.

### 1.25 INSTRUCTIONS

- A. After the systems are in operation, the Contractor furnishing the equipment will thoroughly instruct the designated Owner's personnel on operation and maintenance of electrical equipment and systems.
- B. This Contractor shall schedule, with the Onwer/Engineer/Building Inspector, a series of meetings which will be attended by several designated representatives.
- C. This Contractor shall be required to provide a minimum of twenty-four (24) hours total instruction to Maintenance Department personnel. Instructions shall include the following:

### 1.26 EXISTING FIRE ALARM AND ELECTRICAL SYSTEMS

- A. For purposes of this Contract the assumption during bidding is that any and all existing fire alarm and electrical systems are complete and operating properly.
- B. Before commencing any work on fire alarm, energy management, emergency lighting or electrical systems or any work which affects them, the specialty Contractor shall examine such system thoroughly. If this Contractor finds any portion of any system not functioning fully and properly, he shall notify the Project Engineer in writing exactly and precisely which item(s) are not working. (This paragraph does not require diagnosis as to why such item(s) are not working nor the repair of such.)
- C. Upon above notification to the Owner, the P/E shall verify whether such report is accurate.
- D. **However, upon commencing any work under this Contract on fire alarm or electrical systems under this Construction Contract, this Contractor has accepted the systems as complete and functioning properly.** From the time of commencing work on such systems, they become the responsibility of this Contractor to maintain and keep functional through the Date of

Final Substantial Completion. If, at the time of Final Substantial Completion, such a system or portion of such system is found not to be functioning properly, such item shall be listed on the "punch-list" and shall be corrected by this Contractor.

**END OF SECTION 16050**

## **SECTION 16060 — GROUNDING AND BONDING**

### **PART 1: GENERAL**

Related Documents: Drawings and general provisions of the Contract, including General and Supplementary General Provisions and Special Conditions, and Division 1 Specification sections, apply to work of this section .

#### **1.1 SECTION INCLUDES**

- A . Equipment Grounding Conductors.
- B . Power System Grounding/Bonding.
- C . Electrical Equipment and Raceway Grounding and Bonding.

#### **1.2 REGULATORY REQUIREMENTS**

- A . Conform to requirements of ANSI/NFPA 70 / NEC Article 250
- B . Furnish products listed and classified by Underwriters Laboratories, Inc. (UL) or NRTL, as suitable for purpose specified and shown.

#### **1.3 SYSTEM DESCRIPTION**

- A . The existing building system shall be re-certified after completion of work

#### **1.4 PERFORMANCE REQUIREMENTS**

- A . The grounding system installed on permanent building and structures shall provide a maximum of 5 ohms resistance to ground.

### **PART 2: PRODUCTS 2.1**

#### **MATERIAL**

- A . Copper: Size to meet NFPA-70 requirements.

### **PART 3: EXECUTION**

#### **3.1 EXAMINATION**

- A . Field verify existing conditions.

#### **3.2 INSTALLATION**

- A . Install products in accordance with manufacturer's instructions
- B . Provide bonding to meet Regulatory Requirements

- C . Bond together each metallic raceway, pipe, and other metal objects
- D . Provide equipment grounding conductors in all raceways including FAS or Power/Lighting/etc . per NEC . A minimum #12 be installed for fire alarm and power/lighting systems .
- E . The following systems and/or equipment shall be bonded in strict accordance with the NEC as minimum requirements:
  - 1 . Fire alarm systems .
  - 2 . Building power/lighting systems .
  - 3 . Raceway and conduit systems .
  - 4 . Non-current carrying metal parts of all motors, panels, and other electrically operated equipment .

### **3.3 FIELD QUALITY CONTROL**

- A . Inspect grounding and bonding system conductors and connections for tightness and proper installation.
- B . Prior to energizing, measure ground resistance from system neutral connection at service entrance to convenient ground reference point using suitable ground testing equipment. Resistance shall not exceed 5 ohms.
- C . Use suitable test instrument to measure resistance to ground of system. Perform testing in accordance with test instrument manufacturer's recommendations using the fall-of-potential method. Submit test results to Engineer for review and approval.

### **3.4 PROJECT RECORD DOCUMENTS**

- A . Accurately record actual locations of grounding electrodes
- B . Test Reports: Indicate overall resistance to ground and resistance of each electrode.

**END OF SECTION 16060**

## **SECTION 16070 — SUPPORTING DEVICES**

### **PART 1: GENERAL**

Related Documents: Drawings and general provisions of the Contract, including General and Supplementary General Provisions and Special Conditions, and Division 1 Specification sections, apply to work of this section .

#### **1.1 WORK INCLUDED**

- A . Conduit and Equipment Supports
- B . Fastening Hardware .
- C . Luminaire Supports .

#### **1.2 QUALITY ASSURANCE**

- A . Support systems shall be adequate for weight of equipment and conduit, including wiring, which they carry.

### **PART 2: PRODUCTS**

#### **2.1 MATERIAL**

- A . Support Channel: Galvanized or Painted Steel or Aluminum (Interior) Aluminum or Stainless Steel (Exterior).
- B . Hardware: All exterior hardware (nuts, bolts, screws, washers, etc .) shall be stainless steel.

### **PART 3: EXECUTION**

#### **3.1 INSTALLATION**

- A . Fasten hanger rods, conduit clamps, outlets, and junction boxes to building structure using expansion anchors, beam clamps, or spring steel clips. All supporting devices and hardware shall be UL listed for that purpose and per other sections of this specification. In no case will the support device be less than this specification or the manufacturer's requirements and standards for the equipment material to be supported.
- B . Use toggle bolts or hollow wall fasteners in hollow masonry, plaster, or gypsum board partitions and walls; expansion anchors or preset inserts in solid masonry walls; self-drilling anchors or expansion anchor on concrete surfaces; sheet metal screws in sheet metal studs; and wood screws in wood construction.



- C . All raceways shall be independently supported to building structure. Do not use boxes with attached conduit brackets as sole conduit support.
- D . Do not fasten supports to piping, ductwork, mechanical equipment, or conduit.
- E . Do not use powder-actuated anchors.
- F . Do not drill structural steel members. Limited to strapping conduit. All other holes shall have Structural Engineer's approval prior to cutting or drilling.
- G . Fabricate supports from structural steel or steel channel, rigidly welded or bolted to present a neat appearance. Use hexagon head bolts with spring lock washers under all nuts.

**END OF SECTION 16070**

## **SECTION 16075 — ELECTRICAL IDENTIFICATION**

### **PART 1: GENERAL**

Related Documents: Drawings and general provisions of the Contract, including General and Supplementary General Provisions and Special Conditions, and Division 1 Specification sections, apply to work of this section.

#### **1.1 WORK INCLUDED**

- A . Nameplates and Tape Labels.
- B . Wire and Cable Markers.
- C . Conduit System Junction Box and Pull Box Color Coding

#### **1.2 SUBMITTALS**

- A . Include schedule for nameplates and tape labels.

### **PART 2: PRODUCTS**

#### **2.1 MATERIALS**

- A . Phenolic Nameplates: Engraved, three-layer, laminated plastic with black letters on a white background. For emergency panels and equipment, engraved, three-layer, laminated plastic with white letters on a red background.
- B . Wire and Cable Markers: Cloth markers, split sleeve or tubing type

### **PART 3: EXECUTION**

#### **3.1 INSTALLATION**

- A . Degrease and clean surfaces to receive nameplates.
- B . Install nameplates parallel to equipment lines.
- C . Secure nameplates to equipment fronts using screws or rivets. Secure nameplate to inside face of recessed panelboard doors in finished locations.
- D . Embossed tape will not be permitted for any application
- E . Every circuit and circuit modification shall be legibly identified as to its clear, evident, and specific purpose or use, not limited to lights and receptacles. Switchboard/panelboard identification shall include sufficient detail to allow each circuit to be distinguished from all others. The identification shall be included in a

circuit directory that is located on the face or inside of the panel door in the case of a panelboard, and located at each switch on a switchboard. For any panelboard or switchboard, a laminated affixed label shall be provided with the following information:

Equipment I.D. #, voltage, phase, amperage, panelboard or switchboard from where served, circuit number, rating of circuit feeder (overcurrent device), and from where the overcurrent device is fed. Label shall be a single, one-piece application/unit.

F. Service disconnect identification shall be provided on the exterior of all covers of enclosures. A laminated affixed label shall be provided with the following information: what it serves, where served from (panel), service circuit number, and circuit rating.

G. Panel schedules shall be typewritten by F.I.S.H. room number. Changes and/or additions shall be updated per this standard.

H. Special application switches shall be provided with an laminated affixed labels

I. All affixed laminated labels to be pop-riveted to panel cover in a neat and workman-like manner. Wall mounted labels shall be mounted in a permanent manner not relying on adhesive.

J. All replaced/upgraded panelboards/panels/switchboards and load centers shall have schedules completely re-made or re-labeled appropriately identifying all existing and new loads.

### **3.2 WIRE IDENTIFICATION**

A. Provide wire markers on each conductor in panelboard gutters, pull boxes, outlet and junction boxes, and at load connection. Identify with branch circuit or feeder number for power and lighting circuits, and with control wire number as indicated on schematic and interconnection diagrams or equipment manufacturer's shop drawings for control wiring.

### **3.3 NAMEPLATE ENGRAVING SCHEDULE**

A. Provide nameplates of minimum letter height as scheduled below:

1. Panelboards, Switchboards, and Motor Control Centers: 1/4 inch; identify equipment designation. 1/8 inch; identify voltage rating and source.
2. Individual Circuit Breakers, Switches, and Motor Starters In Panelboards, Switchboards, and Motor Control Centers: 1/8 inch; identify circuit and load served, including location.
3. Individual Circuit Breakers, Enclosed Switches, and Motor Starters: 1/8

inch; identify load served.

### **3.4 CONDUIT SYSTEM, JUNCTION BOX, AND PULLBOX COLOR CODING SCHEDULE**

- A . Identify conduit system junction boxes and pull boxes, as scheduled below:
  - 1 . Emergency Distribution System: Orange. (Match existing if different)
  - 2 . 208 Volt, Single and Three Phase System: Brown. (Match existing if different)
  - 3 . Fire Alarm System: Red.
  - 4 . Motor and Other Control Systems: Purple. (Match existing if different)

**END OF SECTION 16075**

## **SECTION 16100 – BUILDING WIRE AND CABLE**

### **PART 1: GENERAL**

Related Documents: Drawings and general provisions of the Contract, including General and Supplementary General Provisions and Special Conditions, and Division 1 Specification sections, apply to work of this section.

#### **1.1 SECTION INCLUDES**

- A . Building Wire and Cable.
- B . Remote Control and Signal Cable.
- C . Power Limited Fire Protective Signaling Cable
- D . Wiring Connectors and Connections.

#### **1.2 RELATED SECTIONS**

- A . Section 16129 Conduit and Raceways.
- B . Section 16128 Boxes.
- C . Section 16075 Electrical Identification.

#### **1.3 REFERENCES**

- A . ANSI/NFPA 70—National Electrical Code.
- B . NEMA WC5—Thermoplastic-insulated wire and cable for the transmission and distribution of electrical energy.

#### **1.4 PROJECT CONDITIONS**

- A . Verify that field measurements are as shown on drawings
- B . All conductors shall be copper.
- C . Conductor sizes are based on copper.
- D . Where wire and cable routing is not shown, and destination only is indicated, determine exact routing and lengths required.

#### **1.5 COORDINATION**

- A . Determine required separation between cable and other work

- B . Determine cable routing to avoid interference with other work

## **PART 2: PRODUCTS**

### **2.1 BUILDING WIRE AND CABLE**

- A . Description: Single conductor insulated wire .
- B . Conductor: Copper .
- C . Insulation Voltage Rating: 600 volts .
- D . Insulation: ANSI/NFPA 70, Type THHN/THWN, XHHW material rated 90°C

### **2.2 CLASS 1 REMOTE CONTROL AND SIGNAL CABLE**

- A . Description: ANSI/NFPA 70, Type TFFN, THHN .
- B . Conductor: Copper .
- C . Insulation Voltage Rating: 600 volts .

