

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 14-C-00053

DOWNTOWN RIVERWALK FROM MACDILL PARK TO CURTIS HIXON WATERFRONT PARK - ELEVATOR

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

JANUARY 2016

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NOTICE TO BIDDERS
CITY OF TAMPA, FLORIDA

Contract 14-C-00053; DOWNTOWN RIVERWALK FROM MACDILL PARK TO
CURTIS HIXON WATERFRONT PARK – ELEVATOR

Sealed Proposals will be received by the City of Tampa no later than 1:30 P.M., February 16, 2016, in the 4th 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, construction of a hydraulic elevator and lobby building on the Riverwalk - Kennedy Boulevard Bridge Segment, including concrete, stone wall cladding system/stone panels, perforated metal screen wall panels, exterior painting electrical work, with all associated work required for a complete project in accordance with the Contract Documents.

A Pre-Bid Conference will be held, in the 4th Floor Conference Room, Tampa Municipal Office Building, 306 E. Jackson Street.

A contractor must be pre-qualified in accordance with Rule Chapter 14-22 on the date of the Bid Opening or provide sufficient evidence of qualifications within ten (10) days thereof. All bidders must provide Certification of Current Capacity and Status of Contracts on Hand on the day of Bid Opening.

The Instructions to Bidders, Proposal, Form of Bid Bond, Agreement, Form of Public Construction Bond, Specifications, Plans and other Contract Documents may be downloaded from the website at: <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 with FDOT concurrence. 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:

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

NOTICE TO BIDDERS
CITY OF TAMPA, FLORIDA

Contract 14-C-00053; DOWNTOWN RIVERWALK FROM MACDILL PARK TO
CURTIS HIXON WATERFRONT PARK – ELEVATOR

“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.

Posting will provide notice of the City of Tampa's intent to award a contract or to reject all bids. By calling the Contract Administration Department at 813- 274-8456, information concerning the posted projects can be obtained. Bidders are solely responsible for timely monitoring or otherwise verifying on which of the specified alternate posting dates the post of award or reject of all bids actually occurs.

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., three (3) 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.

Bidders are hereby notified that in any contract entered into pursuant to this notice, disadvantaged (DBE's), women or minority business enterprises (DBE's) will be afforded full opportunity to bid and will not be discriminated against on the grounds of race, religion, sex, color or national origin in consideration for an award.

Technical questions - contractadministration@tampagov.net
(Budget: \$425,000)

INSTRUCTIONS TO BIDDERS
SECTION 1 - SPECIAL INSTRUCTIONS

I-1.01 GENERAL:

The proposed work is the Downtown Riverwalk from MacDill Park to Curtis Hixon Waterfront Park – Elevator 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. 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 270 consecutive 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 DISADVANTAGED BUSINESS ENTERPRISES (DBE) / BID OPPORTUNITY DATA COLLECTION:

The State's Disadvantaged Business Enterprises applicable rules and regulations are by reference made a part hereof and bidders must comply therewith. The overall DBE program goal is 9.91%, which the FDOT believes may be achieved entirely through race neutral means. The City supports the utilization of small and disadvantaged businesses on construction projects, and encourages bidders to make all reasonable efforts to obtain participation of these businesses on this project.

The City's Equal Business Opportunity Program forms are provided for data collection purposes only. The FDOT Disadvantaged Business Enterprises rules and regulations apply.

FDOT must maintain a statewide database of all firms that are participating or attempting to participate in FHWA-assisted contracts. The list must include all firms that bid on prime contracts or bid or quote subcontracts on FHWA-assisted projects, including both DBEs and non-DBEs. The Bid Opportunity List is used to record bidders' information for all subcontractors or sub consultants who submitted bids to primes. All contractors must enter their bid opportunity information in the Equal Opportunity Compliance (EOC) System <http://www.dot.state.fl.us/equalopportunityoffice/eoc.shtm> within 3 business days of submission of the bid or Proposal for all subcontractors or subconsultants who quoted bids for FHWA-assisted projects.

Note: All new Primes submitting a bid will need to apply for an EOC UserID and Password, <http://www.dot.state.fl.us/equalopportunityoffice/eoc.shtm> The FDOT LAP Contract Number for this project is G0421.

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.

I-1.13 AGREEMENT

Section 2 – Powers of the City's Representatives

Add the following:

Article 2.05 CITY'S TERMINATION FOR CONVENIENCE:

INSTRUCTIONS TO BIDDERS
SECTION 1 - SPECIAL INSTRUCTIONS

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, 1st Paragraph, 1st 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

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

INSTRUCTIONS TO BIDDERS
SECTION 1 - SPECIAL INSTRUCTIONS

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 CONTRACT EXCLUSIONS: *FOR FDOT CONTRACTS ONLY*

Contractor purchased equipment for State or local ownership is expressly excluded from this Contract.

Local hiring preference is expressly excluded from this Contract.

Owner force account contracting is expressly excluded from this Contract.

Public agencies in competition with the private sector are expressly excluded from this Contract.

Publicly-owned equipment is expressly excluded from this Contract.

Salvage credits are expressly excluded from this Contract.

State or local preferences are expressly excluded from this Contract.

Nothing in the contract is to be construed as limiting the Proposal to domestic-owned contractors only.
The Proposal does not include the Florida orders on business with Syria, Cuba, Iran, and Sudan.

I-1.20 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.

I-1.21 INSTRUCTION TO BIDDERS:
I-2.05 LAWS AND REGULATIONS
Replace with the following:

The Bidder who is awarded the Contract must comply with and all Federal laws, 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-1.22 STANDARIZED CHANGED CONDITIONS
23 CFR 635.109 is included by reference and is applicable where not already covered by the Agreement.

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)

Contract 14-C-00053; Downtown Riverwalk from MacDill Park to Curtis Hixon Waterfront Park – Elevator

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	The work includes the furnishing of all labor, equipment, and material for the construction of a hydraulic elevator and lobby building on the Riverwalk - Kennedy Boulevard Bridge Segment, including concrete, stone wall cladding system/stone panels, perforated metal screen wall panels, exterior painting, electrical work, any allowances that may be listed in Section 01020, and with all associated work required for a complete project in accordance with the Contract Documents.	
		_____ _____ dollars	
		and _____ cents	
	(BASE BID)	LS	\$ _____

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) for at least five (5) percent of the total amount of the Proposal which check shall become the property of the 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:

TAMPA BID BOND

Contract 14-C-00053; Downtown Riverwalk from MacDill Park to Curtis Hixon Waterfront Park – Elevator

KNOW ALL MEN BY THESE PRESENTS, that we, _____

_____ (hereinafter called the Principal) and _____

(hereinafter called the Surety) a C orporation 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 14-C-00053, Downtown Riverwalk from MacDill Park to Curtis Hixon Waterfront Park – Elevator.

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.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
LAP CERTIFICATION OF CURRENT CAPACITY

CONFIDENTIAL

For bids to be received on _____
(Letting Date)

Fill in your FDOT Vendor Number VF _____ (Only applicable to FDOT pre-qualified contractors)
--

CERTIFICATE

I hereby certify that the amount of any proposal submitted by this bidder for the above letting does not exceed the amount of the Firm's CURRENT CAPACITY (maximum capacity rating less total uncompleted work).

The total uncompleted work as shown on
the "Status of Contracts on Hand" report (page 2) \$ _____

I further certify that the "Status of Contracts on Hand" report (page 2) was prepared as follows:

1. If the letting is before the 25th day of the month, the certificate and report reflect the uncompleted work as of the 15th day of the month, last preceding the month of the letting.
2. If the letting is after the 25th day of the month, the certificate and report reflects the uncompleted work in progress as of the 15th day of the month of the letting.
3. All new contracts (and subcontracts) awarded earlier than five days before the letting date are included in the report and charged against our total rating.

I certify that the information above is correct.

Sworn to and subscribed this _____ day
of _____, 20 _____

NAME OF FIRM
By: _____

Title

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
**NON-COLLUSION DECLARATION AND
COMPLIANCE WITH 49 CFR § 29**

ITEM/SEGMENT NO.: _____
F.A.P. NO.: _____
MANAGING DISTRICT: _____
PARCEL NO.: _____
COUNTY OF: _____
BID LETTING OF: _____

I, _____, hereby declare that I am
(NAME)
_____ of _____
(TITLE) (FIRM)
of _____
(CITY AND STATE)

and that I am the person responsible within my firm for the final decision as to the price(s) and amount of this Bid on this State Project.

I further declare that:

1. The prices(s) and amount of this bid have been arrived at independently, without consultation, communication or agreement, for the purpose of restricting competition with any other contractor, bidder or potential bidder.
2. Neither the price(s) nor the amount of this bid have been disclosed to any other firm or person who is a bidder or potential bidder on this project, and will not be so disclosed prior to the bid opening.
3. No attempt has been made or will be made to solicit, cause or induce any other firm or person to refrain from bidding on this project, or to submit a bid higher than the bid of this firm, or any intentionally high or non-competitive bid or other form of complementary bid.
4. The bid of my firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary bid.
5. My firm has not offered or entered into a subcontract or agreement regarding the purchase of materials or services from any firm or person, or offered, promised or paid cash or anything of value to any firm or person, whether in connection with this or any other project, in consideration for an agreement or promise by any firm or person to refrain from bidding or to submit a complementary bid on this project.
6. My firm has not accepted or been promised any subcontract or agreement regarding the sale of materials or services to any firm or person, and has not been promised or paid cash or anything of value by any firm or person, whether in connection with this or any other project, in consideration for my firm's submitting a complementary bid, or agreeing to do so, on this project.
7. I have made a diligent inquiry of all members, officers, employees, and agents of my firm with responsibilities relating to the preparation, approval or submission of my firm's bid on this project and have been advised by each of them that he or she has not participated in any communication, consultation, discussion, agreement, collusion, act or other conduct inconsistent with any of the statements and representations made in this Declaration.
8. As required by Section 337.165, Florida Statutes, the firm has fully informed the Department of Transportation in writing of all convictions of the firm, its affiliates (as defined in Section 337.165(l)(a), Florida Statutes), and all directors, officers, and employees of the firm and its affiliates for violation of state or federal antitrust laws with respect to a public contract or for violation of any state or federal law involving fraud, bribery, collusion, conspiracy or material misrepresentation with respect to a public contract. This includes disclosure of the names of current employees of the firm or affiliates who were convicted of contract crimes while in the employ of another company.

9. I certify that, except as noted below, neither my firm nor any person associated therewith in the capacity of owner, partner, director, officer, principal, investigator, project director, manager, auditor, and/or position involving the administration of Federal funds:

- (a) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions, as defined in 49 CFR §29.110(a), by any Federal department or agency;
- (b) has within a three-year period preceding this certification been convicted of or had a civil judgment rendered against him or her for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a Federal, State or local government transaction or public contract; violation of Federal or State antitrust statutes; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property;
- (c) is presently indicted for or otherwise criminally or civilly charged by a Federal, State or local governmental entity with commission of any of the offenses enumerated in paragraph 9(b) of this certification; and
- (d) has within a three-year period preceding this certification had one or more Federal, State or local government public transactions terminated for cause or default.

10. I(We), certify that I(We), shall not knowingly enter into any transaction with any subcontractor, material supplier, or vendor who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this contract by any Federal Agency unless authorized by the Department.

Where I am unable to declare or certify as to any of the statements contained in the above stated paragraphs numbered (1) through (10), I have provided an explanation in the "Exceptions" portion below or by attached separate sheet.

EXCEPTIONS:

(Any exception listed above will not necessarily result in denial of award, but will be considered in determining bidder responsibility. For any exception noted, indicate to whom it applies, initiating agency and dates of agency action. Providing false information may result in criminal prosecution and/or administrative sanctions.)

I declare under penalty of perjury that the foregoing is true and correct.

CONTRACTOR: _____ (Seal)

BY: _____
NAME AND TITLE PRINTED

WITNESS: _____

BY: _____
SIGNATURE

WITNESS: _____

Executed on this _____ day of _____, _____

**FAILURE TO FULLY COMPLETE AND EXECUTE THIS DOCUMENT
MAY RESULT IN THE BID BEING DECLARED NONRESPONSIVE**

REQUIRED CONTRACT PROVISIONS

This certification applies to subcontractors, material suppliers, vendors and other lower tier participants.

- Appendix B of 49 CFR Part 29 –

Appendix B—Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion—Lower Tier Covered Transactions

Instructions for Certification

1. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.
2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
3. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
4. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to whom this proposal is submitted for assistance in obtaining a copy of those regulations.
5. The prospective lower tier participant agrees by submitting this proposal that it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
6. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.
8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
9. Except for transactions authorized under paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion—Lower Tier Covered Transactions

- (1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntary excluded from participation in this transaction by any Federal department or agency.
- (2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

**CERTIFICATION REGARDING DEBARMENT, SUSPENSION,
INELIGIBILITY AND VOLUNTARY EXCLUSION – LOWER TIER
COVERED TRANSACTIONS
FOR FEDERAL AID CONTRACTS**
(Compliance with 49 CFR, Section 29.511)
(Appendix B Certification]

It is certified that neither the below identified firm nor its principals are presently suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

Name of Consultant:

By _____
Authorized Signature

Date: _____

Title: _____

Instructions for Certification

1. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.
2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
3. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or had become erroneous by reason of changed circumstances.
4. The terms *covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal, and voluntarily excluded*, as used in this clause, have the meaning set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
5. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is proposed for debarment under 48 CFR part 9, subpart 9.4, debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the Department or agency with which this transaction originated.
6. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled *Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transaction*, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not proposed for debarment under 48 CFR part 9, subpart 9.4, debarred, suspended, ineligible, or voluntarily excluded from covered transactions, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the List of Parties Excluded from Federal Procurement and Nonprocurement Programs.
8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
9. Except for transactions authorized under paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is proposed for debarment under 48 CFR part 9, subpart 9.4, suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which the transaction originated may pursue available remedies, including suspension and/or debarment.

**CERTIFICATION FOR DISCLOSURE OF LOBBYING ACTIVITIES
ON FEDERAL-AID CONTRACTS
(Compliance with 49CFR, Section 20.100 (b))**

The prospective participant certifies, by signing this certification, that to the best of his or her knowledge and belief:

(1) No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities", in accordance with its instructions. (Standard Form-LLL can be obtained from the Florida Department of Transportation's Professional Services Administrator or Procurement Office.)

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The prospective participant also agrees by submitting his or her proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such subrecipients shall certify and disclose accordingly.

Name of Consultant:

By: _____ Date: _____ Authorized Signature

Title: _____

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
DISCLOSURE OF LOBBYING ACTIVITIES

375-030-34
 PROCUREMENT
 04/14

1. Type of Federal Action: a. contract b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	2. Status of Federal Action: a. bid/offer/application b. initial award c. post-award	3. Report Type: a. initial filing b. material change For Material Change Only: Year: _____ Quarter: _____ Date of last report: _____ (mm/dd/yyyy)
4. Name and Address of Reporting Entity: <input type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier _____, <i>if known:</i> _____ _____ _____ Congressional District, <i>if known:</i> 4c _____	5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime: _____ _____ _____ Congressional District, <i>if known:</i> _____	
6. Federal Department/Agency: _____ _____	7. Federal Program Name/Description: _____ _____ CFDA Number, <i>if applicable:</i> _____	
8. Federal Action Number, if known: _____	9. Award Amount, if known: \$ _____	
10. a. Name and Address of Lobbying Registrant <i>(if individual, last name, first name, MI):</i> _____ _____ _____	b. Individuals Performing Services <i>(including address if different from No. 10a)</i> <i>(last name, first name, MI):</i> _____ _____ _____	
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.	Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date (mm/dd/yyyy): _____	
Federal Use Only:	Authorized for Local Reproduction Standard Form LLL (Rev. 7-97)	

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the fullname, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

(b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).
11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503.

**CERTIFICATION
COMPLIANCE WITH EQUAL EMPLOYMENT OPPORTUNITY (EEO)
PROVISIONS ON FEDERAL AID CONTRACTS**

FIN PROJECT I.D. _____ DATE _____
 _____ CONTRACT NO. _____

_____, prime contractor
 for the above referenced contract, hereby certifies that this company and all of its subcontractors have made every Good Faith Effort to comply with the EEO provisions of FHWA Form-1273 (Section II. Nondiscrimination and Section III. Nonsegregated facilities) on this contract.

Exception:

The following subcontractor(s) have been found to be in noncompliance with the provisions stated above. Attached is notification sent to the respective subcontractor(s) explaining their noncompliance with these provisions.

Subcontractor Name _____

Subcontractor Name _____

Street Address _____

Street Address _____

City/State/Zip _____

City/State/Zip _____

State of Florida

County of _____

Sworn to and subscribed before me this _____ day

of _____, by _____

(Print name of person signing Certification)

A false statement or omission made in connection with this certification is sufficient cause for suspension, revocation, or denial of qualification to bid, and a determination of nonresponsibility, and may subject the person and/or entity making the false statement to any and all civil and criminal penalties available pursuant to applicable Federal and State law.

Notary Public _____

Contractor _____

Commission Expires _____

By _____

Personally Known OR Produced Identification

Title _____

Type of Identification Produced _____

Instructions:

1. Attach copy of any notifications of noncompliance sent to each applicable subcontractor
2. List the subcontractors found not in compliance at the time of this certification.
3. A separate certification is required for each contract.
4. To be signed by an officer or director of the Contractor with the authority to bind the Contractor and notarized.
5. To avoid delay in payment, certification must be submitted to the Project Engineer no later than the Friday before the monthly estimate cutoff date (generally the 3rd Sunday of the month).

7-25 Equal Employment Opportunity Requirements.

7-25.1 **Equal Employment Opportunity Policy:** Accept as the operating policy, the following statement which is designed to further the provision of equal employment opportunity to all persons without regard to their age, race, color, religion, national origin, sex, or disability and to promote the full realization of equal employment opportunity through a positive continuing program:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their age, race, religion, color, national origin, sex, or disability. Such action must include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training."

7-25.2 **Equal Employment Opportunity Officer:** Designate and make known to the Department's contracting officers an equal employment opportunity officer (hereinafter referred to as the EEO Officer) who must be capable of effectively administering and promoting an active Contractor program employment opportunity and who must be assigned adequate authority and responsibility to do so.

7-25.3 **Dissemination of Policy:** All members of the Contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the Contractor's equal employment opportunity policy and contractual responsibilities.

7-25.4 **Recruitment:** When advertising for employees, include in all advertisements for employees the notation "An Equal Opportunity Employer".

7-25.5 **Personnel Actions:** Establish and administer wages, working conditions, employee benefits, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination without regard to age, race, color, religion, national origin, sex, or disability.

Follow the following procedures:

- (1) Conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
- (2) Periodically evaluate the spread of wages paid with each classification to determine any evidence of discriminatory wage practices.
- (3) Periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action must include all affected persons.
- (4) Investigate all complaints of alleged discrimination made in connection with obligations under this Contract, attempt to resolve such complaints, and take appropriate corrective action. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action must include such other persons. Upon completion of each investigation inform every complainant of all of the avenues of appeal.

7-25.6 Subcontracting: Use the best efforts to ensure subcontractor compliance with their equal employment opportunity policy.

7-25.7 Records and Reports: Keep such records as are necessary to determine compliance with the equal employment opportunity obligations. The records kept will be designed to indicate the following:

(1) The number of minority and nonminority group members employed in each work classification on the project.

(2) The progress and efforts being made in cooperation with unions to increase minority group employment opportunities (applicable only to Contractors who rely in whole or in part on unions as a source of their work force).

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority group employees as deemed appropriate to comply with their Equal Employment Opportunity Policy.

(4) The progress and efforts being made in securing the services of minority group subcontractors or subcontractors with meaningful minority group representation among their employees as deemed appropriate to comply with their Equal Employment Opportunity Policy.

All such records must be retained for a period of three years following completion of the contract work and be available at reasonable times and places for inspection by authorized representatives to the Department and the Federal Highway Administration.

Upon request, submit to the Department a report of the number of minority and nonminority group employees currently engaged in each work classification required by the Contract work.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
DRUG-FREE WORKPLACE PROGRAM CERTIFICATION

375-040-18
PROCUREMENT
06/12

287.087 Preference to businesses with drug-free workplace programs. --Whenever two or more bids, proposals, or replies that are equal with respect to price, quality, and service are received by the state or by any political subdivision for the procurement of commodities or contractual services, a bid, proposal, or reply received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. In order to have a drug-free workplace program, a business shall:

(1) Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

(2) Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

(3) Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).

(4) In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than 5 days after such conviction.

(5) Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community by, any employee who is so convicted.

(6) Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

Does the individual responding to this solicitation certify that their firm has implemented a drug-free workplace program in accordance with the provision of Section 287.087, Florida Statutes, as stated above?

YES

NO

NAME OF BUSINESS: _____

**LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – E-VERIFY.
(REV 6-13-11) (FA 6-16-11) (1-15)**

SECTION 7 is expanded by the following new Article:

7-28 E-Verify.

The Contractor shall utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Contractor during the term of the Contract and shall expressly require any subcontractors performing work or providing services pursuant to the Contract to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the Contract term.

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

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

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

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

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

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

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

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

2. Withholding

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

3. Payrolls and basic records

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

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

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

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

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

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

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

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

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

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

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

TITLE VI/ NONDISCRIMINATION ASSURANCE

Pursuant to Section 9 of US DOT Order 1050.2A, the _____ assures the Florida Department of Transportation (FDOT) that no person shall on the basis of race, color, national origin, sex, age, disability, family or religious status, as provided by Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, the Florida Civil Rights Act of 1992 and other nondiscrimination authorities be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination or retaliation under any program or activity.

The _____ further assures FDOT that it will undertake the following with respect to its programs and activities:

1. Designate a Title VI Liaison that has a responsible position within the organization and access to the Recipient's Chief Executive Officer.
2. Issue a policy statement signed by the Chief Executive Officer, which expresses its commitment to the nondiscrimination provisions of Title VI. The policy statement shall be circulated throughout the Recipient's organization and to the general public. Such information shall be published where appropriate in languages other than English.
3. Insert the clauses of *Appendices A and E* of this agreement in every contract subject to the Acts and the Regulations
4. Develop a complaint process and attempt to resolve complaints of discrimination against sub-recipients. Complaints against the Recipient shall immediately be forwarded to the FDOT District Title VI Coordinator.
5. Participate in training offered on Title VI and other nondiscrimination requirements.
6. If reviewed by FDOT or USDOT, take affirmative action to correct any deficiencies found within a reasonable time period, not to exceed ninety (90) calendar days.
7. Have a process to collect racial and ethnic data on persons impacted by your agency's programs.

THIS ASSURANCE is given in consideration of and for the purpose of obtaining any and all federal funds, grants, loans, contracts, properties, discounts or other federal financial assistance under all programs and activities and is binding. The person whose signature appears below is authorized to sign this assurance on behalf of the Recipient.

Dated _____

by _____,
Chief Executive Officer

APPENDICES A and E

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

- (1.) **Compliance with Regulations:** The Contractor shall comply with the Regulations relative to nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation (hereinafter, "USDOT") Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this Agreement.
- (2.) **Nondiscrimination:** The Contractor, with regard to the work performed during the contract, shall not discriminate on the basis of race, color, national origin, sex, age, disability, religion or family status in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
- (3.) **Solicitations for Subcontractors, including Procurements of Materials and Equipment:** In all solicitations made by the Contractor, either by competitive bidding or negotiation for work to be performed under a subcontract, including procurements of materials or leases of equipment; each potential subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this contract and the Regulations relative to nondiscrimination on the basis of race, color, national origin, sex, age, disability, religion or family status.
- (4.) **Information and Reports:** The Contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the *Florida Department of Transportation, the Federal Highway Administration, Federal Transit Administration, Federal Aviation Administration, and/or the Federal Motor Carrier Safety Administration* to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information the Contractor shall so certify to the *Florida Department of Transportation, the Federal Highway Administration, Federal Transit Administration, Federal Aviation Administration, and/or the Federal Motor Carrier Safety Administration* as appropriate, and shall set forth what efforts it has made to obtain the information.
- (5.) **Sanctions for Noncompliance:** In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, the *Florida Department of Transportation* shall impose such contract sanctions as it or the *Federal Highway Administration, Federal Transit Administration, Federal Aviation Administration, and/or the Federal Motor Carrier Safety Administration* may determine to be appropriate, including, but not limited to:
 - a. withholding of payments to the Contractor under the contract until the Contractor complies, and/or
 - b. cancellation, termination or suspension of the contract, in whole or in part.
- (6.) **Incorporation of Provisions:** The Contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The Contractor shall take such action with respect to any subcontract or procurement as the

Florida Department of Transportation, the Federal Highway Administration, Federal Transit Administration, Federal Aviation Administration, and/or the Federal Motor Carrier Safety Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. In the event a Contractor becomes involved in, or is threatened with, litigation with a sub-contractor or supplier as a result of such direction, the Contractor may request the *Florida Department of Transportation* to enter into such litigation to protect the interests of the *Florida Department of Transportation*, and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

- (7.) **Compliance with Nondiscrimination Statutes and Authorities:** Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21; The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects); Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex); Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27; The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age); Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex); The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not); Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 -- 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38; The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex); Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations; Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100); Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

CHAPTER 14-78 PARTICIPATION BY SOCIALLY AND ECONOMICALLY DISADVANTAGED INDIVIDUALS IN DEPARTMENT OF TRANSPORTATION CONTRACTS

- 14-78.001 General.
- 14-78.0011 Time and General Procedural Requirements.
- 14-78.002 Definitions.
- 14-78.003 General Responsibilities.
- 14-78.004 Non-Federally Funded State DBE Program.
- 14-78.005 Standards for Certification of DBEs.
- 14-78.007 Procedure for Certification.
- 14-78.0071 Challenge Procedure.
- 14-78.008 Suspension or Revocation.
- 14-78.0081 Federal Appeal Rights.
- 14-78.009 Forms.

14-78.001 General.

This rule chapter implements the Department of Transportation's policy, required by legislative mandate, that small business concerns owned and controlled by socially and economically disadvantaged individuals shall have the maximum opportunity to participate in the performance of Department contracts.

Specific Authority 334.044(2), 339.0805(5) FS. Law Implemented 339.05, 339.0805 FS. History-New 12-9-81, Amended 5-23-84, Formerly 14-78.01, Amended 9-21-87, 5-4-88.

14-78.0011 Time and General Procedural Requirements.

(1) Time. In computing any period of time prescribed by this rule chapter, the day of the act from which the designated period of time begins to run shall not be included. The last day of the period shall be included unless it is a Saturday, Sunday, or legal holiday in which event the period shall run until the end of the next day which is neither a Saturday, Sunday, nor legal holiday. As used in this rule chapter, a legal holiday means those days designated in Section 110.117, Florida Statutes, and any other day the Department's offices are closed.

(2) Requests for Hearing. All requests for hearing shall be in writing and shall be filed with the Clerk of Agency Proceedings, Department of Transportation, MS 58, Haydon Burns Building, Tallahassee, Florida 32399-0458. A request for hearing is filed when it is received by the Clerk of Agency Proceedings.

Accordingly, a request for hearing is not timely filed unless it is received by the Clerk of Agency Proceedings within the appropriate time period. Requests for hearings by FAX are not acceptable.

Specific Authority 334.044(2), 339.0805 FS. Law Implemented 339.05, 339.0805 FS. History-New 5-23-84, Formerly 14-78.011, Amended 9-21-87, 5-4-88, 12-2-93.

14-78.002 Definitions.

Throughout this rule chapter, the following words and phrases shall have the respective meanings set forth below unless a different meaning is plainly required by the context:

(1) "Affiliates" is defined pursuant to 13 C.F.R. Section 121.401, which is hereby incorporated by reference and made a part of these rules. "Affiliates" means companies having one or more of the following relationships:

- (a) One concern controls or has the power to control the other;
- (b) A third party or parties controls or has the power to control both;
- (c) An identity of interest between or among parties exists such that affiliation may be found.

(2) Pursuant to 13 C.F.R. Section 121.403(a) and (b), "Business Concern" or "Concern" means:

(a) A business concern eligible for assistance as a small business is a business entity organized for profit, with a place of business located in the United States and which makes a significant contribution to the U.S. economy through payment of taxes and/or use of American products, materials and/or labor.

(b) Such business entity may be in the legal form of an individual proprietorship, partnership, corporation, joint venture, association, trust or a cooperative, except that where the form is a joint venture there can be no more than 49 percent participation by foreign business entities in the joint venture.

(3) "Certified" means a finding of qualification by the Department in accordance with this rule chapter.

(4) Pursuant to C.F.R. 49 Subtitle A, Subpart A, Section 23.5, "Compliance" means the condition existing when the Department or a contractor has met and implemented the requirements of this rule chapter.

(5) "Department" means Florida Department of Transportation.

(6) "Disadvantaged" means socially and economically disadvantaged, whenever used throughout this rule chapter.

(7) "DBE" means disadvantaged business enterprise.

(8) "DBE Directory" means the directory published monthly by the Equal Opportunity Office, which lists those firms that have been determined eligible to participate in the Department's DBE program.

(9) Pursuant to 49 C.F.R. Subtitle A, Subpart D, Section 23.62 and Appendix A, to Section 23.62, "Disadvantaged Business Enterprise" or "DBE" means a small business concern organized for profit:

(a) Which is at least 51 percent owned by one or more disadvantaged individuals, or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more disadvantaged individuals; and

(b) Whose management and daily business operations are controlled by one or more of the disadvantaged individuals who own it.

(10) "Individual" means only natural persons and not artificial persons such as corporations and other business entities.

(11) Pursuant to 49 C.F.R. Subtitle A, Subpart A, Section 23.5, a "Joint Venture" means an association of two or more businesses to carry out a single business enterprise for profit for which purpose they combine their property, capital, efforts, skills, and knowledge.

(12) Pursuant to 49 C.F.R. Subtitle A, Subpart C, Section 23.47(e)(2), "Manufacturer" means a firm that operates or maintains

a factory or establishment that produces on the premises the materials or supplies obtained by the Department or a contractor.

(13) Pursuant to C.F.R. 49 Subtitle A, Subpart A, Section 23.5, "Noncompliance" means the condition existing when the Department or a contractor has failed to implement the requirements of this rule chapter.

(14) "Owner/Operator" means an individual who owns one truck that he or she drives as an independent hauler.

(15) Pursuant to 49 C.F.R. Subtitle A, Subpart C, Section 23.47(e)(3), a "Regular Dealer" means a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials or supplies required for the performance of the contract are bought, kept in stock, and regularly sold to the public in the usual course of business. To be a regular dealer, the firm

must engage in, as its principal business and in its own name, the purchase and sale of the products in question. A regular dealer in such bulk items as steel, cement, gravel, stone, and petroleum products does not need to keep such products in stock, if the dealer owns or operates the appropriate distribution facility.

Brokers and packagers shall not be regarded as manufacturers or regular dealers within the meaning of these rules.

(16) Pursuant to 49 C.F.R. Subtitle A, Subpart A, Section 23.5, "Set Aside" means a technique which limits consideration of bids or proposals to those submitted by DBEs.

(17) Pursuant to 49 C.F.R. Subtitle A, Subpart D, Section 23.62 and Appendix A to Section 23.62 and Appendix B of Subpart D, "Small Business Concern" means those business concerns as defined in 13 C.F.R. Section 121.403(a) and (b), which regulation is hereby incorporated by reference and made a part of these rules, except that a small business concern shall not include any concern which, together with its affiliates, has annual average gross receipts over the previous three fiscal years in excess of \$15,370,000 or the amount as adjusted for inflation by the Secretary of the U.S. Department of Transportation or the applicable lower limits on business size established by the Small Business Administration in 13 C.F.R. Part 121, Sections 121.402 and 121.601, whichever is lower. For the purpose of determining business size, the firm shall be classified under the appropriate standard industrial classification code based upon the work primarily performed by the company.

(18) Pursuant to 49 C.F.R. Subtitle A, Subpart D, Section 23.62, "Socially and Economically Disadvantaged Individuals" means those individuals:

(a) Who are citizens of the United States (or lawfully admitted permanent residents) and who are women, Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, or Asian-Indian Americans, and any other minorities or individuals found to be disadvantaged by the Small Business Administration pursuant to Section 8(a) of the Small Business Act (15 USC 637) and implementing regulations. Individuals in the following groups are presumed to be disadvantaged; however, this presumption is rebuttable:

1. "Black Americans," which includes persons having origins in any of the black racial groups of Africa;
 2. "Hispanic Americans," which includes persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish or Portuguese culture or origin, regardless of race;
 3. "Asian-Pacific Americans," which includes persons whose origins are from Japan, China, Taiwan, Korea, Vietnam, Laos, Cambodia, the Philippines, Samoa, Guam, the U.S. Trust Territories of the Pacific, and the Northern Marianas;
 4. "Asian-Indian Americans," which includes persons whose origins are from India, Pakistan, and Bangladesh; and
 5. "Native Americans," which includes persons who are Eskimos, Aleuts, Native Hawaiians, or persons who have origins in any of the American Indian tribes prior to 1835.
6. Women.

(b) Who are not members of the presumptive groups as defined in Section 14-78.002, but meet the criteria as set out in Rule 14-78.005, F.A.C.

(19) "Subordinate(s)" or "Subordination" means performance by a third party of a specific part of the work which is the responsibility of the principal DBE subcontractor by contract, agreement, or arrangement, including but not limited to

supervision, labor, hauling, management, transporting, supplying, planning, organizing, providing personnel, or equipping.

(20) The "Critical Areas of Operation" are those areas required for the production and delivery of the primary product or service of the firm and may include, at a minimum, estimating, bidding, and field supervision. The areas of administration and financial management are not critical areas of operation unless they constitute the firm's primary product or service.

Specific Authority 334.044(2), 339.05, 339.0805 FS. Law Implemented 339.05, 339.0805 FS. History—New 5-23-84, Formerly 14-78.02, Amended 9-21-87, 5-4-88, 4-17-89, 6-24-91, 4-15-92, 12-2-93.

14-78.003 General Responsibilities.

(1) In furtherance of the purpose of this rule chapter, the Department shall establish overall DBE goals for its entire DBE program, as set forth in 49 C.F.R. Subtitle A, Subpart C, Section 23.45(g), and Subpart D, Section 23.64. In setting the overall goals the Department shall consider the following factors, in accordance with 49 C.F.R. Subtitle A, Subpart C, Sections 23.45(g)(5)(i) and 23.45(g)(5)(ii):

(a) Overall goals shall be based on projection of the number and types of contracts to be awarded by the Department and a projection of the number of and types of DBEs likely to be available to compete for contracts from the Department over the period during which the goals will be in effect;

(b) Overall goals shall also be based on past results of the Department's efforts to contract with DBEs and the reasons for the high or low level of those results.

(2) Pursuant to 49 C.F.R. Subtitle A, Subpart C, Section 23.45(k), when implementing its DBE goal program the Department may:

(a) Set aside contracts for competition only by, between, or among certified DBEs.

1. The total dollar amount of all projects set aside in any one fiscal year shall not exceed ten percent of the funds allocated for contracting for that fiscal year.

2. A contract shall not be set aside unless at least three DBEs with capabilities consistent with contract requirements exist so as to permit competition.

3. In selecting contracts suitable for a set aside, the Department shall consider the following factors:

a. The number, capacity, and capabilities of potential eligible bidders;

b. The type of work required by the contract to be let; and

c. The estimated total dollar amount of the contract to be let.

4. Pursuant to 49 C.F.R. Subtitle A, Subpart C, Section 23.53(d), a joint venture between a DBE and a non-DBE is eligible to compete in a set aside if the DBE partner of the joint venture is certified pursuant to this rule chapter, if the certified DBE partner's share in the ownership, control, and management responsibilities, risks, and profits of the joint venture is at least 51 percent, and if the DBE partner is responsible for a clearly defined portion of the work to be performed. Firms seeking participation as a joint-venture must, in addition, complete Schedule B – Certification Form No. 2 – Department of Transportation Form 275-030-02, Rev. 8/93, as described in subsections 14-78.005(2) and 14-78.007(1), F.A.C., of this rule chapter.

(b) Establish contract goals on each contract with subcontracting opportunities for certified DBEs.

1. In setting contract goals, the Department shall consider the following factors:

- a. The type of work required by the contract to be let;
- b. The subcontracting opportunities in the contract to be let;
- c. The estimated total dollar amount of the contract to be let; and
- d. The number of certified DBEs.

2. For contracts with an estimated total dollar amount of \$1,000,000 or less, the contract goals shall not exceed 50 percent of the identified potential for DBE participation. For contracts with an estimated total dollar amount over \$1,000,000, the contract goals shall not exceed 75 percent of the identified potential for DBE participation.