### **2.3 CLASS 2 OR 3 REMOTE CONTROL AND SIGNAL CABLE**

- A . Description: NEMA/ICEA WC5, thermoplastic insulated cable, individual insulated conductors twisted together, metallic shielded and covered with PVC jacket when installed in metal raceway .
- B . Conductor: Copper, stranded
- C . Insulation Voltage Rating: 300 volts

### **2.4 CLASS 1 AND NON POWER—LIMITED FIRE PROTECTIVE SIGNALING CABLES**

- A . Description: NEMA/NFPA 70, Type TFFN, THHN installed in metal raceway
- B . Conductor: Copper.
- C . Insulation Voltage Rating: 600 volts.

### **2.5 POWER LIMITED FIRE PROTECTIVE SIGNALING CABLES**

- A . Description: NEMA/NFPA 70, Type TFFN, THHN installed in metal raceway
- B . Conductor: Copper.
- C . Insulation Voltage Rating: 600 volts.

## **2.6 POWER LIMITED FIRE PROTECTIVE SIGNALING CABLES**

- A . Description: NEMA/NFPA 70, Type FPL, FPLR installed in metal raceway
- B . Conductor: Copper.
- C . Insulation Voltage Rating: 300 Volts.

## **2.7 POWER LIMITED FIRE PROTECTIVE SIGNALING CABLES**

- A . Description: NEMA/NFPA 70, Type FPLP installed in metal raceway.
- B . Conductor: Copper.
- C . Insulation Voltage Rating: 300 volts.

## **PART 3: EXECUTION**

### **3.1 EXAMINATION**

- A . Verify that interior of building has been protected from weather
- B . Verify that mechanical work, likely to damage wire and cable, has been completed.

### **3.2 PREPARATION**

- A . Completely and thoroughly swab raceway before installing wire

### **3.3 WIRING METHODS**

- A . Concealed Dry Interior Locations: Use only building wire and cable (all types) in raceway.
- B . Exposed Dry Interior Locations: For feeders, branch circuits, and Class 1 remote control circuits, use only building wire in raceway. For Class 2 or 3 control cable and power limited fire protective signaling cables, run in raceway.
- C . Above Accessible Ceilings: For feeders, branch circuits and Class 1 remote control cables use only building wire in raceway. For Class 2 or 3 remote control cables run exposed. For power limited fire protective signaling cables, run in raceway.
- D . Wet or Damp Interior Locations: For feeders, branch circuits and Class 1 remote control cables use only building wire in raceway. For Class 2 or 3 remote control cable and power limited fire protective signaling cables run in raceway.

- E . Exterior Locations: For feeders, branch circuits and Class 1 remote control cables, use only building wire run in raceway. For Class 2 or 3 remote control cables and fire protective signaling cables, run in raceway.
- F . Underground Installations: For feeders, branch circuits and Class 1 remote control cables, use only building wire run in raceway. For Class 2 or 3 remote control cables and power limited fire protective signaling cables, run in raceway.
- G . Use wiring methods indicated on drawings.

### 3.4 INSTALLATION

- A . Install products in accordance with manufacturer's instructions
- B . If stranded conductors are used for branch-circuits, the devices shall be pressure terminal type.
- C . Use stranded conductors for control circuits and for feeder and branch circuits No . 10 and larger.
- D . Use conductor not smaller than #12 AWG for power and lighting circuits.
- E . Use conductor not smaller than #14 AWG for control circuits.
- F . Use #10 AWG conductors for 20 ampere, 120 volt branch circuits longer than 75 feet.
- G . All phase conductors size #10 and smaller shall have color coded insulation. Conductors size #8 and larger shall be color coded by the use of colored plastic tape applied within 6" of each conductor end. All color coding shall be with the same color being used with its respective phase or bus through the entire length of conductor with enclosures, boxes, cabinets, wireways, panels, switchboards, as follows (match existing if different):

120/208 Volts	
Phase A	Black
Phase B	Red



Phase C	Blue
Neutral White	
Ground	Green
Travelers .....	Purple

- H . Grounded conductors (neutral) shall be identified with a continuous outer finish that is white or gray on #6 and smaller. Color coding with plastic tape or other means is not acceptable. Grounded conductors (larger than size #6) shall be color coded at 12" intervals with a continuous white or gray outer finish or by three continuous white stripes on other than green insulation along its entire length by a distinctive white marking at its terminations. This marking shall encircle the conductor or insulation.
  
- I . Equipment grounding conductors shall be identified with a continuous outer finish that is either green or green with one or more yellow stripes for size #6 and smaller. Color coding with plastic tape or other means is not acceptable. Grounding conductors (larger than size #6) shall be color coded at each end and at every point where the conductor is accessible. Identification shall encircle the conductor and shall be accomplished by one of the following:
  - 1 . Stripping the insulation or covering from the entire exposed length
  - 2 . Coloring the exposed insulation or covering green.
  
- J . Use suitable wire pulling lubricant for building wire #4 AWG and larger.
  
- K . Protect exposed cable from damage.
  
- L . All conduits entering boxes, enclosures, cabinets, wireways, etc ., shall be labeled with a suitable approved permanent marker identifying the appropriate panel/panelboard and branch circuit number serving same. The same shall apply to all enclosure covers.
  
- M . Use suitable cable fittings and connectors.
  
- N . Neatly train and lace wiring inside boxes, equipment, and panelboards
  
- O . Clean conductor surfaces before installing lugs and connectors.
  
- P . Make splices, taps, and terminations to carry full ampacity of conductors with no perceptible temperature rise.
  
- Q . Use Utilco blocks for copper conductor splices and taps, #6 AWG and larger. Tape uninsulated conductors and connector with electrical tape to 150 percent of insulation rating of conductor.

- R . Terminate spare conductors with electrical tape or wirenut .
- S . Use insulated spring wire connectors with plastic caps for copper conductor splices and taps, #8 AWG and smaller.
- T . Splice only in accessible junction boxes.
- U . Do not use quick-connect splice devices.
- V . Feeders (as defined by NEC Article 100) shall not be spliced.

### **3.5 INTERFACE WITH OTHER PRODUCTS**

- A . Identify wire and cable under provisions of Section 16075 .

### **3.6 FIELD QUALITY CONTROL**

- A . Perform field inspection and testing.
- B . Inspect wire and cable for physical damage and proper connection.
- C . Measure tightness of bolted connections and compare torque measurements with manufacturer's recommended values.
- D . Verify continuity of each branch circuit conductor.
- E . Verify continuity of each control circuit conductor.
- F . Verify proper phasing of conductors prior to energizing or reenergizing any and all electrical equipment.

**END OF SECTION 16100**

## **SECTION 16128 - BOXES**

### **PART 1: GENERAL**

Related Documents: Drawings and general provisions of the Contract, including General and Supplementary General Provisions and Special Conditions, and Division 1 Specification sections, apply to work of this section.

#### **1.1 SECTION INCLUDES**

- A . Wall and Ceiling Outlet Boxes.
- B . Pull and Junction Boxes.
- C . FS/FD Cast Device Boxes.

#### **1.2 RELATED SECTIONS**

- A . Section 16050 Basic Electrical Requirements
- B . Section 16140 26 Wiring Devices.
- C . Section 16060 Grounding and Bonding.
- D . Section 16075 Electrical Identification .

#### **1.3 REFERENCES**

- A . ANS1/NEMA OS 1—Sheet-steel Outlet Boxes, Device Boxes, Covers, and Box Supports.
- B . ANS1/NFPA 70—National Electrical Code.
- C . NEMA 250—Enclosures for Electrical Equipment (1000 Volts Maximum)

#### **1.4 PROJECT CONDITIONS**

- A . Verify field measurements are as shown on drawings.
- B . Verify locations of floor boxes and outlets to rough-in.
- C . Electrical boxes are shown on drawings in approximate locations unless dimensioned. Install at location required for box to serve intended purpose.

### **PART 2: PRODUCTS**

#### **2.1 OUTLET BOXES**

- A . Sheet Metal Outlet Boxes: ANS1/NEMA OS 1, galvanized steel

- 1 . Luminaire and Equipment Supporting Boxes: Rated for weight of equipment supported; include 1/2 inch male fixture studs where required. Minimum depth-2%2-inches .
- 2 . Concrete Ceiling Boxes: Concrete type
- B . Cast Boxes: NEMA FB 1, Type FD, cast fer alloy deep type. Provide gasketed cover by box manufacturer. Provide threaded hubs.

## **2.2 PULL AND JUNCTION BOXES**

- A . Sheet Metal Boxes: NEMA OS 1, galvanized steel. Minimum depth-2%2 inches.
- B . Surface-Mounted Cast Metal Box: NEMA 250, Type 4, flat-flanged, surface-mounted junction box.
  - 1 . Material: Stainless Steel.
  - 2 . Cover: Furnish with ground flange, neoprene gasket, and stainless steel cover screws.

## **PART 3: EXECUTION**

### **3.1 INSTALLATION**

- A . Install electrical boxes, as shown on drawings and as required for splices, taps, wire pulling, equipment connections, and compliance with regulatory requirements.
- B . Install electrical boxes to maintain headroom and to present neat mechanical appearance.
- C . Install pull boxes and junction boxes above accessible ceilings and in unfinished areas only. Boxes shall not be installed more than 4 feet above finished ceiling. Use 3/8" threaded rod for box support. Double nut all support points.
- D . Inaccessible Ceiling Areas: Install outlet and junction boxes no more than 6 inches from ceiling access panel or from removable recessed luminaire. Openings shall be a minimum 24" x 24" hinged door with cylinder cam.
- E . Install boxes to preserve fire resistance rating of partitions and other elements, using materials and methods that are UL listed and tested.
- F . Align adjacent wall-mounted outlet boxes for switches, thermostats, and similar devices with each other .

- G . Use flush mounting outlet boxes in finished areas
- H . Do not install flush mounting boxes back-to-back in walls; provide minimum 12 inch separation. Provide minimum 24 inches separation in fire-rated walls. Through-the-wall boxes are not allowed.
- I . Secure flush mounting box to interior wall and partition studs. Accurately position to allow for surface finish thickness.
- J . Use stamped steel bridges to fasten flush mounting outlet box between studs.
- K . Install flush mounting box without damaging wall insulation or reducing its effectiveness.
- L . Use adjustable steel channel fasteners for hung ceiling outlet box.
- M . Do not fasten boxes to ceiling support wires.
- N . All boxes and enclosures, including wiremold boxes, shall be grounded by use of a threaded ground lug/screw. No ground clips acceptable. This shall apply to new and existing installations.
- O . Use gang box where more than one device is mounted together. If sectional boxes are used, barriers are required to separate different voltage systems.
- P . Use gang box with plaster ring for multiple devices mounted together
- Q . Use FD malleable outlet boxes in exterior locations exposed to the weather, wet locations, kitchens, and toilet rooms where surface mounted with weatherproof "while-in-use" cover. Standard weather proof cast boxes are not acceptable.
- R . Set floor boxes level
- S . Large Pull Boxes: Boxes larger than 100 cubic inches (1-600 cubic centimeters) in volume or 12 inches (300 mm) in any dimension.
  - 1 . Interior Dry Locations: Use hinged enclosure under provisions of Section 16160.
  - 2 . Other Locations: Use surface-mounted cast metal box
- T . Interior PVC boxes, PVC junction boxes, PVC pull boxes, and PVC enclosures are not acceptable for any purpose.
- U . Cabinets, enclosures, wire-ways, junction boxes, etc ., shall be color identified per the following color schedule . Also, each raceway entry shall be similarly identified for approximately 12" in length at the box/conduit termination for all items listed below and at ten foot intervals for Fire Alarm and Emergency .