3. For all contracts for which DBE contract goals have been established, each bidder shall meet or exceed or demonstrate that it could not meet, despite its good faith efforts, the contract goals set by the Department. The DBE participation information shall be submitted as outlined in sub-subparagraphs 14-78.003(2)(b)3.a. and b., F.A.C. below. Award of the contract shall be conditioned upon such submission of the DBE participation information and upon satisfaction of the contract goals or, if the goals are not met, upon demonstrating that good faith efforts were made to meet the goals. Failure to satisfy the information requirements shall result in a contractor's bid being deemed nonresponsive and the bid being rejected.

a. The contractor's bid submission shall include information, pursuant to 49 C.F.R. Subtitle A, Subpart C, 23.45(h)(1)(i), submitted on a completed Disadvantaged Business Enterprise (DBE) Utilization Form, Form 275-020-004, Rev. 10/95 and Disadvantaged Business Enterprise (DBE) Utilization Summary Form, Form 275-020-003, Rev. 10/95.

b. In lieu of a completed Disadvantaged Business Enterprise (DBE) Utilization Summary Form, Department of Transportation Form 275-020-003, Rev. 10/95, and a Disadvantaged Business Enterprise (DBE) Utilization Form, Department of Transportation Form 275-020-004, Rev. 10/95, the contractor will submit a Disadvantaged Business Enterprise (DBE) Utilization Summary Form which indicates that either the contractor will achieve the DBE goal established for the project for which the bid has been submitted, or that the contractor has submitted sufficient information to demonstrate that the contractor made good faith efforts to meet the DBE goal as part of the bid submission. If the contractor has submitted a Disadvantaged Business Enterprise (DBE) Utilization Summary Form on which the contractor has indicated that the DBE goal will be achieved, the contractor will provide to the Equal Opportunity Office or to the designated District Office when the job has been let in the District by 5:00 P.M. on the third business day following the bid letting day (Electronic transmissions, such as a FAX, sent directly to the Department will not be accepted):

(I) An updated Disadvantaged Business Enterprise (DBE) Utilization Summary Form listing the DBE subcontractors that will be utilized on the project to meet the DBE goal, the dollar amount of the DBE goal subcontracted to each DBE, and the total dollar amount for the DBE goal; and

(II) Disadvantaged Business Enterprise (DBE) Utilization Forms shall be completed and signed by an authorized representative of the DBE, for each DBE subcontract utilized on the project to achieve the DBE goal. Disadvantaged Business Enterprise (DBE) Utilization Forms that are not signed by an authorized representative of the DBE firm, will be rejected and will result in the bid being non-responsive.

c. A DBE Utilization Form will be deemed complete if it lists the prime contractor's name, the project number(s), and the name of the DBE, describes the type of work to be performed by the DBE, states the total amount claimed as credit for the subcontract, and contains the signature of the DBE's representative. Subject to the requirements of subparagraph 14-78.003(2)(b)5., F.A.C., a bidder will be held to the information submitted on its DBE forms and will be expected to enter into subcontracts with each of the DBEs named on its DBE Utilization Forms for payments sufficient to earn the credits claimed on each form.

d. An otherwise complete DBE Utilization Form that has been submitted within the time required by sub-subparagraph (2)(b)3.b., and which indicates that the contract goal will be met, but which lists an incorrect DBE subcontractor, will be considered to contain a technical error which can be corrected by submission of a corrected DBE Utilization Form when one of the two following conditions occurs:

(I) The subcontractor shown on the DBE Utilization form is a certified DBE, but is not approved for use on the particular contract bid because of the classification of the contract, i.e., a wholly federal or wholly state funded contract.

(II) The subcontractor shown on the DBE Utilization Form was previously certified as a DBE, but the certification expired before the DBE Utilization Form was submitted to the Department. To meet this criterion, the subcontractor shown on the DBE Utilization Form must have been listed as a DBE in the Department's DBE Directory at least one time within the last three consecutively published DBE Directories preceding the date the DBE Utilization Form was submitted to the Department.

e. In order for the Department to accept a revised DBE Utilization Form as a technical correction pursuant to sub-subparagraph (2)(b)3.d., the following criteria must also be met:

(I) The total dollar commitment to the substitute DBE must be the same or greater than the amount shown on the original DBE Utilization Form committed to the technically incorrect subcontractor.

(II) All other subcontractors correctly shown on the original DBE Utilization Form(s) cannot be negatively impacted by the technical correction. For instance, a DBE firm correctly identified and shown on a DBE Utilization Form cannot be removed from the bid, nor can the total dollar amount committed to the correctly-identified DBE firm be reduced.

(III) The revised DBE Utilization Form correcting the technical error, as defined in sub-subparagraph (2)(b)3.d. above, must be furnished to the Equal Opportunity Office, or to the designated District Office when the job has been let in the District, by 5:00 p.m. on the third day after the bidder receives oral or written notification of the technical error from the Equal Opportunity Office or from the designated District Office when the job has been let in the District.

(IV) The original and the revised DBE Utilization Forms must otherwise fully comply with the requirements of sub-subparagraph (2)(b)3.c., above.

f. Pursuant to 49 C.F.R. Subtitle A, Subpart C, Appendix A to Section 23.45, in evaluating a contractor's good faith efforts, the Department will consider:

(I) Whether the contractor, at least seven days prior to the letting, provided written notice by certified mail, return receipt requested, or hand delivery, with receipt, to all certified DBEs which perform the type of work in the geographical area of the

project, which the contractor intends to subcontract, advising the DBEs of the specific work the contractor intends to subcontract; that their interest in the contract is being solicited; and how to obtain information about and review and inspect the contract plans and specifications.

(II) Whether the contractor selected economically feasible portions of the work to be performed by DBEs; including where appropriate, breaking down contracts or combining elements of work into economically feasible units. The ability of a contractor to perform the work with its own work force will not in itself excuse a contractor's failure to meet contract goals.

(III) Whether the contractor provided interested DBEs assistance in reviewing the contract plans and specifications.

(IV) Whether the DBE goal was met by other bidders.

(V) Whether the contractor submits all quotations received from DBEs, and for those quotations not accepted, an explanation of why the DBE will not be used during the course of the contract. Receipt of a lower quotation from a non-DBE will not in itself excuse a contractor's failure to meet contract goals.

(VI) Whether the contractor assisted interested DBEs in obtaining any required bonding, lines of credit, or insurance.

(VII) Whether the contractor elected to subcontract types of work that match the capabilities of solicited DBEs.

(VIII) Whether the contractor's efforts were merely pro forma and given all relevant circumstances, could not reasonably be expected to produce sufficient DBE participation to meet the goals.

(IX) Whether the contractor has within the past six months utilized DBEs on other contracts.

(X) Whether the contractor attended any pre-solicitation or pre-bid meetings that were scheduled by the Department to inform DBEs of contracting and subcontracting opportunities.

(XI) Whether the contractor advertised in general circulation, trade association, and minority-focus media concerning the subcontracting opportunities.

(XII) This list is not intended to be exclusive or exhaustive and the Department will look not only at the different kinds of efforts that the contractor has made but also the quality, quantity, and intensity of these efforts.

4. A certified DBE who is the apparent low bidder on a contract with DBE goals satisfies the DBE goals.

5. Contractors shall make good faith efforts to replace a DBE subcontractor that is unable to perform successfully with another certified DBE. Any such substitution of subcontractors shall be approved by the Department.

6. The Department shall count DBE participation toward meeting DBE goals, in accordance with 49 C.F.R. Subtitle A, Subpart C, Section 23.47, as follows:

a. Once a firm is determined to be an eligible certified DBE, in accordance with this rule chapter, the total dollar value of the contract to be awarded to the certified DBE is counted toward the applicable DBE goal.

b. A portion of the total dollar value of a contract with a joint venture eligible under this rule chapter equal to the percentage of the ownership and control of the DBE partner in the joint venture may be counted toward the DBE goal.

c. Only expenditures to DBEs that perform a commercially useful function in the work of a contract may be counted toward the DBE goal. A DBE is considered to perform a commercially useful function when it actually performs and manages at least 51 percent of the work subcontracted to it. A DBE is considered to perform a commercially useful function when it is responsible for

execution of a distinct element of the work of a contract and carrying out its responsibilities by actually performing, managing, and supervising the work involved. To determine whether a DBE is performing a commercially useful function, the Department shall evaluate the amount of work subcontracted, industry practices, and other relevant factors.

d. Consistent with normal industry practices, a DBE may enter into subcontracts. A DBE firm performing subcontract work which was used by the prime contractor to meet the contract DBE goals may not subordinate more than 49 percent of the subcontract work. If the DBE subordinates more than 49 percent of the subcontract work, none of that DBE subcontract amount may be counted toward the DBE goal. If a DBE contractor subcontracts a significantly greater portion of the work of the contract

than would be expected on the basis of normal industry practices, the DBE shall be presumed not to be performing a commercially useful function. The DBE may present evidence to rebut this presumption to the Department. The Department's decision on the rebuttal of this presumption is subject to review by the US Department of Transportation.

e. Expenditures for materials and supplies obtained from DBE suppliers and manufacturers may be counted toward the DBE goal, provided that the DBEs assume the actual and contractual responsibility for the provision of the materials and supplies. Supplies on a furnish and install subcontract must be paid for by the DBE if the cost of supplies is to be counted as part of the DBE goal. A two-party check, payable to the DBE and supplier is acceptable; only if any discounts for early payment, etc., are paid to the DBE.

f. The Department or a contractor may count toward its DBE goals 60 percent of its expenditures for materials and supplies required under a contract and obtained from a DBE regular dealer, and 100 percent of such expenditures to a DBE manufacturer.

g. A DBE which is utilized to attain the contract goal may not shift on a temporary basis key personnel or crews from a prime contractor's payroll to the DBE's payroll or shift on a temporary basis key personnel or crews from another subcontractor or contractor's payroll to the DBE's payroll. Violation of this subsection will result in none of the DBE subcontract amount being counted toward the contract goal.

h. Pursuant to 49 C.F.R. Subtitle A, Subpart C, Section 23.47(f), a contractor may count toward DBE goals the following expenditures to DBE firms that are not manufacturers or regular dealers:

(I) The fees or commissions charged for providing a bona fide service, such as: professional, technical, consultant, or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials, or supplies required for performance of the contract; provided that the fee or commission is determined by the Department to be reasonable and not excessive as compared with fees customarily allowed for similar services.

(II) The fees charged for delivery of materials and supplies required on a job site (but not the cost of the materials and the supplies themselves) when the hauler, trucker, or delivery services is not also the manufacturer or a regular dealer in the materials and supplies, provided that the fee is determined by the Department to be reasonable and not excessive as compared with fees customarily allowed for similar services.

(III) The fees or commissions charged for providing any bonds or insurance specifically required for the performance of the contract, provided that the fee or commission is determined by the Department to be reasonable and not excessive as compared with fees customarily allowed for similar services.

i. A DBE trucking company being utilized to haul material as part of the goal must perform at least 51 percent of the contract by utilizing owned or leased equipment. The DBE may therefore use its own trucks and its company employees, leased trucks operated by its own employees and vehicles owned and operated by owner/operators. The owner/operator must be the owner of one truck, of which he or she is the driver. If independent owner/operators are used, they must be shown on the DBE payroll but as owner/operators and not as employees. The use of leased or rented equipment from leasing companies, rental agencies or individuals, which comes with operators other than the owners of the vehicles, will not be counted in the mandatory 51 percent.

j. In fulfilling the DBE goals, a contractor may not count delivery of materials and supplies as expenditures to DBE firms where such delivery is to or from offsite locations that are not monitored by either DOT project personnel or other personnel designated by the Department.

(3) The Department shall compile and make available a directory to contractors and other interested persons listing all DBEs certified by the Department. Only those DBE firms certified on the date of the letting or listed in the current DBE Directory will be eligible for use as a DBE to meet DBE contract goals. A copy of the directory may be obtained from the Liaison Officer, Equal Opportunity Office, 605 Suwannee Street, Mail Station 65, Tallahassee, Florida 32399-4050, (850) 414-4747.

(4) In furtherance of the purpose of this rule chapter, the contractor shall have the following responsibilities:

(a) The contractor shall implement a DBE program containing the following elements:

1. A policy statement, expressing a commitment to use DBEs in all aspects of contracting to the maximum extent feasible. The contractor's policy making body (Board, Council, etc.) shall issue a policy statement, signed by the chairperson, which expresses its commitment to the program, outlines the various levels of responsibility, and states the objectives of the program. The contractor's policy statement shall be circulated throughout the contractor's organization and the minority, female, and non-minority community and business organizations.

2. The designation of a liaison officer within the contractor's organization, as well as such support staff as may be necessary and proper to administer the program, and a description of the authority, responsibility, and duties of the liaison officer and support staff. The Chief Executive Officer of the contractor's organization shall designate a DBE liaison officer and adequate staff to administer the DBE program. The DBE liaison officer shall report directly to the Chief Executive Officer. The DBE liaison officer and staff shall be responsible for developing, managing, and implementing the program on a day-to-day basis; for carrying out technical assistance activities for DBEs; and for disseminating information on available business opportunities so that DBEs are provided an equitable opportunity to participate in contracts let by the Department. Techniques to facilitate DBE participation in contracting activities shall include but not be limited to:

a. Arranging solicitations, time for the presentation of bids, quantities, specifications, and delivery schedules so as to facilitate the participation of DBEs.

b. Providing assistance to DBEs in overcoming barriers such as the inability to obtain bonding, financing, or technical assistance.

c. Carrying out information and communications programs on contracting procedures and specific contracting opportunities in a timely manner, with such programs being bilingual where appropriate.

d. Encouraging eligible DBEs to apply for certification with the Department.

e. Contacting Minority Contractor Associations and city and county agencies with programs for disadvantaged individuals or women for assistance in recruiting and encouraging eligible DBE contractors to apply for certification with the Department.

(b) The contractor shall submit its DBE program to the Department for approval prior to or with its first bid submission and shall update its program annually.

1. No contract shall be awarded to a contractor until after its DBE program has been approved by the Department.

2. The contractor's DBE program and the contractor's commitment to carry out its program shall be incorporated into and become a part of any contract awarded by the Department. Failure to keep these commitments shall be deemed noncompliance with this rule chapter and breach of the contract.

(c) In order to monitor the progress of its DBE program the contractor shall develop a record keeping system which will identify and assess the contractor's progress in achieving subcontract goals and other DBE program efforts.

1. Specifically, the records maintained by the contractor shall include:

a. The procedures adopted to comply with this rule chapter;

b. The number of subcontracts on Department projects awarded to DBEs;

c. The dollar value of the contracts awarded to DBEs;

d. The percentage of the dollar value of all subcontracts awarded to DBEs as a percentage of the total contract amount;

e. A description of the general categories of contracts awarded to DBEs;

f. The specific efforts employed to identify and award contracts to DBEs;

g. Copies of payment certification as required by contract specifications for each project in which work is counted toward the DBE goal;

h. Copies of all correspondence or written statements utilized by the contractor involving the DBE program and the Department; and

i. Copies of all written quotations submitted by DBE firms for subcontract work.

2. The records maintained by the contractor in accordance with this rule shall be provided upon request to the Department for review. These records must be retained by the contractor for a period of five years.

Specific Authority 334.044(2), 337.125(4), 337.137(3), FS. Law Implemented 337.125, 337.137, 337.139, 339.05, 339.0805 FS. History—New

12-9-81, Amended 5-23-84, 11-10-85, Formerly 14-78.03, Amended 9-21-87, 5-4-88, 4-17-89, 6-24-91, 12-2-93, 10-30-96, 8-12-97, 12-31-98.

14-78.004 Non-Federally Funded State DBE Program.

(1) Purpose. It is the purpose of the Non-Federally Funded State DBE Program, hereinafter referred to as "State DBE

Program," to take specific affirmative actions to eliminate discrimination and the effects of past discrimination, and to ensure that construction contractors and subcontractors provide equal employment opportunity to minority and female business in Florida Department of Transportation road/bridge construction and road/bridge maintenance non-federally funded contracts.

(2) Except where in conflict with this rule, all provisions of Chapter 14-78, F.A.C., apply equally to the State DBE Program.

Where a conflict exists, this rule shall govern.

(3) Definitions. With the following additions, all words and phrases shall have the respective meanings set forth in Rule 14-78.002, F.A.C.:

(a) "Road/Bridge Construction" means any road and bridge construction, including bridge repair, installation of traffic control systems, asphaltic concrete overlay, resurface existing roadway, construction of curbs and gutters, re-roof facilities, construction of pedestrian overpass, construction interchange, widen bridges, replace fence, resurface and pave shoulders, and painting bridges.

(b) "Road/Bridge Maintenance" means any road and bridge maintenance, including mowing, bridge tending, furnish asphalt, mechanical sweeping, guardrail repair, lighting maintenance, marking and signing, litter removal, concrete paving repairs, fertilize shoulders, remove and replace reflective markings, and tree trimming and removal.

(c) "Significant Disparity" means a disparity index (the ratio of the percentage utilization to the percentage availability times 100) below 80.

(4) General Responsibilities.

(a) In furtherance of the purpose of this rule, the Department will establish overall goals not to exceed those goals identified in the most recent study.

(b) Eligible DBEs. Only DBEs certified under Rule 14-78.005 and 14-78.007, F.A.C., who meet all of the following criteria shall be eligible to participate in the State DBE Program. These DBEs are presumed to have experienced past discrimination by the Department, but the presumption is rebuttable.

1. Those DBEs with their primary place of business in the State of Florida or in other counties where the disparity study has shown discrimination by the Department; and

2. Those DBEs from classifications which have experienced a significant disparity by the Department in indicated business categories as established by the disparity study.

(c) The following methods are available to implement the State DBE Program:

1. Percentage goals shall be set on a project by project basis according to the availability of qualified DBEs, but shall not exceed 50% on any contract.

2. Set aside contracts may be established to facilitate the State DBE Program.

(5) Program goals may be waived where appropriate circumstances exist:

(a) Eligible DBE's are unavailable.

(b) The goals set are not feasible.

(c) When DBE price quotes exceed competitive levels which unreasonably inflate bids.

(6) Race/Gender Neutral Methods. The Department shall continue to use race/gender neutral methods to increase DBE utilization. These may include, but are not limited to:

(a) Annually, the Department will provide to minority and female businesses which have bid on contracts during the fiscal

year, a summary on major policy manuals or important changes in contracting procedures;

(b) The Department shall provide the same summary of key policies to parties requesting applications for the DBE program;

(c) The Department shall provide semi-annual workshops for newly certified businesses to explain contracting and purchasing processes;

(d) The Department shall provide a summary of key DBE policies to user departments and persons responsible for contracting activities in the central office and districts;

(e) The Department shall provide technical and managerial aid in:

1. Reading plans and specifications;

2. Identifying jobs comparable to the DBE's work specialty;

3. Putting together the bid package;

4. Scheduling;

5. Computing take-off estimates; Marketing;

7. Setting up books to track revenues and expenses;

8. Interpreting financial statements;

9. Completing applications for loans or bonding.

(f) The Department shall provide to DBEs job listings and listings of the potential prime bidders;

(g) The Department shall hold pre-bid conferences at least six times a year in order to bring together DBEs, the Department and prime contractors.

(7) Federal Participation and Federal Appeal Rights. There shall be no federal participation or federal appeal rights as regards any part of the State DBE Program. Any reference to USDOT or federal participation or federal appeal rights elsewhere in Chapter 14-78 are inapplicable to this rule.

Specific Authority 334.044(2), 337.125(4), 337.137(3), 337.139, 339.0805 FS. Law Implemented 337.125, 337.137, 337.139, 339.0805 FS.

History--New 12-2-93.

14-78.005 Standards for Certification of DBEs.

(1) Pursuant to 49 C.F.R. Subtitle A, Subpart C Section 23.51(a), and Subpart D, Appendix A, to ensure that this rule chapter benefits only small business concerns which are at least 51 percent owned and controlled in both form and substance by one or more disadvantaged individuals, the Department shall certify firms who wish to participate as DBEs under this rule chapter.

(2) Pursuant to 49 C.F.R. Subtitle A, Subpart C, Section 23.51(b), each business, including the DBE partner in a joint venture, wishing to participate as a DBE in Department contracts shall complete and submit a Schedule A -- Certification Form No. 1 -- Department of Transportation Form 275-030-01, Rev. 04/96.

Currently certified DBEs that have had no changes in the ownership, control or independence of the firm since last certified by the Department, must reapply for DBE certification annually by completing Schedule C -- Certification Form No. 3 -- Department of Transportation Form 275-030-03, Rev. 04/96. Each entity wishing to participate as a joint venture DBE in Department contracts shall, in addition, complete and submit a Schedule B -- Certification Form No. 2 -- Department of Transportation Form 275-030-02, Rev. 08/93. The schedule(s) shall be signed by the authorized representative of the business entity and notarized.

(3) A DBE firm or DBE applicant shall submit a new Schedule A or Schedule A and B in the event a significant change in the structure of a firm occurs; such as a change of ownership or incorporation of a non-incorporated firm. Also, a new schedule may

be required whenever the Department has reason to believe that a substantial change in the firm has occurred.

(4) Within 10 days of any change of address for the DBE firm, the Department shall be notified in writing.

(5) A DBE need not submit a new Schedule A and/or B solely because of any change in the officers or the name of a corporation, but such information shall be certified to the Department within 10 days of the effective date of the change.

(6) A firm seeking certification as a DBE shall cooperate fully with the Department representative assigned to conduct an on-site review of the applicant firm at the business location and/or a project site(s). The on-site review should be scheduled within 60 days of receipt of the initial application for DBE certification, receipt of additional information, or upon request by the Department. An on-site review may include but is not limited to any of the following:

(a) Interviews with owners, key officers, and managers;

(b) Visits to project or facility sites;

(c) Inspection of any statistical or documentary materials relevant to the applicant firm's performance or resources;

(d) Visits to offices of applicant firm.

(7) Pursuant to 49 C.F.R. Subtitle A, Subpart D, Section 23.62, a firm seeking certification and recertification as a DBE shall meet the following standards. A firm which does not fulfill all the Department's criteria for certification shall not be considered a Disadvantaged Business Enterprise.

(a) The firm must be a small business concern;

(b) The firm must be at least 51 percent owned by one or more disadvantaged individuals, or, in the case of a publicly owned business, at least 51 percent of the stock must be owned by one or more disadvantaged individuals; and the management and daily business operations must be controlled by one or more of the disadvantaged individuals who own the firm.

1. Members of the groups named in subsection 14-78.002(18), F.A.C., are presumed to be disadvantaged; however, this presumption is rebuttable and may be challenged pursuant to Rule 14-78.0071, F.A.C. Membership in those groups shall be established on the basis of the individual's claim that he or she is a member of one of those groups and is so regarded by that particular community. Pursuant to 49 C.F.R., Part 23, Subpart D, Appendix C, to be considered a member of one of these groups, the individual must have held himself or herself out to be a member, have acted as a member of that group, and be capable of being identified by persons in the population at large as belonging to the disadvantaged group. However, the Department is not required to accept this claim if it determines the claim invalid.

2. Individuals certified by the Small Business Administration, pursuant to Section 8(a) of the Small Business Act (15 U.S.C. 637), as socially and economically disadvantaged, shall be accepted into the DBE Program based upon their Section 8(a) certification provided they are able to meet all remaining criteria under this rule chapter. Hence, 8(a) firms shall still be required to apply to the DBE Program and participate fully in the certification process as all other applicants. On-site reviews to verify the small business status of 8(a) certified firms will not be required during the certification process. In the event the Department becomes aware of information that questions the social and economic status of the applicant, the Department reserves the right to conduct an on-site review. Certification concerns of the Department will be forwarded to the Small Business Administration along with the appropriate documentation and recommendation.

3. Pursuant to 49 C.F.R., Part 23, Subpart D, Appendix C, A., individuals who are not members of the presumed groups but wish to be certified as disadvantaged must meet the following criteria:

a. Elements of Social Disadvantage. In order to determine that an individual is socially disadvantaged, the Department must conclude that the individual meets the following standards:

(I) The individual's social disadvantage must stem from his or her color, national origin; gender, physical disability; long-term residence in an environment isolated from the mainstream of American society; or other similar cause beyond the individual's control. The individual cannot establish social disadvantage on the basis of factors which are common to small business persons who are not socially disadvantaged. For example, because of their marginal financial status, many small businesses have difficulty obtaining credit through normal banking channels. An individual predicating a social disadvantage claim on denial of bank credit to his or her firm would have to establish that the denial was based on one or more of the listed causes, or similar causes – not simply on the individual's or the firm's marginal financial status.

(II) The individual must demonstrate that he or she has personally suffered social disadvantage, not merely claim membership in a non-designated group which could be considered socially disadvantaged. This can be achieved, for example, by describing specific instances of discrimination which the individual has experienced, or by recounting in some detail how his or her development in the business world has been thwarted by one or more of the listed causes or similar causes. As a general rule, the more specific an explanation of how one has personally suffered social disadvantage, the more persuasive it will be. In assessing such facts, the Department should place substantial weight on prior administrative or judicial findings of discrimination experienced by the individual. Such findings, however, are not necessarily conclusive evidence of an individual's social disadvantage; nor are they a prerequisite for establishing social disadvantage.

(III) The individual's social disadvantage must be rooted in treatment which he or she has experienced in American society, not in other countries.

(IV) The individual's social disadvantage must be chronic, longstanding, and substantial, not fleeting or insignificant. Typically, a number of incidents illustrating a person's social disadvantage, occurring over a substantial period of time, would be necessary to make a successful claim. Usually, only by demonstrating a series of obstacles which have impeded one's progress in the business world can an individual demonstrate chronic, longstanding, and substantial social disadvantage.

(V) The individual's social disadvantage must have negatively affected his or her entry into, and/or advancement in, the business world. The closer the individual can link social disadvantage to impairment of business opportunities, the stronger the case. For example, the Department should place little weight on annoying incidents experienced by an individual which have had little or no impact on the person's career or business development. On the other hand, the Department should place greater weight on concrete occurrences which have tangibly disadvantaged an individual in the business world.

b. Evidence of Social Disadvantage. Any evidence relevant to the applicant's claim will be considered. In addition to a personal statement from the individual claiming to be socially disadvantaged, such evidence may include, but is not limited to:

third party statements; copies of administrative or judicial findings of discrimination; and other documentation in support of matters discussed in the personal statement. Special emphasis will be given to the areas of education, employment, and business history. However, the applicant may present evidence relating to other matters as well. Moreover, the attainment of a quality education or job should not absolutely disqualify the individual from being found socially disadvantaged if sufficient other evidence of social disadvantage is presented.

(I) Education. The Department shall consider, as evidence of an individual's social disadvantage: denial of equal access to business or professional schools; denial of equal access to curricula; exclusion from social and professional association with students and teachers; denial of educational honors; social patterns or pressures which have discouraged the individual from pursuing a professional or business education; and other similar factors.

(II) Employment. The Department shall consider, as evidence of an individual's social disadvantage, discrimination in hiring; discrimination in promotions and other aspects of professional advancement; discrimination in pay and fringe benefits; discrimination in other terms and conditions of employment; retaliatory behavior by an employer; social patterns or pressures which have channelled the individual into non-professional or non-business fields; and other similar factors.

(III) Business History. The Department shall consider, as evidence of an individual's social disadvantage, unequal access to credit or capital; acquisition of credit under unfavorable circumstances; discrimination in receipt (award and/or bid) of government contracts; discrimination by potential clients; exclusion from business or professional organizations; and other similar factors which have retarded the individual's business development.

c. Economic Disadvantage. Pursuant to 49 C.F.R., Part 23, Subpart D, Appendix C, A., the Department shall always make a determination of social disadvantage before proceeding to make a determination of economic disadvantage. If the Department determines that the individual is not socially disadvantaged, it is not necessary to make the economic disadvantage determination.

(I) Elements of Economic Disadvantage. The applicants must show that they are socially disadvantaged individuals whose ability to compete in the free enterprise system has been impaired due to diminished capital and credit opportunities, as compared to others in the same or similar line of business and competitive market area who are not socially disadvantaged.

(II) Evidence of Economic Disadvantage. In determining the degree of diminished credit and capital opportunities of a socially disadvantaged individual, consideration will be given to both the disadvantaged individual and the applicant concern with which he or she is affiliated. The test is not absolute deprivation, but rather disadvantage compared to business owners who are not socially disadvantaged individuals and firms owned by such individuals. Applicants must provide information about their economic situation when they seek eligibility as disadvantaged businesses. The Department shall attempt to become as knowledgeable as possible about the types of businesses with which the Department deals, so that the Department can make a reasonably informed comparison between an applicant firm and other firms in the same line of business. The Department is not required to make a detailed, point-by-point, accountant-like comparison of the businesses involved. The Department is expected to make a basic

judgment about whether the applicant firm and its socially disadvantaged owner(s) are in a more difficult economic situation than most firms (including established firms) and owners who are not socially disadvantaged.

(c) Pursuant to 49 C.F.R. Subtitle A, Subpart C, Section 23.53(a)(2), Subpart D, Appendix A, to be certified under this rule chapter, a DBE shall be an independent business entity. In assessing business independence, the Department shall consider all relevant factors, including the date the firm was established, the adequacy of its resources, and the degree to which financial relationship, equipment leasing, and other business relationships with non-DBE firms which vary from industry practice.

1. The ownership and control exercised by disadvantaged individuals shall be real, substantial, and continuing, and shall go beyond mere pro forma ownership of the firm, as reflected in its ownership documents. Where the applicant business is found to be a family-operated business, and when the firm's duties, responsibilities and decision-making are occurring jointly and mutually among the owners and principals, or occurring severally or individually along managerial and operational lines between disadvantaged and non-disadvantaged owners, in such instances the disadvantaged owners shall not be considered as controlling the business.

2. The disadvantaged owners shall enjoy the customary incidence of ownership and shall share in the risks and profits commensurate with their ownership interests, as demonstrated by an examination of the substance rather than form of financial and managerial arrangements. The following factors will be considered in determining whether the disadvantaged owners share in the risks and profits commensurate with their ownership:

a. The disadvantaged owners must demonstrate that they share income commensurate with the percentage of their ownership in the business concern, including but not limited to, salaries, draws, bonuses and profit-sharing, and other benefits.

b. The disadvantaged owners must share in all the risks assumed by the business firm commensurate with their percentage of ownership, including but not limited to start-up costs, third-party agreements, bonding applications, and other liabilities. Start-up contributions may include but are not limited to space, cash, equipment, real estate, inventory or services estimated at fair market value.

(d) Pursuant to 49 C.F.R. Subtitle A, Subpart C, Section 23.53(a)(5), for purposes of establishing a corporation as a certified DBE under this rule chapter, all securities which constitute ownership or control by disadvantaged individuals shall be held directly by socially and economically disadvantaged individuals. No securities held in trust for a minor, or by any guardian for a minor, shall be considered as held by disadvantaged individuals in determining the ownership or control of a corporation.

(e) Pursuant to 49 C.F.R. Subtitle A, Subpart C, Section 23.53(a)(3), to be certified under this rule chapter, the DBE shall be one in which the disadvantaged owner shall also possess the power to direct or cause the direction of the management, policies, and operations of the firm and to make day-to-day as well as major business decisions concerning the firm's management, policy, and operation.

1. The discretion of the disadvantaged owners shall not be subject to any formal or informal restrictions (including, but not limited to, franchise agreements, bylaw provisions, partnership agreements, trust agreements or charter requirements for

cumulative voting rights or otherwise) which would vary managerial discretion customary in the industry, or that would prevent the disadvantaged owners, without the cooperation or vote of a non-disadvantaged owner, from making a business decision for the firm. Pursuant to 49 C.F.R. Subtitle A, Subpart D, Appendix A to Section 23.62, the disadvantaged owner must control the operations of the business. Absentee ownership, or titular ownership by a disadvantaged individual who does not take an active role in controlling the business is not consistent with eligibility as DBE under this rule chapter.

2. In assessing the power of the disadvantaged owner to direct or cause the direction of the firm, the Department will look past stock ownership and consider the minority applicant's ownership interest, knowledge of the particular business, background, involvement in the business on a day-to-day basis, expertise, involvement by the non-disadvantaged owners, employees or non-employees, other full or part-time employment by the minority applicant and the size of the applicant's business.

3. In further determining whether the disadvantaged owners also possess the power to direct or cause the direction of the management, policies and operations of the firm and have the requisite decision-making authority, the Department may look to the control lodged in the owners who are not socially and economically disadvantaged individuals. Pursuant to 49 C.F.R. Subtitle A, Subpart C, Section 23.53(a)(4), if the owners of the firm who are not disadvantaged individuals are disproportionately responsible for the operation of the firm then the firm, for purposes of this rule chapter, is not controlled by disadvantaged individuals and shall not be considered a DBE within the meaning of this rule chapter. Where the actual management of the firm is contracted out to individuals other than the owner(s), those persons who have the ultimate power to hire and fire the managers can be considered as controlling the business for the purposes of this rule chapter, provided the contract does not affect the applicant's ability to qualify under the other criteria of the rule.

4. The disadvantaged owners shall have managerial and technical expertise in the form of knowledge, training, education and/or experience required to make decisions in the critical areas of operation. The level of expertise required must be such that the disadvantaged owners possess the specialized knowledge, attributes, and skills necessary to critically evaluate and independently utilize information supplied to the disadvantaged owner by its subordinates. Administrative and managerial expertise will not suffice as a substitute for technical expertise. In determining the applicant's eligibility, the Department will review the prior employment and educational backgrounds of the disadvantaged owners, the professional skills, training and/or licenses required for the given industry, the previous and existing managerial relationship between and among all owners, especially those who are familially related, and the timing and purpose of management changes.

5. For those disadvantaged owner(s) requiring professional licensing (e.g., public accounting, law, engineering, etc.), the Department must determine that the small business concern holds the requisite licensing, and all licensing must comply with applicable state law.

(f) Pursuant to 49 C.F.R. Subtitle A, Subpart C, Section 23.53(a)(6), to be certified under this rule chapter, the DBE shall be one in which the contributions of capital or expertise are real and substantial.

1. In order for expertise to be utilized to substantiate stock ownership, the applicant must be able to calculate and verify the dollar value of such expertise and establish that the dollar value correlates to the value of the interest acquired; and establish that such expertise was actually contributed.

2. Contributions of capital may be considered in the form of payment for stock, conversion of liabilities or contributions of cash or other assets. For the purposes of the DBE program these sources of capital contributions are considered investments in the business and as such cannot be considered loaned to the company.

3. Contributions of capital and expertise documentation shall include but are not limited to transfer titles of equipment and property, checks, financial statements, partnership agreements, corporate organization minutes, educational documentation, professional licenses or work experience in the administrative and technical areas of the business.

4. Pursuant to 49 C.F.R. Subtitle A, Subpart C, Section 23.53(a)(6), examples of insufficient contributions include, but are not limited to, a promise to contribute capital, a note payable to the firm or its owners who are not disadvantaged individuals, or the mere participation as an employee, rather than as a manager.

(g) Disadvantaged owners seeking certification as a supplier of products which are required for DBE contracts, must be a regular dealer as defined in Rule 14-78.002, F.A.C.

(h) In order to qualify for the DBE program, trucking companies must own or lease at least one truck which is not owner operated, and which is utilized in the day-to-day critical areas of the business. All qualifying trucking companies must also comply with sub-subparagraph 14-78.003(2)(b)3.i., F.A.C.

(i) Pursuant to 49 C.F.R. Subtitle A, Subpart C, Section 23.53(b), in addition to the above standards, the Department shall give special consideration to the following circumstances:

1. Newly formed firms and firms whose ownership or control has changed shall be closely scrutinized to determine the reasons for the timing of the formation of or change in the firm.

2. A previous and/or continuing employer-employee relationship between or among present owners shall be carefully reviewed to ensure that the employee-owner has sufficient management responsibilities and capabilities.

3. Any relationship between an applicant and a non-DBE which has an interest in the enterprise seeking certification shall be carefully reviewed to determine if the interest of the non-DBE conflicts with the ownership and control requirements of this rule chapter.

(8) Pursuant to 49 C.F.R. Subtitle A, Subpart C, Section 23.53(c), a joint venture is eligible under this rule chapter if the DBE partner of the joint venture is a certified DBE and if the DBE partner in the joint venture is responsible for a clearly defined portion of the work to be performed and shares in the ownership, control, management responsibilities, risks, and profits of the joint venture.

(9) Pursuant to 49 C.F.R. Subtitle A, Subpart C, Section 23.53(d), a joint venture is eligible to compete in an DBE set-aside under this section if the DBE partner of the joint venture meets the standards of an eligible DBE set forth above, and the DBE partner's share in the ownership, control, and management responsibilities, risks, and profits of the joint venture is at least 51 percent and the DBE partner is responsible for a clearly defined portion of the work to be performed.

(10) Pursuant to 49 C.F.R. Subtitle A, Subpart C, Section 23.53(e), a business wishing to be certified as an DBE or joint venture DBE by the Department shall cooperate with the Department in supplying additional information which may be requested

in order to make a determination.