- 1 . Fire Alarm: Red
- 2 . Emergency: Orange
- V . All boxes are to be supported to building structure or building structural support with approved supports and hardware suitable for the task. No box, cabinet, or enclosure will be supported by the conduit or raceway only.
- W . All boxes, junction boxes, and enclosures shall have the exterior cover marked identifying the branch circuit and panelboard of origination with an indelible ink marker or grease pencil.
- X . Myers hubs shall be used on all exterior boxes or enclosures where the conduits terminate on top of box or enclosure. Sealing lock nuts or Myers hubs shall be used where the conduits enter the side or bottom of the box or enclosure.

### **3.2 INTERFACE WITH OTHER PRODUCTS**

- A . Coordinate locations and sizes of required access doors with Construction Manager/General Contractor and other trades.
- B . Locate flush mounting box in masonry wall to require cutting of masonry unit corner only. Coordinate masonry cutting to achieve neat opening.
- C . Position outlet boxes to locate luminaries as shown on reflected ceiling plan.

### **3 .03 ADJUSTING**

- A . Install knockout closures in all unused box openings.

**END OF SECTION 16128**

## **SECTION 16129 - CONDUIT AND RACEWAYS**

### **PART 1: GENERAL**

Related Documents: Drawings and general provisions of the Contract, including General and Supplementary General Provisions and Special Conditions, and Division 1 Specification sections, apply to work of this section.

#### **1.1 SECTION INCLUDES**

- A . Metal Conduit.
- B . Flexible Metal Conduit.
- C . Liquidtight Flexible Metal Conduit.
- D . Electrical Metallic Tubing.
- E . Non-Metal Conduit.
- F . Fittings and Conduit Bodies.

#### **1.2 RELATED SECTIONS**

- A . Section 16128 Boxes.
- B . Section 16060 Grounding and Bonding.
- C . Section 16070 Supporting Devices.
- D . Section 16075 Electrical Identification.

#### **1.3 REFERENCES**

- A . ANSI C80 .1—Rigid Steel Conduit, Zinc Coated.
- B . ANSI C80 .3—Electrical Metallic Tubing, Zinc Coated
- C . ANSI/NEMA FB 1—Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit and Cable Assemblies.
- D . ANSI/NFPA 70—National Electrical Code
- E . NECA "Standard of Installation."
- F . NEMA TC 2—Electrical Plastic Tubing (EPT) and Conduit (EPC-40 and EPC-80).

- G . NEMA TC 3—PVC Fittings for Use with Rigid PVC Conduit and Tubing .
- H . UL651A—Type EB and A Rigid PVC Conduit and HDPE Conduit .
- I . UL651B—Continuous Length HDPE Conduit .

#### **1.4 DESIGN REQUIREMENTS**

- A . Conduit Size: ANSI/NFPA 70 .

#### **1.5 PROJECT RECORD DOCUMENTS**

- A . Accurately record actual routing of conduits larger than 1-1/4 inches .
- B . Accurately record actual routing of all underground conduits .

#### **1.6 DELIVERY, STORAGE, AND HANDLING**

- A . Deliver, store, protect, and handle Products to site .
- B . Accept conduit on site . Inspect for damage .
- C . Protect conduit from corrosion and entrance of debris by storing above grade  
Provide appropriate covering .
- D . Protect PVC conduit from sunlight .

#### **1.7 PROJECT CONDITIONS**

- A . Verify that field measurements are as shown on Drawings .
- B . Verify routing and termination locations of conduit prior to rough-in .
- C . Conduit routing is shown on Drawings in approximate locations unless dimensioned . Route as required to complete wiring system .

### **PART 2: PRODUCTS**

#### **2.1 CONDUIT REQUIREMENTS**

- A . Homeruns shall be a minimum size of three-quarter inch (3A"), unless otherwise specified . Provide a minimum of half-inch (1/2") for flexible connections to equipment .
- B . Underground Installations:
  - 1 . Use thickwall nonmetallic conduit, Schedule 40 PVC



2. Minimum Size: 3/4"
  3. Install rigid steel, long radius elbows for conduits larger than one inch (1").
- C. Outdoor Locations, Above Grade: Use rigid and liquidtight flexible metal conduit with enhanced corrosion. Provide completely coated of the rigid conduit with an alkali and rust resistant bitumastic paint, Kopper NO . 50 .
- D. Wet and Damp Locations: Use rigid steel, intermediate, and liquidtight flexible metal conduit.
- E. Dry Locations:
1. Concealed: Use rigid steel, intermediate metal conduit, and electrical metallic tubing.
  2. Exposed:
    - a. Exterior—Rigid Steel only.
    - b. Interior—Rigid Steel to 4'0" A .F .G ., then Electrical Metallic Tubing.

## **2.2 METAL CONDUIT**

- A. Rigid Steel and Intermediate Metal Conduit: ANSI C80 .1 .
- B. Fittings and Conduit Bodies: ANSI/NEMA FB 1; all steel fittings

## **2.3 FLEXIBLE METAL CONDUIT**

- A. Description: For exposed locations, interlocked steel construction. For concealed locations- interlocked steel construction.
- B. Fittings: ANSI/NEMA FB 1 .

## **2.4 LIQUIDTIGHT FLEXIBLE METAL CONDUIT**

- A. Description: Interlocked steel construction with PVC jacket
- B. Fittings: ANSI/NEMA FB 1 .

## **2.5 ELECTRICAL METALLIC TUBING (EMT)**

- A. Description: ANSI C80 .3; galvanized tubing.
- B. Fittings and Conduit Bodies: ANSI/NEMA FB 1; steel set screw or steel compression coupling or connectors . All connectors shall be insulated throat, up

to one inch .

## **2.6 NONMETALLIC CONDUIT**

- A . Description: NEMA TC 2; Schedule 40 PVC .
- B . Fittings and Conduit Bodies: NEMA TC 3 .

## **2.7 HIGH DENSITY POLYETHYLENE (HDPE) CONDUIT**

- A . Description: UL651A; UL651B, extruded rigid, Schedule 40, high density polyethylene . Gray in color .
- B . Fittings: UL651A

## **PART 3: EXECUTION**

### **3.1 INSTALLATION**

- A . All thru-slab conduits and raceways larger than one inch (1") installed into block masonry walls and through slabs shall be rigid galvanized conduit to the first enclosure, cabinet, panelboard/switchboard, or box/outlet. All exposed/surface mounted raceways thru slabs to panelboards/ switchboards, enclosures, cabinets, conduits and boxes shall be rigid galvanized conduits entering into same enclosures with no junction boxes.
- B . PVC conduits and raceways are only permitted underground or under slabs. Exception: PVC is permitted within block walls to first outlet box A .F .F . if PVC raceway is one inch (1") trade size or smaller.
- C . All exterior conduits and raceways shall be rigid galvanized steel conduit. EMT and PVC shall not be used.
- D . All above ceiling and within partition wall raceways and conduits shall be EMT, intermediate metal conduit or rigid galvanized conduit. PVC is not permitted above the ceiling spaces.
- E . EMT Fittings (connectors/couplings) shall be steel set screw or steel compression type. Fittings in wet locations shall be compression type.
- F . All raceway terminations at boxes and enclosures one inch (1") and smaller shall be made with insulated throat connectors. RMC, intermediate metal conduit to comply with NEC .
- G . All raceway terminations at boxes and enclosures larger than one inch (1") shall be made with insulated throat connectors or metallic insulated bushings. Plastic

bushings are not acceptable. Conduits/raceways enclosing #3 or larger conductors shall have connectors with insulated throat or use metal insulated bushings.

- H . All raceways and conduits within concrete second floor and above slabs shall be intermediate metal conduit, rigid galvanized conduit, or PVC. EMT is not acceptable.
- I . Threadless connectors and couplings for intermediate metal conduit and rigid galvanized conduits are not permitted.
- J . Exposed and surface mounted raceway systems shall have two approved supporting devices per 10' length as equally spaced as practical.
- K . All conduit and raceway systems shall have UL approved supports (equal to Erico Caddy® SK-I Clamp) within three feet (3') of boxes or enclosures and couplings/fittings/condulets . Bar Joist spacing exceeding three feet (3') shall meet the N . E . C . 5' exception to the rule for support.
- L . Tie-wire, tie-wrap, duct tape, etc. Shall not be permitted as a means of support for any conduit or raceway system. All conduits and raceways shall be adequately supported with U . L . approved supporting devices.
- M . All flexible conduits in exposed areas shall be steel or metal seal-tite . All flexible raceways in damp or wet locations shall be metal seal-tite . All flexible conduits above suspended lay-in ceilings shall be aluminum or steel. Flexible conduits are not permitted above drywall, plaster or hard ceilings where not accessible. Minimum size flexible conduits for all installations shall be 1/2" trade size and shall not exceed 6' in length. Flexible metal conduit fittings and connectors shall be clamp-type. Set screw type fittings and connectors are not permitted.
- N . Seal tight or flexible conduit shall NOT be installed through walls
- O . Horizontal runs of conduit in masonry walls is not permissible
- P . All conduit shall be concealed whenever possible. Concealed conduit run above the ceiling shall be supported independent of ceiling supports. When a lay-in type ceiling is utilized, the conduit must be installed high enough to permit removal of ceiling tile.
- Q . Home-Run conduits are to be a minimum of 3/4" trade size to first point of use box/enclosure. Branch circuit conduits for lighting and receptacles shall be filled a maximum of three (3) phase/hot conductors.
- R . Conduit systems shall be racked and run in parallel and perpendicular from its point or origin (i . e . , panelboard/panel/switchboard, systems cabinet, etc .) To its destination or first termination. Authority having jurisdiction shall approve

any deviation or conflicts with this rule. All conduits after the first point of termination shall be run parallel with or at right angles to building walls or building structure.

- S . Conduit shall be continuous from outlet to outlet, from outlet to cabinet, junction box to pull box in such a manner that each system shall be electrically continuous from point of service to all outlets.
- T . When hot dipped rigid galvanized steel conduit is installed below grade, it shall be coated with an asphalt trim paint or approved corrosion tape.
- U . Any conduit that penetrates a firewall shall be sealed with a fire barrier caulk or similar compound to preserve the fire rating of the wall. Fire-rated foam spray is acceptable.
- V . Conduits not terminating in boxes and unused shall be capped
- W . All empty conduits and raceways shall have a pull-string installed capable of pulling conductors typical of conduit size.
- X . Install conduit in accordance with NECA "Standard of Installation."
- Y . Install nonmetallic conduit in accordance with manufacturer's instructions.
- Z . Arrange supports to prevent misalignment during wiring installation.
- AA . Arrange conduit to maintain headroom and present neat appearance. Minimum headroom for equipment suspended from ceiling or building structure shall be 6'8" unless otherwise specified.
- BB . Route exposed conduit parallel and perpendicular to walls. Exposed conduits shall only be run in mechanical and electrical rooms unless otherwise specified.
- CC . Maintain 12" clearance between conduit and surfaces with temperatures exceeding 104°F (40°C) unless otherwise specified.
- DD . Cut conduit square using saw or pipecutter; de-burr cut ends. Bring conduit to shoulder of fittings; fasten securely.
- EE . Join nonmetallic conduit using cement as recommended by manufacturer. Wipe nonmetallic conduit dry and clean before joining. Apply full even coat of cement to entire area inserted in fitting. Allow joint to cure for 20 minutes, minimum.
- FF . Install no more than equivalent of four (4) 90° bends between boxes. Use conduit bodies to make sharp changes in direction, as around beams. Use hydraulic one-shot bender or factory elbows for bends in metal conduit larger than 2" size.

- GG . Provide fittings designed to accommodate expansion and deflection where conduit crosses, control, and expansion joints.
- HH . Flexible metal conduit shall be used for a flexible connection only, not raceways.
- JJ . Install grounded metal insulated bushing with lug on all mains, sub-feeders, disconnects and equipment rated at 100 amps and above.
- KK . Install and seal boxes and conduit in acoustical treated walls and ceilings per architectural acoustics specifications.
- LL . All work shall be done in a neat and workman like manner per NECA "Standard of Installation."

### **3.2 INTERFACE WITH OTHER PRODUCTS**

- A . Install conduit to preserve fire resistance rating of partitions and other elements, using materials and methods that are UL listed and tested.