(11) Pursuant to 49 C.F.R. Subtitle A, Subpart C, Section 23.53(f), once certified, a DBE shall update its submission annually by submitting a new Schedule A or Schedule C as specified in subsections 14-78.005(2) and (3), F.A.C. At any time there is a change in ownership or control of the firm, the DBE shall submit a new Schedule A within 10 days of the date of the change.

(12) Pursuant to 49 C.F.R. Subtitle A, Subpart C, Section 23.53(h), the Department shall safeguard from disclosure to unauthorized persons information that reasonably may be regarded as confidential business information, consistent with Federal, state and local law.

(13) Decision-making rationale as well as specific U.S. Department of Transportation denials will be considered by the Department in its certification and recertification process.

(14) DBEs certified by the Department shall, for a minimum of five years, maintain and make available to the Department, upon request, the following records:

(a) A copy of all contractors' initial solicitation of quotations for contracts to be let by the Department and any subsequent communications regarding such solicitations.

(b) A copy of all quotations or other correspondence submitted to contractors by DBEs for contracts to be let by the Department.

(c) Copies of DBE payment certification as required by contract specifications for each Department project in which the DBE work is counted toward the DBE goal.

(d) Copies of all other correspondence or written documents involving the Department and DBE firm.

(e) A copy of all documentation to confirm DBE participation which is counted toward the DBE goal by the prime contractor.

Specific Authority 334.044(2), 337.125(4), 337.137(3), 339.0805(1) FS. Law Implemented 337.125, 337.137, 339.05, 339.0805 FS.

History—New

12-9-81, Amended 5-23-84, Formerly 14-78.05, Amended 9-21-87, 5-4-88, 6-24-91, 12-2-93, 4-30-96.

14-78.007 Procedure for Certification.

(1) All firms, including the DBE partner in a joint venture, shall complete and submit a Schedule A or Schedule C as specified in subsection 14-78.005(2) and (3), F.A.C. Firms wishing to participate as a joint venture shall in addition complete and submit a Schedule B. The schedule(s) shall be signed by the authorized representative of the business entity, notarized, and filed with the Equal Opportunity Office, 605 Suwannee Street, Mail Station 65, Tallahassee, Florida 32399-4050. The schedule(s) cannot be notarized by an owner or officer of the applicant business. A firm certified by the Small Business Administration shall in addition submit a copy of the letter approving the firm's participation in the Small Business Administration Section 8(a) program.

(2) The following procedures shall be applicable to any application for certification as a DBE:

(a) Within 30 days after receipt of an application for certification as a DBE, the Department shall examine the application, notify the applicant of any apparent errors or omissions, and request any additional information the Department is permitted by

law to require. In order for the additional information to be considered, the DBE shall return the requested information to the Department within 30 days after receipt of the request. If the additional information is not received within 30 days, the Department will process the application with the information as provided unless the applicant has requested and received an extension in writing.

(b) The Department shall approve or deny every application for certification as a DBE within 90 days after receipt of the original application or receipt of the timely requested additional information or correction of errors or omissions. For new certifications and recertifications, the 90-day processing period will begin upon receipt of the application or timely receipt of the timely requested additional information or correction of errors or omissions.

(c) The Department may make such inquiries and investigations as deemed necessary to comply with 49 C.F.R. Part 23 and may conduct an on-site review to verify and evaluate the information provided by the applicant. The DBE must be available for an on-site review as required by 49 C.F.R. 23.45(3) within 60 days of receipt of the application for DBE certification or receipt of requested additional information. Failure to be available for on-site review shall be grounds for denial of certification.

(d) The 90-day period shall be tolled by the initiation of a proceeding under Section 120.57, Florida Statutes, and shall resume 10 days after the recommended order is submitted to the Department and the parties.

(3) The Department shall certify a disadvantaged business enterprise, which certification shall be valid for 12 months. The Department's application for certification for a disadvantaged business enterprise shall require sufficient information to determine eligibility as a small business concern owned and controlled by a disadvantaged individual. An applicant who is denied certification may not reapply within six months after issuance of the denial letter or the final order, whichever is later. The application and financial information are confidential and exempt from Section 119.07(1), Florida Statutes. This exemption from Section 119.07(1), Florida Statutes, is subject to the Open Government Sunset Review Act in accordance with Section 119.14, Florida Statutes.

(4) Certification is conditioned upon continued eligibility. In order to avoid a break in certification, at least 90 days prior to the expiration of its certification, a DBE shall submit a new Schedule A or Schedule C as specified in subsections 14-78.005(2) and (3), F.A.C., and if a joint venture, a new Schedule A and a new Schedule B. If the DBE has applied for recertification at least 90 days prior to the expiration of its existing certification and the Department has requested additional information as specified in paragraph 14-78.007(2)(a), F.A.C., the DBE will remain in the DBE directory during the pendency of the recertification process or any timely filed appeal action. If the DBE did not apply for recertification at least 90 days prior to the expiration of its existing certification and a decision has not been made by the Department prior to the certification expiration date, then the DBE will be removed from the DBE directory upon expiration.

(5) If at any time there is a change in address, ownership, or control of the firm, the DBE shall, within 10 days following the change, notify the Equal Opportunity Office as specified in subsections 14-78.005(3), (4), and (5), F.A.C.

(6) The Department is required to provide written notice its intent to certify or deny the firm. If the Department intends to deny

an application for certification as a DBE, the Department shall provide, by certified mail, return receipt requested, or by personal delivery to the office of the applicant, notice of the facts which warrant such action. A mailed notice shall constitute full and complete notice even if the mail is returned as refused or unclaimed by the applicant provided the Department mails such notice to the last known address as provided by the applicant in writing.

(a) The written notice of denial of an application for certification shall contain:

1. The particular facts or basis for denial of the application.
2. A statement that the applicant has the right to an administrative hearing pursuant to Section 120.57, Florida Statutes.
3. A statement that the denial shall become conclusive and final agency action if no request for a hearing is filed within 15 days of receipt of the notice of denial.

(b) All requests for hearing shall be made in writing and shall be filed with the Clerk of Agency Proceedings, 605 Suwannee Street, MS 58, Haydon Burns Building, Tallahassee, Florida 32399-0458, within 15 days of receipt of the notice of denial of the application and shall include:

1. The name and address of the party making the request;
2. A statement that the party is requesting a formal proceeding pursuant to Section 120.57(1), Florida Statutes, or an informal proceeding pursuant to Section 120.57(2), Florida Statutes; and
3. A reference to the notice of denial of the application.

(c) If the applicant fails to file a request for a hearing within 15 days after receipt of the notice of denial of the application, the denial shall become conclusive and final agency action.

(d) Where the notice is refused or unclaimed, the 15 days will begin to run as of the last date of attempted contact by the delivery agent.

Specific Authority 334.044(2), 339.0805(1) FS. Law Implemented 120.57, 120.60, 334.044(2), 339.05, 339.0805 FS. History—New 12-9-81, Amended 5-23-84, Formerly 14-78.07, Amended 9-21-87, 5-4-88, 6-24-91, 12-2-93, 4-30-96.

14-78.0071 Challenge Procedure.

(1) Pursuant to 49 C.F.R. Subtitle A, Subpart D, Section 23.69, any third party may challenge the socially and economically disadvantaged status of any individual (except an individual who has a current 8(a) certification from the Small Business Administration) who is a member of one of the presumptive groups listed in subsection 14-78.002(18), F.A.C., if that individual is an owner of a firm certified by or seeking certification from the Department as a disadvantaged business.

(a) The challenge shall be made in writing to the Department and shall be filed with the Clerk of Agency proceedings and shall include:

1. The name and address of the party making the challenge;
2. The name of the person being challenged;
3. All information available to the challenging third party relevant to a determination of whether the challenged party is in fact disadvantaged.

(b) The Department shall determine, on the basis of the information provided by the challenging party, whether there is reason to believe that the challenged party is in fact not disadvantaged.

1. If the Department determines that there is not reason to believe that the challenged party is not disadvantaged, the Department shall so inform the challenging party in writing. This terminates the proceeding.

2. If the Department determines that there is reason to believe that the challenged party is not disadvantaged, the Department shall begin proceedings as provided in subsections (c), (d), and (e) of this section.

(c) The Department shall notify the challenged party in writing by certified mail, return receipt requested, or personal delivery to the office of the challenged party, that his or her status as a disadvantaged individual has been challenged. The notice shall identify the challenging party and summarize the grounds for the challenge. The notice shall also require the challenged party to provide to the Department, within 15 days of receipt of the notice, information sufficient to permit the Department to evaluate his or her status as a disadvantaged individual.

(d) The Department shall evaluate the information available to it and make a proposed determination of the disadvantaged status of the challenged party. The Department shall notify both parties of this proposed determination in writing, setting forth the reasons for its proposal. The Department shall provide an opportunity to the parties for an informal hearing, at which they can respond to this proposed determination in writing and in person.

(e) Following the informal hearing, the Department shall make a final determination. The Department shall inform the parties in writing of the final determination, setting forth the reasons for its decision.

(f) In making the determinations called for in subsections (b), (d) and (e) of this section, the Department shall use the standards set forth in Rule 14-78.005, F.A.C., of this rule chapter.

(g) During the pendency of a challenge under this section, the presumption that the challenged party is a disadvantaged individual shall remain in effect.

(h) The final determination of the Department under sub-subparagraphs (1)(a)2.a. and (1)(a)5. may be appealed to the U.S. Department of Transportation by the adversely affected party to the proceeding under the procedures of 49 C.F.R. Subtitle A, Section 23.55.

(2) The Department shall initiate a challenge against any applicant's status or certified DBE if it obtains credible information which questions the disadvantaged status of the applicant.

(a) If the Department challenges the socially and economically disadvantaged status of an applicant, it will issue an intent to deny certification pursuant to subsection 14-78.007(6), F.A.C.

(b) If the Department challenges the socially and economically disadvantaged status of a currently certified DBE, the Department shall revoke certification under the procedures specified in subsections 14-78.008(2), (3), and (4), F.A.C.

Specific Authority 120.53(1)(b), 334.044(2), 339.0805(1) FS. Law Implemented 120.57, 120.60, 334.044(2), 339.05, 339.0805 FS. History—New

6-24-91, Amended 12-2-93.

14-78.008 Suspension or Revocation.

(1) The Department may suspend, for a specified period of time, or revoke the Department's certification of DBE status if it finds:

(a) The DBE no longer meets the certification standards set forth in Rule 14-78.005, F.A.C.

(b) The DBE willfully made a false, deceptive, or fraudulent statement in its application for certification or in any other information submitted to the Department.

(c) The DBE fails to maintain the records required by subsections 14-78.005(5) and (14), F.A.C.

- (d) The DBE fails to perform a commercially useful function on projects for which the DBE is utilized to satisfy contract goals.
- (e) The DBE fails to fulfill its contractual obligations with contractors.
- (f) The DBE fails to respond to any requests for bid quotations from contractors for three consecutive lettings. For purposes of this provision a statement of noninterest or a bid quotation will be considered a response.
- (g) The DBE subordinates more than 49 percent of the amount of any single subcontract which was used by the prime contractor to meet the contract DBE goals. The Department shall revoke for a period of one year, the DBE certification of any DBE firm found to be in violation of this subsection. Subcontract work performed by a firm which is an affiliate of the DBE firm is considered subordination.
- (h) The DBE fails to provide notarized certification of payments received on specific projects to the prime contractor as required by contract specifications.
- (i) The DBE fails to schedule an on-site review upon request by the Department.
- (j) The DBE becomes insolvent or is the subject of a bankruptcy proceeding.
- (k) It has been determined per Rule 14-78.0071, F.A.C., that the challenged party is not disadvantaged.
- (2) The Department shall revoke the certification of a disadvantaged business enterprise upon receipt of notification of any change in ownership which results in the disadvantaged individual or individuals used to qualify the business as a disadvantaged business enterprise, no longer owning at least 51 percent of the business enterprise. Such notification shall be made to the Department by certified mail within 10 days after the change in ownership and such business shall be removed from the certified disadvantaged business list until a new application is submitted and approved by the Department. Failure to notify the Department of the change in the ownership which qualifies the business as a disadvantaged business enterprise will result in revocation of certification, and subject the business to the provisions of Section 337.135, Florida Statutes.
- (3) With the exception of a change in the qualifying 51% minority ownership, prior to suspending or revoking certification as a DBE, the Department shall inform the DBE in writing by certified mail, return receipt requested, or personal delivery to the office of the DBE, of the following:
- (a) The statutory provision(s) or rule(s) of the Florida Administrative Code which is alleged to have been violated.
- (b) The specific facts or conduct relied upon to justify the revocation or suspension.
- (c) A statement that the DBE has the right to file a request for an administrative hearing pursuant to Section 120.57, Florida Statutes, within 15 days of receipt of the notice of revocation or suspension.
- (d) A statement that the suspension or revocation shall become conclusive and final agency action if no request for a hearing is filed within 15 days of receipt of the notice of revocation or suspension of certification.
- (4) All requests for a hearing shall be made in writing and shall be filed with the Clerk of Agency Proceedings within 15 days of receipt of the notice of suspension or revocation of certification. The request shall include:
- (a) The name and address of the DBE making the request;

- (b) A statement that the DBE is requesting a formal proceeding pursuant to Section 120.57(1), Florida Statutes, or an informal proceeding, pursuant to Section 120.57(2), Florida Statutes; and
- (c) A reference to the notice of revocation or suspension of certification received from the Department and a statement of the specific grounds on which the proposed action is being challenged.
- (5) If the DBE fails to file a request for a hearing within 15 days after receipt of the notice of revocation or suspension of certification, the suspension or revocation shall become conclusive and final agency action.
- Specific Authority 334.044(2), 337.137(3), 339.0805(2) FS. Law Implemented 120.57, 334.044(2) 337.137, 339.05, 339.0805 FS. History—New 12-9-81, Amended 5-23-84, Formerly 14-78.08, Amended 9-21-87, 5-4-88, 6-24-91, 12-2-93.*

14-78.0081 Federal Appeal Rights.

In addition to the other remedies provided in this rule chapter, any person adversely affected by any action taken by the Department may exercise the appeal rights granted in 49 C.F.R. Part 23, Section 23.55 and Subpart D, Appendix A.

Specific Authority 334.044(2), 339.0805(1) FS. Law Implemented 339.05, 339.0805 FS. History—New 5-23-84, Formerly 14-78.081, Amended 9-21-87, 12-2-93.

14-78.009 Forms.

The following forms are incorporated by reference into this rule chapter and shall be used by firms when applying for certification as a DBE:

- (1) Schedule A – Certification Form No. 1 – Department of Transportation Form 275-030-01, Rev. 04/96.
 - (2) Schedule B – Certification Form No. 2 – Department of Transportation Form 275-030-02, Rev. 08/93.
 - (3) Schedule C – Certification Form No. 3 – Department of Transportation Form 275-030-03, Rev. 04/96.
 - (4) Disadvantaged Business Enterprise (DBE) Utilization Summary Form, Department of Transportation Form 275-020-003, Rev. 10/95.
 - (5) Disadvantaged Business Enterprise (DBE) Utilization Form, Department of Transportation Form 275-020-004, Rev. 10/95.
- Copies of these forms may be obtained by contacting the Liaison Officer, Equal Opportunity Office, 605 Suwannee Street, Mail Station 65, Tallahassee, Florida 32399-4050, (850) 414-4747.
- Specific Authority 334.044(2), 339.0805(1), (2) FS. Law Implemented 334.044(2), 339.05, 339.0805 FS. History—New 12-9-81, Amended 5-23-84, Formerly 14-78.09, Amended 9-21-87, 5-4-88, 6-24-91, 12-2-93, 4-30-96.*

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stated in the plans or special provisions. Federal participation will be limited to (1) the cost of the material to the State transportation department or other public agency; or (2) the fair and reasonable value of the material, whichever is less. Special cases may arise that will justify Federal participation on a basis other than that set forth above. Such cases should be fully documented and receive advance approval by the FHWA Division Administrator.

(f) Costs incurred by the State transportation department or other public agency for acquiring a designated source or the right to take materials from it will not be eligible for Federal participation if the source is not used by the contractor.

(g) The contract provisions for one or a combination of Federal-aid projects shall not specify a mandatory site for the disposal of surplus excavated materials unless there is a finding by the State transportation department with the concurrence of the FHWA Division Administrator that such placement is the most economical except that the designation of a mandatory site may be permitted based on environmental considerations, provided the environment would be substantially enhanced without excessive cost.

§ 635.409 Restrictions upon materials.

No requirement shall be imposed and no procedure shall be enforced by any State transportation department in connection with a project which may operate:

(a) To require the use of or provide a price differential in favor of articles or materials produced within the State, or otherwise to prohibit, restrict or discriminate against the use of articles or materials shipped from or prepared, made or produced in any State, territory or possession of the United States; or

(b) To prohibit, restrict or otherwise discriminate against the use of articles or materials of foreign origin to any greater extent than is permissible under policies of the Department of Transportation as evidenced by requirements and procedures prescribed by the FHWA Administrator to carry out such policies.

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§ 635.410 Buy America requirements.

(a) The provisions of this section shall prevail and be given precedence over any requirements of this subpart which are contrary to this section. However, nothing in this section shall be construed to be contrary to the requirements of § 635.409(a) of this subpart.

(b) No Federal-aid highway construction project is to be authorized for advertisement or otherwise authorized to proceed unless at least one of the following requirements is met:

(1) The project either: (i) Includes no permanently incorporated steel or iron materials, or (ii) if steel or iron materials are to be used, all manufacturing processes, including application of a coating, for these materials must occur in the United States. Coating includes all processes which protect or enhance the value of the material to which the coating is applied.

(2) The State has standard contract provisions that require the use of domestic materials and products, including steel and iron materials, to the same or greater extent as the provisions set forth in this section.

(3) The State elects to include alternate bid provisions for foreign and domestic steel and iron materials which comply with the following requirements. Any procedure for obtaining alternate bids based on furnishing foreign steel and iron materials which is acceptable to the Division Administrator may be used. The contract provisions must (i) require all bidders to submit a bid based on furnishing domestic steel and iron materials, and (ii) clearly state that the contract will be awarded to the bidder who submits the lowest total bid based on furnishing domestic steel and iron materials unless such total bid exceeds the lowest total bid based on furnishing foreign steel and iron materials by more than 25 percent.

(4) When steel and iron materials are used in a project, the requirements of this section do not prevent a minimal use of foreign steel and iron materials, if the cost of such materials used does not exceed one-tenth of one percent (0.1 percent) of the total contract cost or \$2,500, whichever is greater. For purposes of this paragraph, the cost is that

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shown to be the value of the steel and iron products as they are delivered to the project.

(c)(1) A State may request a waiver of the provisions of this section if:

(i) The application of those provisions would be inconsistent with the public interest; or

(ii) Steel and iron materials/products are not produced in the United States in sufficient and reasonably available quantities which are of a satisfactory quality.

(2) A request for waiver, accompanied by supporting information, must be submitted in writing to the Regional Federal Highway Administrator (RFHWA) through the FHWA Division Administrator. A request must be submitted sufficiently in advance of the need for the waiver in order to allow time for proper review and action on the request. The RFHWA will have approval authority on the request.

(3) Requests for waivers may be made for specific projects, or for certain materials or products in specific geographic areas, or for combinations of both, depending on the circumstances.

(4) The denial of the request by the RFHWA may be appealed by the State to the Federal Highway Administrator (Administrator), whose action on the request shall be considered administratively final.

(5) A request for a waiver which involves nationwide public interest or availability issues or more than one FHWA region may be submitted by the RFHWA to the Administrator for action.

(6) A request for waiver and an appeal from a denial of a request must include facts and justification to support the granting of the waiver. The FHWA response to a request or appeal will be in writing and made available to the public upon request. Any request for a nationwide waiver and FHWA's action on such a request may be published in the FEDERAL REGISTER for public comment.

(7) In determining whether the waivers described in paragraph (c)(1) of this section will be granted, the FHWA will consider all appropriate factors including, but not limited to, cost, administrative burden, and delay that would be imposed if the provision were not waived.

(d) Standard State and Federal-aid contract procedures may be used to assure compliance with the requirements of this section.

[48 FR 53104, Nov. 25, 1983, as amended at 49 FR 18821, May 3, 1984; 58 FR 38975, July 21, 1993]

§ 635.411 Material or product selection.

(a) Federal funds shall not participate, directly or indirectly, in payment for any premium or royalty on any patented or proprietary material, specification, or process specifically set forth in the plans and specifications for a project, unless:

(1) Such patented or proprietary item is purchased or obtained through competitive bidding with equally suitable unpatented items; or

(2) The State transportation department certifies either that such patented or proprietary item is essential for synchronization with existing highway facilities, or that no equally suitable alternate exists; or

(3) Such patented or proprietary item is used for research or for a distinctive type of construction on relatively short sections of road for experimental purposes.

(b) When there is available for purchase more than one nonpatented, nonproprietary material, semifinished or finished article or product that will fulfill the requirements for an item of work of a project and these available materials or products are judged to be of satisfactory quality and equally acceptable on the basis of engineering analysis and the anticipated prices for the related item(s) of work are estimated to be approximately the same, the PS&E for the project shall either contain or include by reference the specifications for each such material or product that is considered acceptable for incorporation in the work. If the State transportation department wishes to substitute some other acceptable material or product for the material or product designated by the successful bidder or bid as the lowest alternate, and such substitution results in an increase in costs, there will not be Federal-aid participation in any increase in costs.

006 CONTROL OF MATERIALS – SOURCE OF SUPPLY - STEEL.
(REV 10-19-12) (FA 11-15-12) (7-13)

SUBARTICLE 6-5.2 (Pages 54) is deleted and the following substituted:

6-5.2 Source of Supply-Steel: Use steel and iron produced in the United States, in accordance with the Buy America provisions of 23 CFR 635.410, as amended. Ensure that all manufacturing processes for this material occur in the United States. As used in this specification, a manufacturing process is any process that modifies the chemical content, physical shape or size, or final finish of a product, beginning with the initial melding and mixing and continuing through the bending and coating stages. A manufactured steel or iron product is complete only when all grinding, drilling, welding, finishing and coating have been completed. If a domestic product is taken outside the United States for any process, it becomes foreign source material. When using steel and iron as a component of any manufactured product incorporated into the project (e.g., concrete pipe, prestressed beams, corrugated steel pipe, etc.), these same provisions apply, except that the manufacturer may use minimal quantities of foreign steel and iron when the cost of such foreign materials does not exceed 0.1% of the total Contract amount or \$2,500, whichever is greater. These requirements are applicable to all steel and iron materials incorporated into the finished work, but are not applicable to steel and iron items that the Contractor uses but does not incorporate into the finished work. Provide a certification from the producer of steel or iron, or any product containing steel or iron as a component, stating that all steel or iron furnished or incorporated into the furnished product was manufactured in the United States in accordance with the requirements of this specification and the Buy America provisions of 23 CFR 635.410, as amended. Such certification shall also include (1) a statement that the product was produced entirely within the United States, or (2) a statement that the product was produced within the United States except for minimal quantities of foreign steel and iron valued at \$ (actual value). Furnish each such certification to the Engineer prior to incorporating the material into the project. Prior to the use of foreign steel on a project, furnish invoices to document the cost of such material, and obtain the Engineer's written approval prior to incorporating the material into the project.

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shown to be the value of the steel and iron products as they are delivered to the project.

(c)(1) A State may request a waiver of the provisions of this section if:

(i) The application of those provisions would be inconsistent with the public interest; or

(ii) Steel and iron materials/products are not produced in the United States in sufficient and reasonably available quantities which are of a satisfactory quality.

(2) A request for waiver, accompanied by supporting information, must be submitted in writing to the Regional Federal Highway Administrator (RFHWA) through the FHWA Division Administrator. A request must be submitted sufficiently in advance of the need for the waiver in order to allow time for proper review and action on the request. The RFHWA will have approval authority on the request.

(3) Requests for waivers may be made for specific projects, or for certain materials or products in specific geographic areas, or for combinations of both, depending on the circumstances.

(4) The denial of the request by the RFHWA may be appealed by the State to the Federal Highway Administrator (Administrator), whose action on the request shall be considered administratively final.

(5) A request for a waiver which involves nationwide public interest or availability issues or more than one FHWA region may be submitted by the RFHWA to the Administrator for action.

(6) A request for waiver and an appeal from a denial of a request must include facts and justification to support the granting of the waiver. The FHWA response to a request or appeal will be in writing and made available to the public upon request. Any request for a nationwide waiver and FHWA's action on such a request may be published in the FEDERAL REGISTER for public comment.

(7) In determining whether the waivers described in paragraph (c)(1) of this section will be granted, the FHWA will consider all appropriate factors including, but not limited to, cost, administrative burden, and delay that would be imposed if the provision were not waived.

(d) Standard State and Federal-aid contract procedures may be used to assure compliance with the requirements of this section.

[48 FR 53104, Nov. 25, 1983, as amended at 49 FR 18821, May 3, 1984; 58 FR 38975, July 21, 1993]

§ 635.411 Material or product selection.

(a) Federal funds shall not participate, directly or indirectly, in payment for any premium or royalty on any patented or proprietary material, specification, or process specifically set forth in the plans and specifications for a project, unless:

(1) Such patented or proprietary item is purchased or obtained through competitive bidding with equally suitable unpatented items; or

(2) The State transportation department certifies either that such patented or proprietary item is essential for synchronization with existing highway facilities, or that no equally suitable alternate exists; or

(3) Such patented or proprietary item is used for research or for a distinctive type of construction on relatively short sections of road for experimental purposes.

(b) When there is available for purchase more than one nonpatented, nonproprietary material, semifinished or finished article or product that will fulfill the requirements for an item of work of a project and these available materials or products are judged to be of satisfactory quality and equally acceptable on the basis of engineering analysis and the anticipated prices for the related item(s) of work are estimated to be approximately the same, the PS&E for the project shall either contain or include by reference the specifications for each such material or product that is considered acceptable for incorporation in the work. If the State transportation department wishes to substitute some other acceptable material or product for the material or product designated by the successful bidder or bid as the lowest alternate, and such substitution results in an increase in costs, there will not be Federal-aid participation in any increase in costs.

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(c) A State transportation department may require a specific material or product when there are other acceptable materials and products, when such specific choice is approved by the Division Administrator as being in the public interest. When the Division Administrator's approval is not obtained, the item will be nonparticipating unless bidding procedures are used that establish the unit price of each acceptable alternative. In this case Federal-aid participation will be based on the lowest price so established.

(d) Reference in specifications and on plans to single trade name materials will not be approved on Federal-aid contracts.

(e) In the case of a design-build project, the following requirements apply: Federal funds shall not participate, directly or indirectly, in payment for any premium or royalty on any patented or proprietary material, specification, or process specifically set forth in the Request for Proposals document unless the conditions of paragraph (a) of this section are applicable.

(f) State transportation departments (State DOTs) shall have the autonomy to determine culvert and storm sewer material types to be included in the construction of a project on a Federal-aid highway.

[41 FR 36204, Aug. 27, 1976, as amended at 67 FR 75926, Dec. 10, 2002; 71 FR 66454, Nov. 15, 2006; 78 FR 5717, Jan. 28, 2013]

§ 635.413 Guaranty and warranty clauses.

The STD may include warranty provisions in National Highway System (NHS) construction contracts in accordance with the following:

(a) Warranty provisions shall be for a specific construction product or feature. Items of maintenance not eligible for Federal participation shall not be covered.

(b) All warranty requirements and subsequent revisions shall be submitted to the Division Administrator for advance approval.

(c) No warranty requirement shall be approved which, in the judgment of the Division Administrator, may place an undue obligation on the contractor for items over which the contractor has no control.

(d) A STD may follow its own procedures regarding the inclusion of warranty provisions in non-NHS Federal-aid contracts.

(e) In the case of a design-build project, the following requirements will apply instead of paragraphs (a) through (d) of this section.

(1) General project warranties may be used on NHS projects, provided:

(i) The term of the warranty is short (generally one to two years); however, projects developed under a public-private agreement may include warranties that are appropriate for the term of the contract or agreement.

(ii) The warranty is not the sole means of acceptance;

(iii) The warranty must not include items of routine maintenance which are not eligible for Federal participation; and,

(iv) The warranty may include the quality of workmanship, materials and other specific tasks identified in the contract.

(2) Performance warranties for specific products on NHS projects may be used at the STD's discretion. If performance warranties are used, detailed performance criteria must be provided in the Request for Proposal document.

(3) The STD may follow its own procedures regarding the inclusion of warranty provisions on non-NHS Federal-aid design-build contracts.

(4) For best value selections, the STD may allow proposers to submit alternate warranty proposals that improve upon the warranty terms in the RFP document. Such alternate warranty proposals must be in addition to the base proposal that responds to the RFP requirements.

[60 FR 44274, Aug. 25, 1995, as amended at 67 FR 75926, Dec. 10, 2002; 72 FR 45336, Aug. 14, 2007]

§ 635.417 Convict produced materials.

(a) Materials produced after July 1, 1991, by convict labor may only be incorporated in a Federal-aid highway construction project if such materials have been:

(1) Produced by convicts who are on parole, supervised release, or probation from a prison or

(2) Produced in a qualified prison facility and the cumulative annual production amount of such materials for use in Federal-aid highway construction does not exceed the amount of such materials produced in such facility for use in Federal-aid highway construction during the 12-month period ending July 1, 1987.

(b) *Qualified prison facility* means any prison facility in which convicts, during the 12-month period ending July 1, 1987, produced materials for use in Federal-aid highway construction projects.

[53 FR 1923, Jan. 25, 1988, as amended at 58 FR 38975, July 21, 1993]

PART 636—DESIGN-BUILD CONTRACTING

Subpart A—General

Sec.

- 636.101 What does this part do?
- 636.102 Does this part apply to me?
- 636.103 What are the definitions of terms used in this part?
- 636.104 Does this part apply to all Federal-aid design-build projects?
- 636.105 Is the FHWA requiring the use of design-build?
- 636.106 [Reserved]
- 636.107 May contracting agencies use geographic preference in Federal-aid design-build or public-private partnership projects?
- 636.108 [Reserved]
- 636.109 How does the NEPA process relate to the design-build procurement process?
- 636.110 What procedures may be used for solicitations and receipt of proposals?
- 636.111 Can oral presentations be used during the procurement process?
- 636.112 May stipends be used?
- 636.113 Is the stipend amount eligible for Federal participation?
- 636.114 What factors should be considered in risk allocation?
- 636.115 May I meet with industry to gather information concerning the appropriate risk allocation strategies?
- 636.116 What organizational conflict of interest requirements apply to design-build projects?
- 636.117 What conflict of interest standards apply to individuals who serve as selection team members for the owner?
- 636.118 Is team switching allowed after contract award?
- 636.119 How does this part apply to a project developed under a public-private partnership?

Subpart B—Selection Procedures, Award Criteria

- 636.201 What selection procedures and award criteria may be used?
- 636.202 When are two-phase design-build selection procedures appropriate?
- 636.203 What are the elements of two-phase selection procedures for competitive proposals?
- 636.204 What items may be included in a phase-one solicitation?
- 636.205 Can past performance be used as an evaluation criteria?
- 636.206 How do I evaluate offerors who do not have a record of relevant past performance?
- 636.207 Is there a limit on short listed firms?
- 636.208 May I use my existing prequalification procedures with design-build contracts?
- 636.209 What items must be included in a phase-two solicitation?
- 636.210 What requirements apply to projects which use the modified design-build procedure?
- 636.211 When and how should tradeoffs be used?
- 636.212 To what extent must tradeoff decisions be documented?

Subpart C—Proposal Evaluation Factors

- 636.301 How should proposal evaluation factors be selected?
- 636.302 Are there any limitations on the selection and use of proposal evaluation factors?
- 636.303 May pre-qualification standards be used as proposal evaluation criteria in the RFP?
- 636.304 What process may be used to rate and score proposals?
- 636.305 Can price information be provided to analysts who are reviewing technical proposals?

Subpart D—Exchanges

- 636.401 What types of information exchange may take place prior to the release of the RFP document?
- 636.402 What types of information exchange may take place after the release of the RFP document?
- 636.403 What information may be exchanged with a clarification?
- 636.404 Can a competitive range be used to limit competition?
- 636.405 After developing a short list, can I still establish a competitive range?
- 636.406 Are communications allowed prior to establishing the competitive range?
- 636.407 Am I limited in holding communications with certain firms?

filed by the complainant within 90 days of receipt from the Department of the letter required by §28.170(g). The Department may extend this time for good cause.

(i) Timely appeals shall be accepted and processed by the Assistant Secretary for Transportation Policy. The appeal will not be heard by the same person who made the initial determination on the request. The decision on the appeal shall constitute the Department's final action in the matter.

(j) The Department shall notify the complainant of the results of the appeal within 60 days of the receipt of the request. If the Department determines that it needs additional information from the complainant, it shall have 60 days from the date it receives the additional information to make its determination on the appeal.

(k) The time limits cited in paragraphs (g) and (j) of this section may be assisted with the permission of the Assistant Attorney General.

(l) The Department may delegate its authority for conducting complaint investigations to other Federal agencies, except that the authority for making the final determination may not be delegated to another agency.

[56 FR 37296, Aug. 6, 1991, as amended at 59 FR 10061, Mar. 3, 1994]

§§ 28.171–28.999 [Reserved]

PART 29—GOVERNMENTWIDE DEBARMENT AND SUSPENSION (NONPROCUREMENT)

Sec.

29.25 How is this part organized?

29.50 How is this part written?

29.75 Do terms in this part have special meanings?

Subpart A—General

29.100 What does this part do?

29.105 Does this part apply to me?

29.110 What is the purpose of the nonprocurement debarment and suspension system?

29.115 How does an exclusion restrict a person's involvement in covered transactions?

29.120 May we grant an exception to let an excluded person participate in a covered transaction?

29.125 Does an exclusion under the nonprocurement system affect a person's eligibility for Federal procurement contracts?

29.130 Does exclusion under the Federal procurement system affect a person's eligibility to participate in nonprocurement transactions?

29.135 May DOT exclude a person who is not currently participating in a nonprocurement transaction?

29.140 How do I know if a person is excluded?

29.145 Does this part address persons who are disqualified, as well as those who are excluded from nonprocurement transactions?

Subpart B—Covered Transactions

29.200 What is a covered transaction?

29.205 Why is it important to know if a particular transaction is a covered transaction?

29.210 Which nonprocurement transactions are covered transactions?

29.215 Which nonprocurement transactions are not covered transactions?

29.220 Are any procurement contracts included as covered transactions?

29.225 How do I know if a transaction in which I may participate is a covered transaction?

Subpart C—Responsibilities of Participants Regarding Transactions

DOING BUSINESS WITH OTHER PERSONS

29.300 What must I do before I enter into a covered transaction with another person at the next lower tier?

29.305 May I enter into a covered transaction with an excluded or disqualified person?

29.310 What must I do if a Federal agency excludes a person with whom I am already doing business in a covered transaction?

29.315 May I use the services of an excluded person as a principal under a covered transaction?

29.320 Must I verify that principals of my covered transactions are eligible to participate?

29.325 What happens if I do business with an excluded person in a covered transaction?

29.330 What requirements must I pass down to persons at lower tiers with whom I intend to do business?

DISCLOSING INFORMATION—PRIMARY TIER PARTICIPANTS

29.335 What information must I provide before entering into a covered transaction with DOT?

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- 29.340 If I disclose unfavorable information required under §29.335, will I be prevented from participating in the transaction?
- 29.345 What happens if I fail to disclose the information required under §29.335?
- 29.350 What must I do if I learn of the information required under §29.335 after entering into a covered transaction with DOT?

DISCLOSING INFORMATION—LOWER TIER PARTICIPANTS

- 29.355 What information must I provide to a higher tier participant before entering into a covered transaction with that participant?
- 29.360 What happens if I fail to disclose the information required under §29.355?
- 29.365 What must I do if I learn of information required under §29.355 after entering into a covered transaction with a higher tier participant?

Subpart D—Responsibilities of DOT Officials Regarding Transactions

- 29.400 May I enter into a transaction with an excluded or disqualified person?
- 29.405 May I enter into a covered transaction with a participant if a principal of the transaction is excluded?
- 29.410 May I approve a participant's use of the services of an excluded person?
- 29.415 What must I do if a Federal agency excludes the participant or a principal after I enter into a covered transaction?
- 29.420 May I approve a transaction with an excluded or disqualified person at a lower tier?
- 29.425 When do I check to see if a person is excluded or disqualified?
- 29.430 How do I check to see if a person is excluded or disqualified?
- 29.435 What must I require of a primary tier participant?
- 29.440 What method do I use to communicate those requirements to participants?
- 29.445 What action may I take if a primary tier participant knowingly does business with an excluded or disqualified person?
- 29.450 What action may I take if a primary tier participant fails to disclose the information required under §29.335?
- 29.455 What may I do if a lower tier participant fails to disclose the information required under §29.355 to the next higher tier?

Subpart E—Excluded Parties List System

- 29.500 What is the purpose of the Excluded Parties List System (EPLS)?
- 29.505 Who uses the EPLS?
- 29.510 Who maintains the EPLS?