**END OF SECTION 16129**

## **SECTION 16140 – WIRING DEVICES**

### **PART 1: GENERAL**

Related Documents: Drawings and general provisions of the Contract, including General and Supplementary General Provisions and Special Conditions, and Division 1 Specification sections, apply to work of this section .

#### **1.1 SECTION INCLUDES**

- A . Wall Switches.
- B . Receptacles.
- C . Device Plates and Decorative Box Covers.

#### **1.2 REFERENCES**

- A . NEMA WD 1—General Purpose Wiring Devices.
- B . NEMA WD 5—Specific Purpose Wiring Devices.
- C . NEMA WD 6—Wiring Device Configurations.
- D . Federal Specification—FS-W-C-596 Series—General Specifications
- E . Federal Specification—FS-W-S-896 Series—Toggle Switches.

#### **1.3 SUBMITTALS**

- A . Product Data: Provide manufacturer's catalog information showing dimensions, colors, and configurations.
- B . Manufacturer's Instructions:
  - 1 . Indicate application conditions and limitations of use stipulated by product testing agency specified under regulatory requirements.

### **PART 2 PRODUCTS**

#### **2.1 WALL SWITCHES**

- A . Manufacturers:
  - 1 . Arrow Hart
  - 2 . Hubbell.

3. Leviton .
  4. Pass & Seymour.
  5. Substitutions: Permitted.
- B . Description: NEMA WD 1, heavy-duty industrial grade AC only general-use snap switch.
- C . Device Body: Ivory plastic with toggle handle.
- D . Indicator Light: Separate pilot strap; red color lens.
- E . Locator Light: Lighted handle type switch; red color handle.
- F . Voltage Rating: 120-277 volts, AC .
- G . Current Rating: 20 amperes.
- H . Motor Rating: Motor rated for fractional horsepower.
- 1 . Motors 1/2 HP and Smaller: Provide switch with thermal overloads to match motor nameplate rating, if motor does not have built-in overload protection.

## **2.2 RECEPTACLES**

- A . Manufacturers:
1. Arrow Hart.
  2. Hubbell.
  3. Leviton .
  4. Pass & Seymour.
  5. Substitutions: Permitted.
- B . Description: NEMA WD 1; heavy-duty industrial grade general-use receptacle.
- C . Device Body: Ivory plastic for general use receptacles.
- D . Configuration: NEMA WD 6; type as specified and indicated.
- E . Convenience Receptacle: NEMA Type 5-20 .
- F . GFCI Receptacle: Convenience receptacle with integral ground fault circuit interrupter to meet regulatory requirements.

## **2.3 WALL PLATES**

- A . Decorative Cover Plate: Smooth stainless steel, only . Plastic, fiberglass, nylon,

and veneer are not acceptable .

1. Hubbell .
  2. Leviton .
  3. Pass & Seymour .
  4. Substitutions: Permitted .
- B. Weatherproof Cover Plate: Gasketed, cast aluminum with hinged, gasketed device cover . Cover shall be key lockable .
1. Hubbell .
  2. Carlon .
  3. Substitutions: Permitted .

### **PART 3: EXECUTION**

#### **3.1 EXAMINATION**

- A. Verify site conditions .
- B. Verify outlet boxes are installed at proper height .
- C. Verify wall openings are neatly cut and will be completely covered by wall plates .
- D. Verify branch circuit wiring installation is completed, tested, and ready for connection to wiring devices .

#### **3.2 PREPARATION**

- A. Provide extension rings to bring outlet boxes flush with finished surface .
- B. Clean debris from outlet boxes .
- C. All devices shall be U .L . listed and labeled . Prior to installation, all wiring devices shall be stored on the jobsite in the original labeled cartons .

#### **3.3 INSTALLATION**

- A. Install products in accordance with manufacturer's instructions . All wiring devices shall be of one manufacturer; no mixing of manufacturers shall be permitted .
- B. Install devices plumb and level



- C . Install switches in the vertical position with OFF position down
- D . Install receptacles with grounding pole on bottom
- E . Connect wiring device grounding terminal to outlet box with bonding jumper and branch circuit equipment grounding conductor.
- F . Connect wiring devices by wrapping conductor clockwise around screw terminal. "Quick wire"/push-in/snap-in residential type wiring devices shall not be permitted. Receptacles and switches shall be pig-tailed, no feed through wiring.
- G . Install galvanized and raised steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface mounted outlets.
- H . Assemble all devices and equipment shipped loose with furniture furnished by others as a part of this project. Provide all necessary wiring, plugs, conduit, etc ., required to complete this work.

### **3.4 INTERFACE WITH OTHER PRODUCTS**

- A . Coordinate locations of outlet boxes.
- B . Install wall switch at forty-eight inches (48") above finished floor to top of outlet box
- C . Install convenience receptacle at twenty inches (20") above finished floor to top of outlet box or as noted on drawings.
- D . Install telephones outlet boxes at twenty inches (20") above finished floor to top of outlet box.

### **3.5 FIELD QUALITY CONTROL**

- A . Inspect each wiring device for defects.
- B . Operate each wall switch with circuit energized and verify proper operation.
- C . Verify that each receptacle device is energized.
- D . Test each receptacle device for proper polarity.
- E . Test each GFC1 receptacle device for proper operation. Using a tester specifically designed to test GFC1 receptacles or branch circuits.

### **3.6 ADJUSTING**

- A . Adjust devices and wall plates to be flush and level

**END OF SECTION 16140**

## **SECTION 16411 – DISCONNECT SWITCHES**

### **PART 1: GENERAL**

Related Documents: Drawings and general provisions of the Contract, including General and Supplementary General Provisions and Special Conditions, and Division 1 Specification sections, apply to work of this section.

#### **1.1 WORK INCLUDED**

- A . Disconnect Switches.
- B . Fuses.
- C . Enclosures.

#### **1.2 REFERENCES**

- A . ANSI/UL 198C—High-Intensity Capacity Fuses; Current Limiting Types
- B . ANSI/UL 198E—Class R Fuses.
- C . FS W-F-870—Fuseholders (For Plug and Enclosed Cartridge Fuses).
- D . FS W-S-865—Switch, Box, (Enclosed), Surface-Mounted.
- E . NEMA KS 1—Enclosed Switches.

#### **1.3 SUBMITTALS**

- A . Submit product data and include outline drawings with dimensions, and equipment ratings for voltage, capacity, horsepower, and short circuit.

### **PART 2: PRODUCTS**

#### **2.1 ACCEPTABLE MANUFACTURERS—DISCONNECT SWITCHES**

- A . Square D .
- B . General Electric
- C . Cutler Hammer.
- D . Siemens.
- E . Substitutions: Not Permitted.

#### **2.2 DISCONNECT SWITCHES**

- A . Fusible Switch Assemblies: NEMA KS 1; Type HD, FS W-S-865; quick-make,

quick-break, load interrupter enclosed knife switch with externally operable handle interlocked to prevent opening front cover with switch in ON position . Handle lockable in ON or OFF position as noted . Fuse Clips: FS W-F- 870 .

- B . Nonfusible Switch Assemblies: NEMA KS 1; Type HD, FS W-S-865; quick-make, quick-break, load interrupter enclosed knife switch with externally operable handle interlocked to prevent opening front cover with switch in ON position. Handle lockable in ON or OFF position as noted.
- C . Enclosures: NEMA KS 1; Fabricate enclosure from stainless steel.
  - 1 . Interior Dry Locations: Type 1 .
  - 2 . Exterior Locations: Type 4X Stainless Steel 316 .
- D . All service disconnects shall be "Heavy-Duty Type." General duty equipment is not acceptable.

### **2.3 ACCEPTABLE MANUFACTURERS—FUSES**

- A . Busmann .
- B . Gould-Schawmut .
- C . Littelfuse Tracor .
- D . Substitutions: Not Permitted.

### **2.4 FUSES**

- A . Coordinate fuse types with elevator equipment supplier
- B . Interrupting Rating: 100,000 rms amperes.
- C . Spare fuses shall be provided in the amount of 10% of each size and type of fuse installed; but, in no case, shall be less than three (3) spares for each different size and class of fuse being provided. Store in fuse cabinet of sufficient size to house all fuses (provided by Electrical Contractor), located by Onwer/Engineer .

## **PART 3: EXECUTION**

### **3.1 INSTALLATION**

- A . Install disconnect switches where indicated on drawings
- B . Install fuses in fusible disconnect switches.
- C . Fuses and fuse holders shall be equipped with UL Class "R" rejection clips

- D . All fusible switches which contain current limiting fusing shall have UL Class "R" rejection clips
- E . All fuses shall be by the same manufacturer.
- F . All multi-pole breakers shall have factory installed common trip handle ties.

**END OF SECTION 16411**

## **SECTION 16721 — FIRE ALARM SYSTEM**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary General Provisions and Special Conditions, and Division 1 Specification sections, apply to work of this section.

#### **1.2 SUMMARY**

- A. Section Includes:
- 1. Fire-alarm control unit provided by Fire Lite Model MS-9600VDLS with DACT-2VID provided by the owner, installed by contractor.**
  2. Manual fire-alarm boxes.
  3. System smoke detectors.
  4. Heat detectors.
  5. Notification appliances.
  6. Magnetic door holders.
  7. Remote annunciator.
  8. Addressable interface device.
  9. Digital alarm communicator transmitter.
  10. System printer.

#### **1.3 SYSTEM DESCRIPTION**

- A. **Non-proprietary and non-coded, UL Listed intelligent analog addressable fire alarm system with multiplexed signal transmission.**
- B. The System supplied under this specification utilize independently addressed, input/output modules, power supply(s) as described in this specification. The system contain fire alarm control panel is provided by the owner, remote annunciator(s) and NAC power supply(s).

Obtain owner provided materials from City/Storage Facility, 1550 N Grady Avenue, Tampa, FL, 33607, and load, deliver to the site, unload, etc,

#### **1.4 PERFORMANCE REQUIREMENTS**

- A. Installation shall be in accordance with the drawings, specifications and the following current Florida Code:
1. NFPA 70 National Electrical Code
  2. NFPA 72 National Fire Alarm Code
  3. NFPA 101 Life Safety Code
  4. NFPA 90A Standard for the Installation of Air Conditioning and Ventilating

Systems

5. NFPA 13 Standard for the Installation of Sprinkler Systems
  6. Americans with Disabilities Accessibility Guidelines
  7. ASME A17.1 Elevator Code
  8. Florida Building Code
- B. System, including all components, shall be listed by Underwriters Laboratories, Inc. (UL) for the fire protective signaling purpose for which used.
1. UL 864/UOJZ, APOU Control units for Fire Protective Signaling Systems 9th Edition
  2. UL 268 Smoke Detectors for Fire Protective Signaling Systems
  3. UL 268A Smoke Detectors for Duct Applications
  4. UL 521 Heat Detectors for Fire Protective Signaling Systems
  5. UL 228 Door Holders for Fire Protective Signaling Systems
  6. UL 464 Audible Signaling Appliances
  7. UL 1638 Visual Signaling Appliances
  8. UL 38 Manually Activated Signaling Boxes
  9. UL 346 Waterflow Indicators for Fire Protective Signaling System
  10. UL 1971 Standard for Signaling Devices for the Hearing Impaired
  11. UL 1481 Power Supplies for Fire Protective Signaling Systems

**1.5 SUBMITTALS**

- A. The Contractor shall purchase no equipment for the system specified herein until the Owner has approved the project submittals in their entirety and has returned them to the contractor. It is the responsibility of the contractor to meet the entire intent and functional performance detailed in these specifications. Approved submittals shall only allow the contractor to proceed with the installation and shall not be construed to mean that the contractor has satisfied the requirements of these specifications. The Contractor shall minimum submit six (6) complete sets of documentation within 30 calendar days after award of purchase order.
- B. Each submittal shall include a cover letter providing a list of each variation that the submittal may have from the requirements of the Contract Documents. In addition the Contractor shall provide specific notation on each Shop Drawing, sample, catalog cut, data sheet, installation manual, etc. submitted for review and approval, of each such variation.
1. Submittals shall be approved by authorities having jurisdiction prior to submitting them to the owner and Engineer.
  2. Shop Drawings shall be prepared by persons with the following qualifications:
    - a. Trained and certified by manufacturer in fire-alarm system design.
    - b. N ICET-certified fire-alarm technician, Level III minimum
- C. Product Data: Product Data sheets with the printed logo or trademark of the manufacturer of all equipment. Indicated in the documentation shall be the type, size, rating, style, and catalog number for all items proposed to meet the system

performance detailed in this specification. The proposed equipment shall be subject to the approval of the Owner.

D. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

1. Comply with recommendations in the "Documentation" Section of the "Fundamentals of Fire Alarm Systems" Chapter in NFPA72.
2. Include voltage drop calculations for notification appliance circuits.
3. Include battery-size calculations.
4. Include performance parameters and installation details for each detector, verifying that each detector is listed for complete range of air velocity, temperature, and humidity possible when air-handling system is operating.
5. Include plans, sections, and elevations of heating, ventilating, and air-conditioning ducts, drawn to scale and coordinating installation of duct smoke detectors and access to them. Show critical dimensions that relate to placement and support of sampling tubes, detector housing, and remote status and alarm indicators. Locate detectors according to manufacturer's written recommendations.
6. Include floor plans to indicate final outlet locations showing address of each addressable device. Show size and route of cable and conduits.

E. Operation and Maintenance Data: For fire-alarm systems and components to be included in emergency, operation, and maintenance manuals. In addition , include the following:

1. Comply with the "Records" Section of the " Inspection, Testing and Maintenance" Chapter in NFPA72.
2. Provide "Record of Completion Documents" according to NFPA72 article "Permanent Records" in the "Records" Section of the " Inspection, Testing and Maintenance" Chapter.
3. Record copy of site-specific software database file, hardcopy print-out and CD, with password for delivery to the owner. **Proprietary system/service companies will not be acceptable.**
4. Provide "Maintenance, Inspection and Testing Records" according to NFPA72 article of the same name and include the following:
  - a. Frequency of testing of installed components.
  - b. Frequency of inspection of installed components.
  - c. Requirements and recommendations related to results of maintenance.
  - d. Manufacturer's user training manuals (hardcopy) and electronic on CD.
5. Manufacturer's required maintenance related to system warranty requirements.
6. Abbreviated operating instructions for mounting at fire-alarm control unit.
7. Copy of NFPA72.

F. Software and Firmware Operational Documentation:

1. Software operating and upgrade manuals.
2. Program Software Backup: On magnetic media or compact disk, complete with

- data files.
3. Device address list.
  4. Printout of software application.
  5. CD of site-specific software database file with password, and electronic product data sheets. Provide hard copy print-out of the software program. Proprietary system/service companies will not be acceptable.
  6. Provide a complete system comparison report for each change implemented during the warranty period.
  7. Provide a list of global system settings
  8. Provide a list of the contents of each system cabinet and their settings
  9. Provide a list of all addressable devices with their addresses and settings

## 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Personnel shall be trained and certified by manufacturer for installation of units required for this Project.
- B. Installer Qualifications: Installation shall be by personnel certified by N ICET as fire-alarm Level III technician.
- C. Source Limitations for Fire-Alarm System and Components: Obtain fire-alarm system from single source from single manufacturer.
- D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA70, by a qualified testing agency, and marked for intended location and application.
- E. NFPA Certification: Obtain certification according to NFPA72 in the form of a placard by an approved alarm company.

## 1.7 WARRANTY and SOFTWARE SERVICE AGREEMENT

- A. The contractor shall warranty all materials, installation and workmanship for two (2) years from date of acceptance, unless otherwise specified. A copy of the manufacturers' warranty shall be provided with closeout documentation and included with the operation and installation manuals.**
- B. The System Supplier shall maintain a service organization with adequate spare parts stocked within 75 miles of the installation. Any defects that render the system inoperative shall be repaired within 24 hours of the Owner notifying the contractor.
- C. Technical Support: Beginning with Substantial Completion, provide software support for three (3) shall be included in this project.
- D. Detector Sensitivity Testing: During the warranty period, each year the contractor is to perform detector sensitivity testing and provide report to the Owner. Unless, the system is UL Listed to perform automatic sensitivity testing without any manual



intervention and should detector fall outside of sensitivity window, the system will automatically indicate a device trouble. A copy of UL letter is to be provided as proof of system operation.

- E. Upgrade Service: Update software to latest version at Project completion. Install and program software upgrades that become available within five (5) years from date of Substantial Completion. Upgrading software shall include operating system. Upgrade shall include new or revised licenses for use of software.
  - 1. Provide 30 days' notice to Owner to allow scheduling and access to system and to allow Owner to upgrade computer equipment if necessary.

## **1.8 EXTRA MATERIALS**

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Smoke Detectors, heat detectors, monitor modules and control modules: Quantity equal to 5% percent of amount of each type installed, but no fewer than 3 units of each type.
  - 2. Keys: Ten extra set for access to locked and tamperproof components.
  - 3. Audible and Visual Notification Appliances: 5% of each type installed.

## **PART 2 - PRODUCTS**

### **2.1 MANUFACTURERS**

- A. Manufacturers: The fire alarm control panel is manufactured by Fire Lite Model MS-9600UDLS with DACT-2UD and provided by the owner, installed by contractor.** The materials, appliances, equipment and devices shall be tested and listed by a nationally recognized approvals agency for use as part of a protected premises protective signaling fire alarm system. The authorized representative of the manufacturer of the major equipment, such as control panels, shall be responsible for the satisfactory installation of the complete system.
- B. The Contractor shall provide, from the acceptable manufacturer's current product lines, equipment and components, which comply, with the requirements of these Specifications. Equipment or components, which do not provide the performance and features, required by these specifications are not acceptable, regardless of manufacturer.
- C. Strict conformance to this specification is required to ensure that the installed and programmed system will function as designed, and will accommodate the future requirements and operations of the building Owner. All specified operational features must be met without exception.
- D. All control panel assemblies and connected field appliances shall be provided by the same System Supplier, and shall be designed and tested to ensure that the system operates as specified. All equipment and components shall be installed in strict

compliance with the manufacturer's recommendations.

- E. Upon completion of the project the Owner shall be provided with a hard copy printout of the system software database and an electronic version of the system program and database with all required passwords.
- F. That equipment proposed to be supplied will be considered only if it meets all sections of the performance specification. Any deviations of system performance outlined in this specification will only be considered when the following requirements have been met:
1. A complete description of proposed alternate system performance methods with three (3) copies of working drawings thereof for approval by the Owner and Engineer, not less than ten (10) calendar days prior to the scheduled date for submission of bids.
  2. The supplier of alternate equipment shall furnish evidence that the proposed alternate system performance is equal to or superior than the system operation stated in the specification. Such evidence shall be submitted to the Owner, not less than ten (10) calendar days prior to the scheduled date for submission of bids.
  3. The supplier shall submit a point-by-point statement of compliance for all sections in this specification. The statement of compliance shall consist of a list of all paragraphs within these sections. Where the proposed system complies fully with the paragraph as written, placing the word "comply" opposite the paragraph number shall indicate such. Where the proposed system does not comply with the paragraph as written, and the supplier feels the proposed system will accomplish the intent of the paragraph, a full description of the function as well as a full narrative description of how its proposal will meet its intent shall be provided. Any submission that does not include a point-by-point statement of compliance as described herein shall be disqualified. Where a full description is not provided, it shall be assumed that the proposed system does not comply.
  4. The supplier of alternate equipment shall submit a list from the alternate manufacture on the manufactures letterhead indicating the names and addresses of all authorized suppliers in the area. **Proprietary products will not be considered.**
  5. The acceptability of any alternate proposed system shall be the sole decision of the Owner or his authorized representative.
- G. Approved Products: All peripheral devices shall be of the standard product of single manufacturer and shall display the manufacturer's name of each component. The catalog numbers specified under this section are those of Fire Lite and shall constitute the type, product quality, material and desired operating features.

## 2.2 SYSTEMS OPERATIONAL DESCRIPTION

- A. Fire-alarm signal initiation shall be by one or more of the following devices:
1. Manual stations.
  2. Heat detectors.

3. Flame detectors.
  4. Smoke detectors.
  5. Duct smoke detectors.
  6. Verified automatic alarm operation of smoke detectors.
  7. Automatic sprinkler system water flow.
  8. Heat detectors in elevator shaft and pit.
  9. Fire pump and fire protection system.
- B. Fire-alarm signal shall initiate the following actions:
1. Activate the audible and visual notification appliances.
  2. Identify alarm at fire-alarm control unit and remote annunciator.
  3. Transmit an alarm signal to the remote alarm receiving station.
  4. Unlock electric door locks in designated egress paths.
  5. Release fire and smoke doors held open by magnetic door holders.
  6. Switch heating, ventilating, and air-conditioning equipment controls to fire-alarm mode.
  7. Recall elevators to primary or alternate recall floors. Coordinate with elevator contractor and section 16723.
  8. Activate emergency shutoffs for gas and fuel supplies.
  9. Record events in the system memory.
  10. Record events by the system printer.
- C. Supervisory signal initiation shall be by one or more of the following devices and actions:
1. Valve supervisory switch.
  2. Low-air-pressure switch of a dry-pipe sprinkler system.
  3. Elevator shunt-trip supervision. Coordinate with elevator contractor and section 16723.
- D. System trouble signal initiation shall be by one or more of the following devices and actions:
1. Open circuits, shorts, and grounds in designated circuits.
  2. Opening, tampering with, or removing alarm-initiating and supervisory signal-initiating devices.
  3. Loss of primary power at fire-alarm control unit.
  4. Ground or a single break in fire-alarm control unit internal circuits.
  5. Abnormal ac voltage at fire-alarm control unit.
  6. Break in standby battery circuitry.
  7. Failure of battery charging.
  8. Abnormal position of any switch at fire-alarm control unit or annunciator.
  9. Fire-pump power failure, including a dead-phase or phase-reversal condition.
  10. Low-air-pressure switch operation on a dry-pipe or pre-action sprinkler system.
- E. System Trouble and Supervisory Signal Actions: Initiate notification appliance and annunciate at fire-alarm control unit and remote annunciator. Record the event on system printer.

## 2.3 CONTROL PANEL (provided by Owner installed by Contractor)

A. **The FACP shall be a Fire-Lite Alarms model MS-9600 and shall contain a microprocessor based Central Processing Unit (CPU).** The CPU shall communicate with and control the following types of equipment used to make up the system: addressable detectors, addressable modules, printer, annunciators, and other system controlled devices.

### B. System Capacity and General Operation

1. The control panel shall provide, or be capable of expansion to 318 addressable detectors and 318 monitor or control modules (636 addressable devices).
2. The Fire Alarm Control Panel shall include a full featured operator interface control and annunciation panel that shall include a backlit, 80-character Liquid Crystal Display, individual, color coded system status LEDs, and an alphanumeric keypad for the Field Programming and control of the Fire Alarm System.
3. All programming or editing of the existing program in the system shall be achieved without special equipment and without interrupting the alarm monitoring functions of the Fire Alarm Control Panel.
4. The FACP shall provide the following features: Maintenance Alert to warn of excessive detector dirt or dust. Detector sensitivity read/test information and System Status Reports to display or print. Smoke Detector Alarm Verification. Pre-signal, meeting NFPA 72 requirements. Rapid manual station reporting (under 3 seconds). Periodic Detector Test, conducted automatically by the control panel every two hours. March time, temporal (ANS I Cadence) and California Code coding options. Walk Test will check for two detectors set to same address.
5. The main CPU shall contain Form-C relay contacts rated at 2.0 amps/30VDC for the following: Alarm, Trouble, Supervisory.
6. The CPU shall contain two Class A programmable Notification Appliance Circuits.

### C. Central Microprocessor

1. The Microprocessor shall communicate with, monitor, and control all external interfaces with the control panel. It shall include EPROM for system program storage; non-volatile memory for building-specific program storage; and a "watch dog" timer circuit to detect and report microprocessor failure.
2. The Microprocessor shall contain and execute all programming for specific action to be taken if an alarm condition is detected by the system. Such programming shall be held in non-volatile programmable memory and shall not be lost if both the system primary and secondary power failure occurs.
3. The Microprocessor Unit shall also provide a Real- Time Clock for time annotation of system displays, printer, and history file.
4. The Microprocessor Unit shall contain flash memory capabilities for easy upload/download for upgrades of software.
5. All clock, date and history files shall be maintained during power loss.

### D. Display

1. The Display shall provide all the controls and indicators used by the system operator and may also be used to program all system operational parameters.
2. The Display shall include status information and custom alphanumeric labels for all Addressable Detectors, Addressable Modules and Software zones.
3. The Display shall provide a 80-character backlit alphanumeric Liquid Crystal Display (LCD). It shall also provide 9 Light-Emitting-Diodes (LEDs), consisting of and not limited to the following: AC POWER, FIRE ALARM, SUPERVISORY, SYSTEM TROUBLE, MAINTENANCE, ALARM SILENCED, DISABLED, BATTERY, and GROUND.
4. The Display shall provide a 25-key touch key-pad with control capability to command all system functions, entry of any alphabetic or numeric information, and field programming. Two different password levels shall be provided to prevent unauthorized system control or programming.
5. The Display shall include the following operator switches: ACKNOWLEDGE/STEP ALARM SILENCE, DRILL, and SYSTEM RESET (also serving as a lamp test switch).

#### E. Signaling Line Circuit Interface

1. The SLC Interface shall provide power to, and communicate with, all of the Addressable Detectors and Addressable Modules over a single pair of wires. This SLC Loop shall be capable of NFPA Style 4, Style 6, or Style 7 operation.
2. The SLC interface shall receive information from all Addressable Devices. This information shall be processed to determine whether normal, alarm, or trouble conditions exist for each detector. This information may also be used for automatic detector testing and for the automatic determination of detector maintenance requirements.
3. The Signaling Line Circuit shall be capable of distances of 10,000 feet (@ 12 AWG, twisted). For retrofit applications, the system shall support up to 3,000 feet of untwisted, unshielded wire. (Loop 1 only)

#### F. Serial Interfaces

1. An E IA-232 interface between the Fire Alarm Control Panel and UL Listed Electronic Data Processing (EDP) peripherals shall be provided. The E IA-232 interface shall allow the use of printers, or for an interface to an off-line PC programmer.
2. An E IA-485 port shall be available for the serial connection of optional remote led-type annunciators. E IA-485 in terminal mode shall allow serial connection of optional LCD, English language remote system displays. LED (per zone or point) annunciators shall also be provided. The maximum distance to the furthest annunciator shall be 3,000 feet. The system shall support a maximum of 32, remote annunciators on a single twisted, shielded pair. The maximum distance to the furthest annunciator shall be 6,000 feet.
3. A PS2/PC keyboard connection shall be provided to support the connection of a PC keyboard for local programming of the fire alarm system.

#### G. Enclosures:

1. The control panel shall be housed in a UL listed cabinet suitable for surface or semi-flush mounting. Cabinet and front shall be corrosion protected.
2. The door shall provide a key lock and shall include a glass or other transparent opening for viewing of all indicators.
3. An optional semi-flush trim ring shall be available for a neat cabinet dress.

H. All interfaces and associated equipment are to be protected so that they will not be affected by voltage surges or line transients consistent with UL standard 864.

Optional plug-in modules shall be provided for NFPA 72 auxiliary and remote station fire alarm systems as well as a Digital Alarm Communicator Transmitter for NFPA 72 Central Station systems. The DACT (Fire-Lite Alarms model UDACT) shall meet all current UL requirements for delayed AC fail reporting and shall be capable of reporting individual signals for all 636 points.

J. Optional modules (FireLite Alarms model ACM-8RF) shall provide eight Form-C relays rated at 5.0 amps (Relays shall track programmable software zones) and (FireLite Alarms model 4XTMF) Municipal box connection and reverse polarity connection.

K. Power Supply:

1. The Power Supply shall operate on 120 VAC, 60 Hz, and shall provide all necessary power for the FACP.
2. It shall provide a minimum of 6.0 amps of usable Notification Appliance power.
3. It shall provide a battery charger for 24 or 60 hours of standby using dual-rate charging techniques for fast battery recharge.
4. It shall provide a very low frequency sweep earth detect circuit, capable of detecting earth faults on sensitive addressable modules.
5. It shall be power-limited using fuse-less, quick-acting electronic circuitry meeting the latest UL requirements.

L. Operators Controls

1. Acknowledge Switch:

- a. Activation of the control panel Acknowledge switch in response to new Alarms and/or Troubles shall silence the local panel piezo electric signal and change the Alarm and Trouble LEDs from flashing mode to steady-ON mode. If multiple Alarm or Trouble conditions exist, depression of this switch shall advance the 80-character LCD display to the next Alarm or Trouble condition.
- b. Depression of the Acknowledge switch shall also silence all remote annunciator piezo sounders.

2. Signal Silence Switch: Activation of the Signal Silence Switch shall cause all programmed Notification Appliances and relays to return to the normal condition after an alarm condition. The selection of Notification circuits and relays that are silenceable by this switch shall be fully field programmable within the confines of all applicable standards. The FACP software shall include silence inhibit, auto-silence timers, and an option to silence horns and keep strobes flashing.

3. System Reset Switch: Activation of the System Reset Switch shall cause all electronically latched initiating devices, appliances or software zones, as well as all associated output devices and circuits, to return to their normal condition. Holding the RESET switch shall perform a Lamp Test function.
4. Drill (Evacuate) Switch: Press and hold of the Drill switch shall activate all Silenceable Notification Appliance circuits. The Drill function shall latch until press of Signal Silence or Reset.

#### M. Printer

1. A printer may be connected to provide hard-copy printout of all changes in status of the system and shall time-stamp such printouts with the current time-of-day and date. The printer shall communicate with the control panel using an interface complying with Electrical Industries Association standard E IA-232D.

#### N. Field Programming

1. The system and its respective devices (i.e. smoke detectors and modules) shall be programmable, configurable and expandable in the field without the need for special tools or electronic equipment and shall not require field replacement of electronic integrated circuits.
2. All programming may be accomplished through the standard FACP built-in keypad. As well through using a PC keyboard (connection provided on UNIMODE-9600 main circuit board.)
3. All field-defined programs shall be stored in non-volatile memory and shall not be lost if AC mains and/or battery is lost.
4. The programming function shall be enabled with a password that may be defined specifically for the system when it is installed. Two levels of password protection shall be provided in addition to a key-lock cabinet. One level is used for status level changes such as zone disable or manual on/off commands. A second (higher-level) is used for actual change of program information.
5. Program edit shall not interfere with normal operation and fire protection. If a fire condition is detected during programming operation, the system shall exit programming and perform fire protection functions as programmed.
6. A special program check function shall be provided to detect common operator errors.
7. An Auto-Program (self-learn) function shall be provided to quickly program initial functions within several seconds. During this operation, smoke detectors connected to the Signaling Line Circuit shall be automatically installed without labor intensive operator key commands and the using additional electronic equipment to program each individual detector.
8. For flexibility, an optional off-line programming function, with batch upload/download, shall also be available.

#### O. Specific System Operations

1. Alarm Verification: The Fire alarm control panel shall have the ability to alarm verify addressable smoke detectors.

2. Point Disable: Any device in the system may be Enabled or Disabled through the system keypad.
3. Point Read: The system shall be able to display or print the following point status diagnostic functions: a. Device Status, b. Device Type, c. Device Label, d. Device Zone Assignments and e. Program Parameters
4. System Status Reports: Upon command from an operator of the system, a status report will be generated and printed, listing all system status.
5. Device Sensitivity Reports: Upon command from the operator, the detectors sensitivity can be read and results printed
6. System History Recording and Reporting: The Fire Alarm Control Panel shall contain a History Buffer that will be capable of storing up to 1,000 system alarms, troubles, or operator actions.
7. Automatic Detector Maintenance Alert: The Fire Alarm Control Panel shall automatically interrogate each Addressable Smoke Detector and shall analyze the detector responses over a period of time. If any addressable Smoke Detector in the system responds with a reading that is below or above normal limits, then the system will enter the Trouble Mode, and the particular detector will be annunciated on the system display, and printed on the optional printer. This feature shall in no way inhibit the receipt of alarm conditions in the system, nor shall it require any special hardware, special tools or computer expertise to perform.
8. Software Zones: The FACP shall provide 99 software zones. All addressable devices may be field programmed, to be grouped into these zones for control activation and annunciation purposes. Systems that utilize limited programmability, such as general alarm operation, are unacceptable.

## **2.4 SYSTEM COMPONENTS**

### **A. Programmable Electronic Sounders**

1. Electronic sounders shall operate on 24 VDC nominal.
2. Electronic sounders shall be field programmable without the use of special tools, to provide slow whoop, continuous, or interrupted tones (Temporal Pattern) with an output sound level of at least 90 dBA measured at 10 feet from the device.
3. Shall be flush or surface mounted as shown on plans.

### **B. Strobe Lights:**

1. Shall operate on 24 VDC nominal.
2. Shall meet the requirements of the ADA (Americans with Disabilities Act) as well as UL Standard 1971.

### **C. Audible/Visual Combination Devices:**

1. Shall meet the applicable requirements of Section A listed above for audibility.
2. Shall meet the requirements of Section B listed above for visibility.

### **D. Addressable Manual Pull Box (Fire-Lite Alarms model BG-12LX)**

1. Addressable Manual Stations shall be provided to connect to the Fire Alarm



Control Panel Signaling Line Circuit (SLC) Loops. Up to 159 addressable manual stations may be connected to each SLC loop.

2. The Manual Pull Box shall, on command from the Control Panel, send data to the panel representing the state of the manual switch. Manual Fire Alarm Stations shall use a key operated test-reset lock, and shall be designed so that after actual emergency operation, they cannot be restored to normal use except by the use of a key.
3. All operated stations shall have a positive, visual indication of operation that cannot be reset without the use of a key.
4. Manual Stations shall be constructed of LEXAN (or polycarbonate equivalent) with clearly visible operating instructions provided on the cover. The word FIRE shall appear on the front of the stations in raised letters, 1.75 inches or larger.
5. Stations shall be suitable for surface mounting, or semiflush mounting as shown on the plans, and shall be installed in accordance with ADA and local codes.
6. The Manual Station shall provide address-setting means using decimal switches. Addressable manual stations that use binary address setting methods, such as a dip switch, are much more difficult to install and are subject to installation error, and are not allowable substitutes.

#### F. Addressable Photoelectric Detectors (Fire-Lite Alarms model SD350)

1. Smoke detectors shall be addressable and shall connect with two wires to the Fire Alarm Control Panel Signaling Line Circuit. Up to 318 addressable detectors may connect to two separate SLC loops.
2. The detectors shall use the photoelectric (light-scattering) principle to measure smoke density.
3. The detectors shall be low profile ceiling-mount and shall include a twist-lock base.
4. The detectors shall provide a test means whereby they will simulate an alarm condition and report that condition to the control panel. Such a test may be initiated at the detector itself (by activating a switch) or initiated remotely on command from the control panel.
5. The detectors shall provide address-setting means on the detector head using decimal switches. Because of the possibility of installation error, systems that use binary jumpers on dipswitches to set the detector address are not acceptable. The detectors shall also store an internal identifying code that the control panel shall use to identify the type of detector.
6. The detectors shall provide an alarm and power LED. The LED shall flash under normal conditions, indicating that the detector is operational and in regular communication with the control panel. The LED is placed into steady illumination by the control panel indicating that an alarm condition has been detected. An output connection shall also be provided in the base to connect an external remote alarm LED (Fire-Lite Alarms model RA400Z).

#### G. Addressable Photoelectric Detectors with Fixed Thermal Sensor (Fire-Lite Alarms model SD350T)

1. Smoke detectors shall be addressable and shall connect with two wires to the Fire

Alarm Control Panel Signaling Line Circuit. Up to 318 addressable detectors with fixed thermal sensors (135 degree F) connect to two SLC loops.