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- 29.515 What specific information is in the EPLS?
- 29.520 Who places the information into the EPLS?
- 29.525 Whom do I ask if I have questions about a person in the EPLS?
- 29.530 Where can I find the EPLS?

Subpart F—General Principles Relating to Suspension and Debarment Actions

- 29.600 How do suspension and debarment actions start?
- 29.605 How does suspension differ from debarment?
- 29.610 What procedures does DOT use in suspension and debarment actions?
- 29.615 How does DOT notify a person of a suspension and debarment action?
- 29.620 Do Federal agencies coordinate suspension and debarment actions?
- 29.625 What is the scope of a suspension or debarment action?
- 29.630 May DOT impute the conduct of one person to another?
- 29.635 May DOT settle a debarment or suspension action?
- 29.640 May a settlement include a voluntary exclusion?
- 29.645 Do other Federal agencies know if DOT agrees to a voluntary exclusion?

Subpart G—Suspension

- 29.700 When may the suspending official issue a suspension?
- 29.705 What does the suspending official consider in issuing a suspension?
- 29.710 When does a suspension take effect?
- 29.715 What notice does the suspending official give me if I am suspended?
- 29.720 How may I contest a suspension?
- 29.725 How much time do I have to contest a suspension?
- 29.730 What information must I provide to the suspending official if I contest a suspension?
- 29.735 Under what conditions do I get an additional opportunity to challenge the facts on which the suspension is based?
- 29.740 Are suspension proceedings formal?
- 29.745 How is fact-finding conducted?
- 29.750 What does the suspending official consider in deciding whether to continue or terminate my suspension?
- 29.755 When will I know whether the suspension is continued or terminated?
- 29.760 How long may my suspension last?

Subpart H—Debarment

- 29.800 What are the causes for debarment?
- 29.805 What notice does the debarring official give me if I am proposed for debarment?
- 29.810 When does a debarment take effect?
- 29.815 How may I contest a proposed debarment?

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- 29.820 How much time do I have to contest a proposed debarment?
- 29.825 What information must I provide to the debarring official if I contest a proposed debarment?
- 29.830 Under what conditions do I get an additional opportunity to challenge the facts on which the proposed debarment is based?
- 29.835 Are debarment proceedings formal?
- 29.840 How is fact-finding conducted?
- 29.845 What does the debarring official consider in deciding whether to debar me?
- 29.850 What is the standard of proof in a debarment action?
- 29.855 Who has the burden of proof in a debarment action?
- 29.860 What factors may influence the debarring official's decision?
- 29.865 How long may my debarment last?
- 29.870 When do I know if the debarring official debars me?
- 29.875 May I ask the debarring official to reconsider a decision to debar me?
- 29.880 What factors may influence the debarring official during reconsideration?
- 29.885 May the debarring official extend a debarment?

- 29.945 Excluded or exclusion.
- 29.950 Excluded Parties List System.
- 29.955 Indictment.
- 29.960 Ineligible or ineligibility.
- 29.965 Legal proceedings.
- 29.970 Nonprocurement transaction.
- 29.975 Notice.
- 29.980 Participant.
- 29.985 Person.
- 29.990 Preponderance of the evidence.
- 29.995 Principal.
- 29.1000 Respondent.
- 29.1005 State.
- 29.1010 Suspending official.
- 29.1015 Suspension.
- 29.1020 Voluntary exclusion or voluntarily excluded.

Subpart J [Reserved]

APPENDIX TO PART 29—COVERED TRANSACTIONS

AUTHORITY: Sec. 2455, Pub. L. 103-355, 108 Stat. 3327 (31 U.S.C. 6101 note); E.O. 11738 (3 CFR, 1973 Comp., p. 799); E.O. 12549 (3 CFR, 1986 Comp., p. 189); E.O. 12689 (3 CFR, 1989 Comp., p. 235).

SOURCE: 68 FR 66644 and 66645, Nov. 26, 2003, unless otherwise noted.

Subpart I—Definitions

- 29.900 Adequate evidence.
- 29.905 Affiliate.
- 29.910 Agency.
- 29.915 Agent or representative.
- 29.920 Civil judgment.
- 29.925 Conviction.
- 29.930 Debarment.
- 29.935 Debarring official.
- 29.940 Disqualified.

§ 29.25 How is this part organized?

(a) This part is subdivided into ten subparts. Each subpart contains information related to a broad topic or specific audience with special responsibilities, as shown in the following table:

In subpart . . .	You will find provisions related to . . .
A	general information about this rule.
B	the types of DOT transactions that are covered by the Governmentwide nonprocurement suspension and debarment system.
C	the responsibilities of persons who participate in covered transactions.
D	the responsibilities of DOT officials who are authorized to enter into covered transactions.
E	the responsibilities of Federal agencies for the <i>Excluded Parties List System</i> (Disseminated by the General Services Administration).
F	the general principles governing suspension, debarment, voluntary exclusion and settlement.
G	suspension actions.
H	debarment actions.
I	definitions of terms used in this part.
J	[Reserved]

(b) The following table shows which subparts may be of special interest to you, depending on who you are:

If you are . . .	See subpart(s) . . .
(1) a participant or principal in a non-procurement transaction.	A, B, C, and I.
(2) a respondent in a suspension action	A, B, F, G and I.
(3) a respondent in a debarment action	A, B, F, H and I.
(4) a suspending official	A, B, D, E, F, G and I.

If you are . . .	See subpart(s) . . .
(5) a debarring official	A, B, D, E, F, H and I.
(6) a (n) DOT official authorized to enter into a covered transaction.	A, B, D, E and I.
(7) Reserved	J.

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§ 29.50 How is this part written?

(a) This part uses a “plain language” format to make it easier for the general public and business community to use. The section headings and text, often in the form of questions and answers, must be read together.

(b) Pronouns used within this part, such as “I” and “you,” change from subpart to subpart depending on the audience being addressed. The pronoun “we” always is the Department of Transportation.

(c) The “Covered Transactions” diagram in the appendix to this part shows the levels or “tiers” at which the Department of Transportation enforces an exclusion under this part.

§ 29.75 Do terms in this part have special meanings?

This part uses terms throughout the text that have special meaning. Those terms are defined in Subpart I of this part. For example, three important terms are—

(a) *Exclusion or excluded*, which refers only to discretionary actions taken by a suspending or debarring official under this part or the Federal Acquisition Regulation (48 CFR part 9, subpart 9.4);

(b) *Disqualification or disqualified*, which refers to prohibitions under specific statutes, executive orders (other than Executive Order 12549 and Executive Order 12689), or other authorities. Disqualifications frequently are not subject to the discretion of an agency official, may have a different scope than exclusions, or have special conditions that apply to the disqualification; and

(c) *Ineligibility or ineligible*, which generally refers to a person who is either excluded or disqualified.

Subpart A—General

§ 29.100 What does this part do?

This part adopts a governmentwide system of debarment and suspension for DOT nonprocurement activities. It also provides for reciprocal exclusion of persons who have been excluded under the Federal Acquisition Regulation, and provides for the consolidated listing of all persons who are excluded,

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or disqualified by statute, executive order, or other legal authority. This part satisfies the requirements in section 3 of Executive Order 12549, “Debarment and Suspension” (3 CFR 1986 Comp., p. 189), Executive Order 12689, “Debarment and Suspension” (3 CFR 1989 Comp., p. 235) and 31 U.S.C. 6101 note (Section 2455, Public Law 103–355, 108 Stat. 3327).

§ 29.105 Does this part apply to me?

Portions of this part (see table at § 29.25(b)) apply to you if you are a(n)—

(a) Person who has been, is, or may reasonably be expected to be, a participant or principal in a covered transaction;

(b) Respondent (a person against whom the Department of Transportation has initiated a debarment or suspension action);

(c) DOT debarring or suspending official; or

(d) DOT official who is authorized to enter into covered transactions with non-Federal parties.

§ 29.110 What is the purpose of the nonprocurement debarment and suspension system?

(a) To protect the public interest, the Federal Government ensures the integrity of Federal programs by conducting business only with responsible persons.

(b) A Federal agency uses the nonprocurement debarment and suspension system to exclude from Federal programs persons who are not presently responsible.

(c) An exclusion is a serious action that a Federal agency may take only to protect the public interest. A Federal agency may not exclude a person or commodity for the purposes of punishment.

§ 29.115 How does an exclusion restrict a person’s involvement in covered transactions?

With the exceptions stated in §§ 29.120, 29.315, and 29.420, a person who is excluded by the Department of Transportation or any other Federal agency may not:

(a) Be a participant in a(n) DOT transaction that is a covered transaction under subpart B of this part;

(b) Be a participant in a transaction of any other Federal agency that is a covered transaction under that agency's regulation for debarment and suspension; or

(c) Act as a principal of a person participating in one of those covered transactions.

§ 29.120 May we grant an exception to let an excluded person participate in a covered transaction?

(a) The debarring or suspending official may grant an exception permitting an excluded person to participate in a particular covered transaction. If the debarring or suspending official grants an exception, the exception must be in writing and state the reason(s) for deviating from the governmentwide policy in Executive Order 12549.

(b) An exception granted by one agency for an excluded person does not extend to the covered transactions of another agency.

(c) A debarring or suspending official may grant exceptions and make written determinations under this section.

§ 29.125 Does an exclusion under the nonprocurement system affect a person's eligibility for Federal procurement contracts?

If any Federal agency excludes a person under its nonprocurement common rule on or after August 25, 1995, the excluded person is also ineligible to participate in Federal procurement transactions under the FAR. Therefore, an exclusion under this part has reciprocal effect in Federal procurement transactions.

§ 29.130 Does exclusion under the Federal procurement system affect a person's eligibility to participate in nonprocurement transactions?

If any Federal agency excludes a person under the FAR on or after August 25, 1995, the excluded person is also ineligible to participate in nonprocurement covered transactions under this part. Therefore, an exclusion under the FAR has reciprocal effect in Federal nonprocurement transactions.

§ 29.135 May the Department of Transportation exclude a person who is not currently participating in a nonprocurement transaction?

Given a cause that justifies an exclusion under this part, we may exclude any person who has been involved, is currently involved, or may reasonably be expected to be involved in a covered transaction.

§ 29.140 How do I know if a person is excluded?

Check the *Excluded Parties List System (EPLS)* to determine whether a person is excluded. The General Services Administration (GSA) maintains the *EPLS* and makes it available, as detailed in subpart E of this part. When a Federal agency takes an action to exclude a person under the nonprocurement or procurement debarment and suspension system, the agency enters the information about the excluded person into the *EPLS*.

§ 29.145 Does this part address persons who are disqualified, as well as those who are excluded from nonprocurement transactions?

Except if provided for in Subpart J of this part, this part—

(a) Addresses disqualified persons only to—

(1) Provide for their inclusion in the *EPLS*; and

(2) State responsibilities of Federal agencies and participants to check for disqualified persons before entering into covered transactions.

(b) Does not specify the—

(1) DOT transactions for which a disqualified person is ineligible. Those transactions vary on a case-by-case basis, because they depend on the language of the specific statute, Executive order, or regulation that caused the disqualification;

(2) Entities to which the disqualification applies; or

(3) Process that the agency uses to disqualify a person. Unlike exclusion, disqualification is frequently not a discretionary action that a Federal agency takes.

Subpart B—Covered Transactions

§ 29.200 What is a covered transaction?

A covered transaction is a non-procurement or procurement transaction that is subject to the prohibitions of this part. It may be a transaction at—

- (a) The primary tier, between a Federal agency and a person (see appendix to this part); or
- (b) A lower tier, between a participant in a covered transaction and another person.

§ 29.205 Why is it important if a particular transaction is a covered transaction?

The importance of a covered transaction depends upon who you are.

(a) As a participant in the transaction, you have the responsibilities laid out in Subpart C of this part. Those include responsibilities to the person or Federal agency at the next higher tier from whom you received the transaction, if any. They also include responsibilities if you subsequently enter into other covered transactions with persons at the next lower tier.

(b) As a Federal official who enters into a primary tier transaction, you have the responsibilities laid out in subpart D of this part.

(c) As an excluded person, you may not be a participant or principal in the transaction unless—

(1) The person who entered into the transaction with you allows you to continue your involvement in a transaction that predates your exclusion, as permitted under § 29.310 or § 29.415; or

(2) A(n) DOT official obtains an exception from the debarring or suspending official to allow you to be involved in the transaction, as permitted under § 29.120.

§ 29.210 Which nonprocurement transactions are covered transactions?

All nonprocurement transactions, as defined in § 29.970, are covered transactions unless listed in § 29.215. (See appendix to this part.)

§ 29.215 Which nonprocurement transactions are not covered transactions?

The following types of nonprocurement transactions are not covered transactions:

- (a) A direct award to—
 - (1) A foreign government or foreign governmental entity;
 - (2) A public international organization;
 - (3) An entity owned (in whole or in part) or controlled by a foreign government; or
 - (4) Any other entity consisting wholly or partially of one or more foreign governments or foreign governmental entities.

(b) A benefit to an individual as a personal entitlement without regard to the individual's present responsibility (but benefits received in an individual's business capacity are not excepted). For example, if a person receives social security benefits under the Supplemental Security Income provisions of the Social Security Act, 42 U.S.C. 1301 et seq., those benefits are not covered transactions and, therefore, are not affected if the person is excluded.

(c) Federal employment.

(d) A transaction that the Department of Transportation needs to respond to a national or agency-recognized emergency or disaster.

(e) A permit, license, certificate, or similar instrument issued as a means to regulate public health, safety, or the environment, unless the Department of Transportation specifically designates it to be a covered transaction.

(f) An incidental benefit that results from ordinary governmental operations.

(g) Any other transaction if the application of an exclusion to the transaction is prohibited by law.

§ 29.220 Are any procurement contracts included as covered transactions?

(a) Covered transactions under this part—

(1) Do not include any procurement contracts awarded directly by a Federal agency; but

(2) Do include some procurement contracts awarded by non-Federal participants in nonprocurement covered

transactions (see appendix to this part).

(b) Specifically, a contract for goods or services is a covered transaction if any of the following applies:

(1) The contract is awarded by a participant in a nonprocurement transaction that is covered under § 29.210, and the amount of the contract is expected to equal or exceed \$25,000.

(2) The contract requires the consent of a(n) DOT official. In that case, the contract, regardless of the amount, always is a covered transaction, and it does not matter who awarded it. For example, it could be a subcontract awarded by a contractor at a tier below a nonprocurement transaction, as shown in the appendix to this part.

(3) The contract is for federally-required audit services.

§ 29.225 How do I know if a transaction in which I may participate is a covered transaction?

As a participant in a transaction, you will know that it is a covered transaction because the agency regulations governing the transaction, the appropriate agency official, or participant at the next higher tier who enters into the transaction with you, will tell you that you must comply with applicable portions of this part.

Subpart C—Responsibilities of Participants Regarding Transactions

DOING BUSINESS WITH OTHER PERSONS

§ 29.300 What must I do before I enter into a covered transaction with another person at the next lower tier?

When you enter into a covered transaction with another person at the next lower tier, you must verify that the person with whom you intend to do business is not excluded or disqualified. You do this by:

- (a) Checking the *EPLS*; or
- (b) Collecting a certification from that person if allowed by this rule; or
- (c) Adding a clause or condition to the covered transaction with that person.

§ 29.305 May I enter into a covered transaction with an excluded or disqualified person?

(a) You as a participant may not enter into a covered transaction with an excluded person, unless the Department of Transportation grants an exception under § 29.120.

(b) You may not enter into any transaction with a person who is disqualified from that transaction, unless you have obtained an exception under the disqualifying statute, Executive order, or regulation.

§ 29.310 What must I do if a Federal agency excludes a person with whom I am already doing business in a covered transaction?

(a) You as a participant may continue covered transactions with an excluded person if the transactions were in existence when the agency excluded the person. However, you are not required to continue the transactions, and you may consider termination. You should make a decision about whether to terminate and the type of termination action, if any, only after a thorough review to ensure that the action is proper and appropriate.

(b) You may not renew or extend covered transactions (other than no-cost time extensions) with any excluded person, unless the Department of Transportation grants an exception under § 29.120.

§ 29.315 May I use the services of an excluded person as a principal under a covered transaction?

(a) You as a participant may continue to use the services of an excluded person as a principal under a covered transaction if you were using the services of that person in the transaction before the person was excluded. However, you are not required to continue using that person's services as a principal. You should make a decision about whether to discontinue that person's services only after a thorough review to ensure that the action is proper and appropriate.

(b) You may not begin to use the services of an excluded person as a principal under a covered transaction

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unless the Department of Transportation grants an exception under § 29.120.

§ 29.320 Must I verify that principals of my covered transactions are eligible to participate?

Yes, you as a participant are responsible for determining whether any of your principals of your covered transactions is excluded or disqualified from participating in the transaction. You may decide the method and frequency by which you do so. You may, but you are not required to, check the *EPLS*.

§ 29.325 What happens if I do business with an excluded person in a covered transaction?

If as a participant you knowingly do business with an excluded person, we may disallow costs, annul or terminate the transaction, issue a stop work order, debar or suspend you, or take other remedies as appropriate.

§ 29.330 What requirements must I pass down to persons at lower tiers with whom I intend to do business?

Before entering into a covered transaction with a participant at the next lower tier, you must require that participant to—

(a) Comply with this subpart as a condition of participation in the transaction. You may do so using any method(s), unless § 29.440 requires you to use specific methods.

(b) Pass the requirement to comply with this subpart to each person with whom the participant enters into a covered transaction at the next lower tier.

DISCLOSING INFORMATION—PRIMARY
TIER PARTICIPANTS

§ 29.335 What information must I provide before entering into a covered transaction with the Department of Transportation?

Before you enter into a covered transaction at the primary tier, you as the participant must notify the DOT office that is entering into the transaction with you, if you know that you or any of the principals for that covered transaction:

(a) Are presently excluded or disqualified;

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(b) Have been convicted within the preceding three years of any of the offenses listed in § 29.800(a) or had a civil judgment rendered against you for one of those offenses within that time period;

(c) Are presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses listed in § 29.800(a); or

(d) Have had one or more public transactions (Federal, State, or local) terminated within the preceding three years for cause or default.

§ 29.340 If I disclose unfavorable information required under § 29.335, will I be prevented from participating in the transaction?

As a primary tier participant, your disclosure of unfavorable information about yourself or a principal under § 29.335 will not necessarily cause us to deny your participation in the covered transaction. We will consider the information when we determine whether to enter into the covered transaction. We also will consider any additional information or explanation that you elect to submit with the disclosed information.