2. The detectors shall use the photoelectric (light-scattering) principal to measure smoke density.
3. The detectors with fixed thermal sensors shall alarm at a fixed temperature of 135 degree F.
4. The detectors shall be ceiling-mount and shall include a twist-lock base.
5. The detectors shall provide a test means whereby they will simulate an alarm condition and report that condition to the control panel. Such a test may be initiated at the detector itself (by activating a switch) or initiated remotely on command from the control panel.
6. The detectors shall provide address-setting means on the detector head using decimal switches. Because of the possibility of installation error, systems that use binary jumpers on dipswitches to set the detector address are not acceptable. Systems that require a special programmer to set the detector address (including temporary connection at the panel) are labor intensive and not acceptable. The detectors shall also store an internal identifying code that the control panel shall use to identify the type of detector.
7. The detectors shall provide an alarm and power LED. The LED shall flash under normal conditions, indicating that the detector is operational and in regular communication with the control panel. The LED is placed into steady illumination by the control panel indicating that an alarm condition has been detected. An output connection shall also be provided in the base to connect an external remote alarm LED (Fire-Lite Alarms model RA400Z).

#### H. Addressable Ionization Smoke Detectors (Fire-Lite Alarms model CP350)

1. Smoke Detectors shall be low profile addressable and connect with two wires to the Fire Alarm Control Panel Signaling Line Circuit. Up to 318 addressable detectors may connect to two SLC loops.
2. The detectors shall use the dual-chamber ionization principal to measure products of combustion.
3. The detectors shall be low profile ceiling-mount and shall include a twist-lock base.
4. The detectors shall provide a test means whereby they will simulate an alarm condition and report that condition to the control panel. Such a test may be initiated at the detector itself, by activating a switch, or may be activated remotely on command from the control panel.
5. The detectors shall provide address-setting means on the detector head using decimal switches. Because of the possibility of installation error, systems that use binary jumpers or dipswitches to set the address are not acceptable. They shall also store an internal identifying code that the control panel shall use to identify the type of detector.
6. The detectors shall provide an alarm and power LED. The LED shall flash under normal conditions. The LED is placed into steady illumination by the control panel, indicating that an alarm condition has been detected. An output connection shall also be provided in the base to connect a remote alarm LED (Fire-Lite

Alarms model RA400Z).

- . Addressable Monitor Module (Fire-Lite Alarms model MMF-300)
  1. Addressable Monitor modules shall be provided to connect one supervised IDC (zone) of conventional Alarm Initiating Devices (any N.O. dry contact device) to the Fire Alarm Control Panel Signaling Line Circuit (SLC) Loop.
  2. The monitor module shall mount in a 4-inch square, 2-1/8" deep electrical box.
  3. The IDC (zone) may be wired for Style D (Class A) or Style B (Class B) operation. The Monitor module shall provide address-setting means using decimal switches and shall also store an internal identifying code that the Fire Alarm Control Panel shall use to identify the type of device. Modules that use binary jumpers or dip-switches are subject to installation errors and are not acceptable. An LED shall be provided that shall flash under normal conditions, indicating that the Monitor module is operational and in regular communication with the control panel.
  4. For difficult to reach areas, the Monitor Module shall be available in a miniature package and shall be no larger than 2-3/4"W x 1-1/4"H x 1/2"D (Fire-Lite Alarms model MMF-301). This version does not support Style D operation or include an LED.
  
- J. Addressable 2-Wire Smoke Detector Monitor Module (Fire-Lite Alarms model MMF-302)
  1. Addressable 2-Wire Smoke Detector Monitor Modules shall be provided to connect one supervised IDC (zone) of two-wire conventional smoke detectors to the Fire Alarm Control Panel Signaling Line Circuit (SLC) Loop.
  2. The monitor module shall mount in a 4-inch square, 2-1/8" deep electrical box.
  3. The monitor module shall provide terminal connections for a resettable external supply voltage to provide power to the IDC (zone) of two-wire smoke detectors.
  4. The IDC (zone) may be wired for Style D (Class A) or Style B (Class B) operation. The monitor module shall provide address-setting means using decimal switches and shall also store an internal identifying code that the Fire Alarm Control Panel shall use to identify the type of device. Modules that use binary jumpers or dip-switches are subject to installation errors and are not acceptable. An LED shall be provided that shall flash under normal conditions, indicating that the Monitor module is operational and in regular communication with the control panel.
  
- K. Addressable Dual-Circuit Monitor Module (Fire-Lite Alarms model MDF-300)
  1. Addressable Dual-Circuit Monitor Modules shall be provided to connect two supervised IDCs (zones) of conventional Alarm Initiating Devices (any N.O. dry contact device) to the Fire Alarm Control Panel Signaling Line Circuit (SLC) Loop.
  2. The-monitor module shall mount in a 4-inch square, 2-1/8" deep electrical box.

3. The IDCs (zones) may be wired for Style B (Class B) operation only. The Monitor module shall provide address-setting means using decimal switches and shall also store an internal identifying code that the Fire Alarm Control Panel shall use to identify the type of device. Modules that use binary jumpers or dip-switches are subject to installation errors and are not acceptable. An LED shall be provided that shall flash under normal conditions, indicating that the Monitor module is operational and in regular communication with the control panel.

L. Addressable Control Module (Fire-Lite Alarms Model CMF-300)

1. Addressable Control Modules shall be provided to supervise and control the operation of one conventional Notification Appliance Circuit (NAC) of compatible, 24 VDC powered, polarized Audio/Visual appliances or audio speakers.
2. The Control Module shall mount in a standard 4-inch square, 2-1/8" deep electrical box or to a surface mounted backbox.
3. The NAC shall wire in a Class B (Style Y) or Class A (Style Z) fashion. Each control module shall support up to 1 Amp of Inductive or 2 Amps of Resistive Audible/Visual signals.
4. Audio/Visual power shall be provided by a separate supervised power Loop from the main Fire Alarm Control Panel or from a supervised, UL listed Remote Power Supply.
5. The Control Module shall provide address-setting means using decimal switches and shall also store an internal identifying code that the Control Panel shall use to identify the type of device. Modules that use binary jumpers or dip-switches are subject to installation errors and are not acceptable. An LED shall be provided that shall flash under normal conditions, indicating that the Control Module is operational and is in regular communication with the control panel.
6. A magnetic test switch shall be provided to test the module without opening or shorting its NAC circuit wiring.

M. Addressable Relay Module (Fire-Lite Alarms model CRF-300)

1. Addressable Relay Modules shall be provided to allow a compatible control panel to switch discrete contacts by code command.
2. The Relay Module shall mount in a standard 4-inch square, 2-1/8" deep electrical box or to a surface mounted backbox.
3. The Relay Module shall provide two isolated sets of Form-C contacts for fan shutdown and other auxiliary control functions.
4. The Relay Module contact ratings shall support up to 1 Amp/30 VDC of Inductive load or 2 Amps/30VDC (coded) of Resistive load (up to 3 Amps in non-coded applications). The relay coil shall be magnetically latched to reduce wiring connection requirements and to insure that 100% of all auxiliary relays or may be energized at the same time on the same pair of wires.
5. The Control Module shall provide address-setting means using decimal switches and shall also store an internal identifying code that the Control Panel shall use to identify the type of device. Modules that use binary jumpers or dip-switches are subject to installation errors and are not acceptable. An LED shall be provided

that shall flash under normal conditions, indicating that the Control Module is operational and is in regular communication with the control panel.

6. A magnetic test switch shall be provided to test the module without opening or shorting its NAC circuit wiring.

N. Isolator Module (Fire-Lite Alarms model I300).

1. Isolator Modules shall be provided to automatically isolate wire-to-wire short circuits on an SLC loop. The Isolator Module shall limit the number of modules or detectors that may be rendered inoperative by a short circuit fault on the SLC Loop. At least one isolator module shall be provided for each floor or protected zone of the building.
2. If a wire-to-wire short occurs, the Isolator Module shall automatically open-circuit (disconnect) the SLC loop. When the short circuit condition is corrected, the Isolator Module shall automatically reconnect the isolated section of the SLC loop.
3. The Isolator Module shall not require any address setting, and its operations shall be totally automatic. It shall not be necessary to replace or reset an Isolator Module after its normal operation.
4. The Isolator Module shall mount in a standard 4-inch deep electrical box or in a surface mounted backbox. It shall provide a single LED that shall flash to indicate that the Isolator is operational and shall illuminate steadily to indicate that a short circuit condition has been detected and isolated.

O. Waterflow Switches (System Sensor WFD Series)

1. Flow switches shall be integral, mechanical, non-coded, non-accumulative retard type.
2. Flow switches shall have an alarm transmission delay time that is conveniently adjustable from 0 to 60 seconds.
3. Flow switches shall be located a minimum of one (1) foot from a fitting that changes the direction of the flow and a minimum of three (3) feet from a valve.

P. Sprinkler and Standpipe Valve Supervisory Switches:

1. Each sprinkler system water supply control valve riser or zone control valve, and each standpipe system riser control valve shall be equipped with a supervisory switch. Standpipe hose valves, and test and drain valves shall not be equipped with supervisory switches.
2. Each Post Indicator Valve (P IV) or main gate valve shall be equipped with a supervisory switch.
3. Mount switch so as not to interfere with the normal operation of the valve and adjust to operate within two revolutions toward the closed position of the valve control, or when the stem has moved no more than one-fifth of the distance from its normal position.
4. The mechanism shall be contained in a weatherproof aluminum housing, that shall provide a 3/4-inch tapped conduit entrance and incorporate the necessary facilities for attachment to the valves.
5. Switch housing to be finished in red baked enamel.

6. The entire installed assembly shall be tamper proof and arranged to cause a switch operation if the housing cover is removed, or if the unit is removed from its mounting.
7. Valve supervisory switches shall be provided and connected under this section and installed by mechanical contractor.

Q. Serial, LED-Type, Remote Annunciation (Fire-Lite Alarms AFM Series)

1. The annunciator shall communicate with the fire alarm control panel via an E IA 485 (ACS mode) communications loop and shall annunciate all zones in the system. Up to 32 annunciators may be connected to the E IA 485 communications loop.
2. The annunciator shall need no more than four wires to connect to the FACP.
3. The annunciator shall provide a red Alarm LED per zone, and a yellow Trouble LED per zone. The annunciator will also have an "ON-LINE" LED, local piezo sounder, local acknowledge/lamp test switch, and custom zone/function identification labels.
4. The annunciator switches may be used for System control such as, Global Acknowledge, Global Signal Silence, and Global System Reset.

R. Serial, LCD-Type, Remote System Display (Fire-Lite Alarms LCD-80 Series)

1. The annunciator shall communicate with the fire alarm control panel via an E IA-485 (Terminal Mode) communications loop and shall include a 80-character, backlit, LCD display which mimics the integral fire alarm control panel LCD display. Up to 32 annunciators may be connected to the E IA-485 communications loop.
2. The annunciator shall require no more than four wires on the communication loop (two for communication, two for supervision) and two additional wires for power.
3. In addition to the LCD, English language display, the annunciator shall also include a Power LED, Alarm LED, Trouble LED and Supervisory LED.
4. A local piezo sounder shall also be included on the annunciator.
5. Switches for Acknowledge/Lamp Test, Silence, Drill and Reset shall be included on the annunciator protected from unauthorized usage by a key switch (keyed alike to the host FACP).

S. Elevator Recall:

1. Smoke detectors at the following locations shall initiate automatic elevator recall. Alarm-initiating devices, except those listed, shall not start elevator recall.
  - a. Elevator lobby detectors except the lobby detector on the designated floor.
  - b. Smoke detector in elevator machine room.
  - c. Smoke detectors in elevator hoistway.
2. Elevator lobby detectors located on the designated recall floors shall be programmed to move the cars to the alternate recall floor.
3. Water-flow alarm connected to sprinkler in an elevator shaft and elevator machine room shall shut down elevators associated with the location without time delay.
  - a. Water-flow switch associated with the sprinkler in the elevator pit may have a delay to allow elevators to move to the designated floor.

4. Coordinate with elevator contractor and Section 16723.

## **2.5 BATTERIES**

- A. Shall be 12 volt, Gell-Cell type (two required).
- B. Batteries (two required) shall have sufficient capacity to power the fire alarm system for not less than twenty-four hours plus 5 minutes of alarm upon a normal AC power failure.
- C. The batteries are to be completely maintenance free. No liquids are required. Fluid level checks refilling, spills and leakage shall not be required.

## **2.6 MAGNETIC DOOR HOLDERS**

- A. Description: Units are equipped for wall or floor mounting as indicated and are complete with matching doorplate.
  1. Electromagnet: Requires no more than 3 W to develop 25-lbf holding force.
  2. Wall-Mounted Units: Flush mounted unless otherwise indicated.
  3. Rating: 120-V ac, 24-V ac or dc.

## **2.7 INSPECTION BAR CODES**

- A. Inspection bar codes shall be installed on all initiating devices, annunciators, control panels and power supplies.
- B. Inspection bar codes used by the system must utilize Code 3 of 9 or other approved format, and contain a minimum of eight (8) digits that comprise a unique serial identifier within the Web-based Reporting System. There shall be no duplication of serial numbers. Serial number shall be printed below the bar code for identification purposes.
- C. Inspection bar codes shall be limited in size to no more than 2" (5cm) in width, and 3/8" (2 cm), in height and shall include a Mylar® or other protective coating to protect the bar code from fading due to sunlight or exposure.
- D. Inspection bar codes shall be installed on each device in such a manner as to require that scanning of the bar code take place no further than 12" from the device during inspection.

## **2.8 WIRE AND CABLE**

- A. Signaling Line Circuits — Annunciator Data: Twisted pair, not less than No. 18Awg or as recommended by the manufacturer.

- B. Signaling Line Circuits — Intelligent Loop: Twisted pair, not less than No. 18Awg or as recommended by the manufacturer.
  - 1. Circuit Integrity Cable: Provide as required to meet NFPA or Local Code requirements.
  - 2. C I Cable shall meet National Electrical Code, power limited fire alarm service.
  - 3. Existing wiring may be reused as long as it is in good shape, free of electrical noise, and meets the requirements of National Electrical Code and local AHJ.
  
- C. Notification Appliance Circuits
  - 1. Horn and Visual. 12AWG THHN or FPLP or as recommended by the manufacturer.

### **PART 3 - EXECUTION**

#### **3.1 EQUIPMENT INSTALLATION**

- A. Comply with NFPA72 for installation of fire-alarm equipment.
  
- B. Equipment Mounting: Install fire-alarm control unit on finished floor with tops of cabinets not more than 72 inches above the finished floor.
  
- C. Smoke- or Heat-Detector Spacing:
  - 1. Comply with NFPA72, "Smoke-Sensing Fire Detectors" Section in the "Initiating Devices" Chapter, for smoke-detector spacing.
  - 2. Comply with NFPA72, "Heat-Sensing Fire Detectors" Section in the "Initiating Devices" Chapter, for heat-detector spacing.
  - 3. Smooth ceiling spacing shall not exceed 30 feet.
  - 4. Spacing of detectors for irregular areas, for irregular ceiling construction, and for high ceiling areas shall be determined according to NFPA 72.
  - 5. HVAC: Locate detectors not closer than 3 feet from air-supply diffuser or return-air opening.
  - 6. Lighting Fixtures: Locate detectors not closer than 12 inches from any part of a lighting fixture.
  
- D. Duct Smoke Detectors: Comply with NFPA72 and NFPA90A. Install sampling tubes so they extend the full width of duct.
  
- E. Heat Detectors in Elevator Shafts: Coordinate temperature rating and location with sprinkler rating and location with elevator contractor.
  
- F. Single-Station Smoke Detectors: Where more than one smoke alarm is installed within a dwelling or suite, they shall be connected so that the operation of any smoke alarm causes the alarm in all smoke alarms to sound.
  
- G. Notification Appliance Devices: Install between 80 and 96 inches on the wall or ceiling



mounted as noted on the drawings.

- H. Fire-Alarm Control Unit: Surface mounted, with tops of cabinets not more than 72 inches above the finished floor.
- . Annunciator: Install with top of panel not more than 56 inches above the finished floor. Coordinate final location with owner.

### **3.2 CONNECTIONS**

- A. For fire-protection systems related to doors in fire-rated walls and partitions and to doors in smoke partitions, comply with requirements in Division 8 Section "Door Hardware." Connect hardware and devices to fire-alarm system.
  - 1. Verify that hardware and devices are NRTL listed for use with fire-alarm system in this Section before making connections.
- B. Make addressable connections with a supervised interface device to the following devices and systems. Install the interface device less than 3 feet from the device controlled. Make an addressable confirmation connection when such feedback is available at the device or system being controlled.
  - 1. Smoke dampers in air ducts of designated air-conditioning duct systems.
  - 2. Alarm-initiating connection to elevator recall system and components. Coordinate with elevator contractor and section 16723.
  - 3. Alarm-initiating connection to activate emergency lighting control.
  - 4. Alarm-initiating connection to activate emergency shutoffs for gas and fuel supplies.
  - 5. Supervisory connections at valve supervisory switches.
  - 6. Supervisory connections at low-air-pressure switch of each dry-pipe sprinkler system.
  - 7. Supervisory connections at elevator shunt trip breaker. Coordinate with elevator contractor and section 16723.
  - 8. Supervisory connections at fire-pump power failure including a dead-phase or phase-reversal condition.
  - 9. Supervisory connections at fire-pump engine control panel.

### **3.3 IDENTIFICATION**

- A. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Division 16 Section "Electrical Identification."
- B. Install framed instructions in a location visible from fire-alarm control unit.
- C. All initiating devices shall have bar code label installed visibly on the device. This bar code shall be used for digital inspection of the fire alarm system using [Building Reports.Com](http://BuildingReports.Com).

### 3.4 GROUNDING

- A. Ground fire-alarm control unit and associated circuits; comply with IEEE 1100. Install a ground wire from main service ground to fire-alarm control unit.

### 3.5 FIELD QUALITY CONTROL

- A. Field tests shall be witnessed by Architect, Engineer and authorities having jurisdiction.
- B. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections.
- C. Perform tests and inspections.
  - 1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
- D. Tests and Inspections:
  - 1. Visual Inspection: Conduct visual inspection prior to testing.
    - a. Inspection shall be based on completed Record Drawings and system documentation that is required by NFPA72 in its "Completion Documents, Preparation" Table in the "Documentation" Section of the "Fundamentals of Fire Alarm Systems" Chapter.
    - b. Comply with "Visual Inspection Frequencies" Table in the "Inspection" Section of the "Inspection, Testing and Maintenance" Chapter in NFPA72; retain the "Initial/Reacceptance" column and list only the installed components.
  - 2. System Testing: Comply with "Test Methods" Table in the "Testing" Section of the "Inspection, Testing and Maintenance" Chapter in NFPA72.
  - 3. Test audible appliances for the public operating mode according to manufacturer's written instructions. Perform the test using a portable sound-level meter complying with Type 2 requirements in ANSI S1.4.
  - 4. Test audible appliances for the private operating mode according to manufacturer's written instructions.
  - 5. Test visible appliances for the public operating mode according to manufacturer's written instructions.
  - 6. Factory-authorized service representative shall prepare the "Fire Alarm System Record of Completion" in the "Documentation" Section of the "Fundamentals of Fire Alarm Systems" Chapter in NFPA72 and the "Inspection and Testing Form" in the "Records" Section of the "Inspection, Testing and Maintenance" Chapter in NFPA72.
- E. Reacceptance Testing: Perform reacceptance testing to verify the proper operation of added or replaced devices and appliances.

- F. Fire-alarm system will be considered defective if it does not pass tests and inspections.
- G. Prepare test and inspection reports.
- H. Maintenance Test and Inspection: Perform tests and inspections listed for weekly, monthly, quarterly, and semiannual periods. Use forms developed for initial tests and inspections.
  - . Annual Test and Inspection: During the warranty period, each year test fire-alarm system complying with visual and testing inspection requirements in NFPA72. Use forms developed for initial tests and inspections.
- J. Detector Sensitivity Testing: During the warranty period, each year the contractor is to perform detector sensitivity testing and provide report to the Owner. Unless, the system is UL Listed to perform automatic sensitivity testing without any manual intervention and should detector fall outside of sensitivity window, the system will automatically indicated a devices trouble. A copy of UL letter is to be provided as proof of system operation

### **3.6 DEMONSTRATION**

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain fire-alarm system for a minimum of one working day.

**END OF SECTION 16721**

## SECTION 16723—FIRE ALARM SYSTEM EXTENSION

### PART 1 — GENERAL

A certified fire alarm installation firm will make alterations to any existing fire system, or install a system, to recall the elevators in the event of a fire. The system shall conform to the following:

#### 1.01 DESCRIPTION

##### A. Automatic Fire Alarm Initiating Devices

1. Smoke detectors are required in the elevator machine room, the top of the hoistway if there are fire sprinklers at the top of the hoistway, and all fully enclosed elevator lobbies.
2. Heat detectors rated for open-air environments are required in all open-air lobbies.

#### 1.02 SYSTEM OPERATION

- ##### A. Fire Alarm system supervisory faults, such as shorts, opens, and grounds in conductors, operating power failure, or faults within supervised devices, shall cause an audible and visual trouble indication at the control panel. It shall be possible to silence the audible trouble signal once the trouble is correct. If the control panel is not mounted in a common or occupied area, a remote audible and visual trouble indication shall be located in a common or occupied area.
- ##### B. Manual: Upon activation of the fire alarm system by any smoke detector in the elevator machine room or hoistway, the following shall take place;
1. Initiate Phase I Recall of the elevators to the lowest landing — Primary recall floor
  2. Flash the visual "Fireman's Hat" indicators in both elevator cars.
- ##### C. Upon activation of the fire alarm system by an automatic fire initiating device (smoke detector or heat detector) in the elevator lobbies directly in front of the elevator entrance at the lowest level, the following shall take place;
1. Initiate Phase I Recall of the elevators to the 2<sup>nd</sup> landing — Alternate recall floor (not the Mezzanine).
- ##### D. Upon activation of the fire alarm system by an automatic fire initiating device in the elevator lobbies directly in front of the elevator entrances at levels other than the lowest landing or Primary Recall Floor, the following shall take place;
1. Initiate Phase I Recall of the elevators to the lowest landing — Primary recall floor

1.03 WIRING

- A. All fire alarm system wiring within the elevator spaces shall be installed in conduit. All work and components required for the existing system to accept the additional components shall be included or not specifically specified or shown for a complete and operable system. Fire alarm system wiring shall be in accordance with NFPA 70-2008.
- B. Device and wiring shall be compatible with and UL listed for use on any existing system.

PART 2- PRODUCTS

2.01 AUTOMATIC FIRE ALARM INITIATING DEVICES

- A. General: The detectors shall meet the requirements of NFPA-72, National Fire Alarm Code.

2.02 WIRING

- A. All conductors installed shall be of quantity and color code required to match the existing fire alarm system.

PART 3 - INSTALLATION

3.01 COORDINATION

- A. It will be the Fire Alarm Contractor's responsibility to coordinate components being furnished under this contract with the existing system. Failure of the contractor to thoroughly investigate existing conditions shall not warrant additional expense to the Owner.

3.02 CERTIFICATION

- A. Provide fire alarm certification by the fire alarm system contractor in accordance with NFPA 72 and label in compliance with Chapter 4A-48 F.A.C.

3.04 ELEVATOR RECALL AND DETECTION SYSTEM

- A. Installation: Contractor shall provide all conduit wiring and associated devices and detectors for Phase I recall. Three circuits with dry contacts per the elevator Contractor's requirements will be provided to provide compliance with 2.01 above.

END OF SECTION 16723