§ 29.345 What happens if I fail to disclose information required under § 29.335?

If we later determine that you failed to disclose information under § 29.335 that you knew at the time you entered into the covered transaction, we may—

(a) Terminate the transaction for material failure to comply with the terms and conditions of the transaction; or

(b) Pursue any other available remedies, including suspension and debarment.

§ 29.350 What must I do if I learn of information required under § 29.335 after entering into a covered transaction with the Department of Transportation?

At any time after you enter into a covered transaction, you must give immediate written notice to the DOT office with which you entered into the transaction if you learn either that—

(a) You failed to disclose information earlier, as required by § 29.335; or

(b) Due to changed circumstances, you or any of the principals for the transaction now meet any of the criteria in § 29.335.

DISCLOSING INFORMATION—LOWER TIER PARTICIPANTS

§ 29.355 What information must I provide to a higher tier participant before entering into a covered transaction with that participant?

Before you enter into a covered transaction with a person at the next higher tier, you as a lower tier participant must notify that person if you know that you or any of the principals are presently excluded or disqualified.

§ 29.360 What happens if I fail to disclose the information required under § 29.355?

If we later determine that you failed to tell the person at the higher tier that you were excluded or disqualified at the time you entered into the covered transaction with that person, we may pursue any available remedies, including suspension and debarment.

§ 29.365 What must I do if I learn of information required under § 29.355 after entering into a covered transaction with a higher tier participant?

At any time after you enter into a lower tier covered transaction with a person at a higher tier, you must provide immediate written notice to that person if you learn either that—

(a) You failed to disclose information earlier, as required by § 29.355; or

(b) Due to changed circumstances, you or any of the principals for the transaction now meet any of the criteria in § 29.355.

Subpart D—Responsibilities of DOT Officials Regarding Transactions

§ 29.400 May I enter into a transaction with an excluded or disqualified person?

(a) You as an agency official may not enter into a covered transaction with an excluded person unless you obtain an exception under § 29.120.

(b) You may not enter into any transaction with a person who is disqualified from that transaction, unless you ob-

tain a waiver or exception under the statute, Executive order, or regulation that is the basis for the person's disqualification.

§ 29.405 May I enter into a covered transaction with a participant if a principal of the transaction is excluded?

As an agency official, you may not enter into a covered transaction with a participant if you know that a principal of the transaction is excluded, unless you obtain an exception under § 29.120.

§ 29.410 May I approve a participant's use of the services of an excluded person?

After entering into a covered transaction with a participant, you as an agency official may not approve a participant's use of an excluded person as a principal under that transaction, unless you obtain an exception under § 29.120.

§ 29.415 What must I do if a Federal agency excludes the participant or a principal after I enter into a covered transaction?

(a) You as an agency official may continue covered transactions with an excluded person, or under which an excluded person is a principal, if the transactions were in existence when the person was excluded. You are not required to continue the transactions, however, and you may consider termination. You should make a decision about whether to terminate and the type of termination action, if any, only after a thorough review to ensure that the action is proper.

(b) You may not renew or extend covered transactions (other than no-cost time extensions) with any excluded person, or under which an excluded person is a principal, unless you obtain an exception under § 29.120.

§ 29.420 May I approve a transaction with an excluded or disqualified person at a lower tier?

If a transaction at a lower tier is subject to your approval, you as an agency official may not approve—

(a) A covered transaction with a person who is currently excluded, unless

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you obtain an exception under § 29.120; or

(b) A transaction with a person who is disqualified from that transaction, unless you obtain a waiver or exception under the statute, Executive order, or regulation that is the basis for the person's disqualification.

§ 29.425 When do I check to see if a person is excluded or disqualified?

As an agency official, you must check to see if a person is excluded or disqualified before you—

(a) Enter into a primary tier covered transaction;

(b) Approve a principal in a primary tier covered transaction;

(c) Approve a lower tier participant if agency approval of the lower tier participant is required; or

(d) Approve a principal in connection with a lower tier transaction if agency approval of the principal is required.

§ 29.430 How do I check to see if a person is excluded or disqualified?

You check to see if a person is excluded or disqualified in two ways:

(a) You as an agency official must check the *EPLS* when you take any action listed in § 29.425.

(b) You must review information that a participant gives you, as required by § 29.335, about its status or the status of the principals of a transaction.

§ 29.435 What must I require of a primary tier participant?

You as an agency official must require each participant in a primary tier covered transaction to—

(a) Comply with subpart C of this part as a condition of participation in the transaction; and

(b) Communicate the requirement to comply with Subpart C of this part to persons at the next lower tier with whom the primary tier participant enters into covered transactions.

§ 29.440 What method do I use to communicate those requirements to participants?

To communicate the requirement you must include a term or condition in the transaction requiring the participants' compliance with subpart C of this part and requiring them to include

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a similar term or condition in lower-tier covered transactions.

§ 29.445 What action may I take if a primary tier participant knowingly does business with an excluded or disqualified person?

If a participant knowingly does business with an excluded or disqualified person, you as an agency official may refer the matter for suspension and debarment consideration. You may also disallow costs, annul or terminate the transaction, issue a stop work order, or take any other appropriate remedy.

§ 29.450 What action may I take if a primary tier participant fails to disclose the information required under § 29.335?

If you as an agency official determine that a participant failed to disclose information, as required by § 29.335, at the time it entered into a covered transaction with you, you may—

(a) Terminate the transaction for material failure to comply with the terms and conditions of the transaction; or

(b) Pursue any other available remedies, including suspension and debarment.

§ 29.455 What may I do if a lower tier participant fails to disclose the information required under § 29.355 to the next higher tier?

If you as an agency official determine that a lower tier participant failed to disclose information, as required by § 29.355, at the time it entered into a covered transaction with a participant at the next higher tier, you may pursue any remedies available to you, including the initiation of a suspension or debarment action.

Subpart E—Excluded Parties List System

§ 29.500 What is the purpose of the Excluded Parties List System (EPLS)?

The *EPLS* is a widely available source of the most current information about persons who are excluded or disqualified from covered transactions.

§ 29.505 Who uses the EPLS?

(a) Federal agency officials use the *EPLS* to determine whether to enter into a transaction with a person, as required under § 29.430.

(b) Participants also may, but are not required to, use the *EPLS* to determine if—

(1) Principals of their transactions are excluded or disqualified, as required under § 29.320; or

(2) Persons with whom they are entering into covered transactions at the next lower tier are excluded or disqualified.

(c) The *EPLS* is available to the general public.

§ 29.510 Who maintains the EPLS?

In accordance with the OMB guidelines, the General Services Administration (GSA) maintains the *EPLS*. When a Federal agency takes an action to exclude a person under the nonprocurement or procurement debarment and suspension system, the agency enters the information about the excluded person into the *EPLS*.

§ 29.515 What specific information is in the EPLS?

(a) At a minimum, the *EPLS* indicates—

(1) The full name (where available) and address of each excluded or disqualified person, in alphabetical order, with cross references if more than one name is involved in a single action;

(2) The type of action;

(3) The cause for the action;

(4) The scope of the action;

(5) Any termination date for the action;

(6) The agency and name and telephone number of the agency point of contact for the action; and

(7) The Dun and Bradstreet Number (DUNS), or other similar code approved by the GSA, of the excluded or disqualified person, if available.

(b)(1) The database for the *EPLS* includes a field for the Taxpayer Identification Number (TIN) (the social security number (SSN) for an individual) of an excluded or disqualified person.

(2) Agencies disclose the SSN of an individual to verify the identity of an individual, only if permitted under the

Privacy Act of 1974 and, if appropriate, the Computer Matching and Privacy Protection Act of 1988, as codified in 5 U.S.C. 552(a).

§ 29.520 Who places the information into the EPLS?

Federal officials who take actions to exclude persons under this part or officials who are responsible for identifying disqualified persons must enter the following information about those persons into the *EPLS*:

(a) Information required by § 29.515(a);

(b) The Taxpayer Identification Number (TIN) of the excluded or disqualified person, including the social security number (SSN) for an individual, if the number is available and may be disclosed under law;

(c) Information about an excluded or disqualified person, generally within five working days, after—

(1) Taking an exclusion action;

(2) Modifying or rescinding an exclusion action;

(3) Finding that a person is disqualified; or

(4) Finding that there has been a change in the status of a person who is listed as disqualified;

(d) The DOT official's Operating Administration code, as follows: United States Coast Guard [DOT-USCG]; Federal Aviation Administration [DOT-FAA]; Federal Highway Administration [DOT-FHWA]; Federal Motor Carrier Safety Administration [DOT-FMCSA]; Federal Railway Administration [DOT-FRA]; Federal Transit Administration [DOT-FTA]; National Highway Traffic Safety Administration [DOT-NHTSA]; Research and Special Programs [DOT-RSPA]; Maritime Administration [DOT-MARAD]; and DOT (general) [DOT-OST].

§ 29.525 Whom do I ask if I have questions about a person in the EPLS?

If you have questions about a person in the *EPLS*, ask the point of contact for the Federal agency that placed the person's name into the *EPLS*. You may find the agency point of contact from the *EPLS*.

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§ 29.530 Where can I find the EPLS?

(a) You may access the *EPLS* through the Internet, currently at *http://epls.arnet.gov*.

(b) As of November 26, 2003, you may also subscribe to a printed version. However, we anticipate discontinuing the printed version. Until it is discontinued, you may obtain the printed version by purchasing a yearly subscription from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, or by calling the Government Printing Office Inquiry and Order Desk at (202) 783-3238.

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Subpart F—General Principles Relating to Suspension and Debarment Actions

§ 29.600 How do suspension and debarment actions start?

When we receive information from any source concerning a cause for suspension or debarment, we will promptly report and investigate it. We refer the question of whether to suspend or debar you to our suspending or debarring official for consideration, if appropriate.

§ 29.605 How does suspension differ from debarment?

Suspension differs from debarment in that—

A suspending official . . .	A debarring official . . .
(a) Imposes suspension as a temporary status of ineligibility for procurement and nonprocurement transactions, pending completion of an investigation or legal proceedings.	Imposes debarment for a specified period as a final determination that a person is not presently responsible.
(b) Must— (1) Have <i>adequate evidence</i> that there may be a cause for debarment of a person; and (2) Conclude that <i>immediate action</i> is necessary to protect the Federal interest.	Must conclude, based on a <i>preponderance of the evidence</i> , that the person has engaged in conduct that warrants debarment.
(c) Usually imposes the suspension <i>first</i> , and then promptly notifies the suspended person, giving the person an opportunity to contest the suspension and have it lifted.	Imposes debarment <i>after</i> giving the respondent notice of the action and an opportunity to contest the proposed debarment.

§ 29.610 What procedures does the Department of Transportation use in suspension and debarment actions?

In deciding whether to suspend or debar you, we handle the actions as informally as practicable, consistent with principles of fundamental fairness.

(a) For suspension actions, we use the procedures in this subpart and subpart G of this part.

(b) For debarment actions, we use the procedures in this subpart and subpart H of this part.

§ 29.615 How does the Department of Transportation notify a person of a suspension or debarment action?

(a) The suspending or debarring official sends a written notice to the last known street address, facsimile number, or e-mail address of—

- (1) You or your identified counsel; or
- (2) Your agent for service of process, or any of your partners, officers, directors, owners, or joint venturers.

(b) The notice is effective if sent to any of these persons.

§ 29.620 Do Federal agencies coordinate suspension and debarment actions?

Yes, when more than one Federal agency has an interest in a suspension or debarment, the agencies may consider designating one agency as the lead agency for making the decision. Agencies are encouraged to establish methods and procedures for coordinating their suspension and debarment actions.

§ 29.625 What is the scope of a suspension or debarment?

If you are suspended or debarred, the suspension or debarment is effective as follows:

(a) Your suspension or debarment constitutes suspension or debarment of all of your divisions and other organizational elements from all covered

transactions, unless the suspension or debarment decision is limited—

(1) By its terms to one or more specifically identified individuals, divisions, or other organizational elements; or

(2) To specific types of transactions.

(b) Any affiliate of a participant may be included in a suspension or debarment action if the suspending or debarring official—

(1) Officially names the affiliate in the notice; and

(2) Gives the affiliate an opportunity to contest the action.

§ 29.630 May the Department of Transportation impute conduct of one person to another?

For purposes of actions taken under this rule, we may impute conduct as follows:

(a) *Conduct imputed from an individual to an organization.* We may impute the fraudulent, criminal, or other improper conduct of any officer, director, shareholder, partner, employee, or other individual associated with an organization, to that organization when the improper conduct occurred in connection with the individual's performance of duties for or on behalf of that organization, or with the organization's knowledge, approval or acquiescence. The organization's acceptance of the benefits derived from the conduct is evidence of knowledge, approval or acquiescence.

(b) *Conduct imputed from an organization to an individual, or between individuals.* We may impute the fraudulent, criminal, or other improper conduct of any organization to an individual, or from one individual to another individual, if the individual to whom the improper conduct is imputed either participated in, had knowledge of, or reason to know of the improper conduct.

(c) *Conduct imputed from one organization to another organization.* We may impute the fraudulent, criminal, or other improper conduct of one organization to another organization when the improper conduct occurred in connection with a partnership, joint venture, joint application, association or similar arrangement, or when the organization to whom the improper conduct is imputed has the power to direct,

manage, control or influence the activities of the organization responsible for the improper conduct. Acceptance of the benefits derived from the conduct is evidence of knowledge, approval or acquiescence.

§ 29.635 May the Department of Transportation settle a debarment or suspension action?

Yes, we may settle a debarment or suspension action at any time if it is in the best interest of the Federal Government.

§ 29.640 May a settlement include a voluntary exclusion?

Yes, if we enter into a settlement with you in which you agree to be excluded, it is called a voluntary exclusion and has governmentwide effect.

§ 29.645 Do other Federal agencies know if the Department of Transportation agrees to a voluntary exclusion?

(a) Yes, we enter information regarding a voluntary exclusion into the *EPLS*.

(b) Also, any agency or person may contact us to find out the details of a voluntary exclusion.

Subpart G—Suspension

§ 29.700 When may the suspending official issue a suspension?

Suspension is a serious action. Using the procedures of this subpart and subpart F of this part, the suspending official may impose suspension only when that official determines that—

(a) There exists an indictment for, or other adequate evidence to suspect, an offense listed under § 29.800(a), or

(b) There exists adequate evidence to suspect any other cause for debarment listed under § 29.800(b) through (d); and

(c) Immediate action is necessary to protect the public interest.

§ 29.705 What does the suspending official consider in issuing a suspension?

(a) In determining the adequacy of the evidence to support the suspension, the suspending official considers how much information is available, how credible it is given the circumstances,

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whether or not important allegations are corroborated, and what inferences can reasonably be drawn as a result. During this assessment, the suspending official may examine the basic documents, including grants, cooperative agreements, loan authorizations, contracts, and other relevant documents.

(b) An indictment, conviction, civil judgment, or other official findings by Federal, State, or local bodies that determine factual and/or legal matters, constitutes adequate evidence for purposes of suspension actions.

(c) In deciding whether immediate action is needed to protect the public interest, the suspending official has wide discretion. For example, the suspending official may infer the necessity for immediate action to protect the public interest either from the nature of the circumstances giving rise to a cause for suspension or from potential business relationships or involvement with a program of the Federal Government.

§ 29.710 When does a suspension take effect?

A suspension is effective when the suspending official signs the decision to suspend.

§ 29.715 What notice does the suspending official give me if I am suspended?

After deciding to suspend you, the suspending official promptly sends you a Notice of Suspension advising you—

- (a) That you have been suspended;
- (b) That your suspension is based on—
 - (1) An indictment;
 - (2) A conviction;
 - (3) Other adequate evidence that you have committed irregularities which seriously reflect on the propriety of further Federal Government dealings with you; or
 - (4) Conduct of another person that has been imputed to you, or your affiliation with a suspended or debarred person;
- (c) Of any other irregularities in terms sufficient to put you on notice without disclosing the Federal Government's evidence;

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(d) Of the cause(s) upon which we relied under § 29.700 for imposing suspension;

(e) That your suspension is for a temporary period pending the completion of an investigation or resulting legal or debarment proceedings;

(f) Of the applicable provisions of this subpart, Subpart F of this part, and any other DOT procedures governing suspension decision making; and

(g) Of the governmentwide effect of your suspension from procurement and nonprocurement programs and activities.

§ 29.720 How may I contest a suspension?

If you as a respondent wish to contest a suspension, you or your representative must provide the suspending official with information in opposition to the suspension. You may do this orally or in writing, but any information provided orally that you consider important must also be submitted in writing for the official record.

§ 29.725 How much time do I have to contest a suspension?

(a) As a respondent you or your representative must either send, or make arrangements to appear and present, the information and argument to the suspending official within 30 days after you receive the Notice of Suspension.

(b) We consider the notice to be received by you—

- (1) When delivered, if we mail the notice to the last known street address, or five days after we send it if the letter is undeliverable;
- (2) When sent, if we send the notice by facsimile or five days after we send it if the facsimile is undeliverable; or
- (3) When delivered, if we send the notice by e-mail or five days after we send it if the e-mail is undeliverable.

§ 29.730 What information must I provide to the suspending official if I contest a suspension?

(a) In addition to any information and argument in opposition, as a respondent your submission to the suspending official must identify—

- (1) Specific facts that contradict the statements contained in the Notice of

Suspension. A general denial is insufficient to raise a genuine dispute over facts material to the suspension;

(2) All existing, proposed, or prior exclusions under regulations implementing E.O. 12549 and all similar actions taken by Federal, state, or local agencies, including administrative agreements that affect only those agencies;

(3) All criminal and civil proceedings not included in the Notice of Suspension that grew out of facts relevant to the cause(s) stated in the notice; and

(4) All of your affiliates.

(b) If you fail to disclose this information, or provide false information, the Department of Transportation may seek further criminal, civil or administrative action against you, as appropriate.

§ 29.735 Under what conditions do I get an additional opportunity to challenge the facts on which the suspension is based?

(a) You as a respondent will not have an additional opportunity to challenge the facts if the suspending official determines that—

(1) Your suspension is based upon an indictment, conviction, civil judgment, or other finding by a Federal, State, or local body for which an opportunity to contest the facts was provided;

(2) Your presentation in opposition contains only general denials to information contained in the Notice of Suspension;

(3) The issues raised in your presentation in opposition to the suspension are not factual in nature, or are not material to the suspending official's initial decision to suspend, or the official's decision whether to continue the suspension; or

(4) On the basis of advice from the Department of Justice, an office of the United States Attorney, a State attorney general's office, or a State or local prosecutor's office, that substantial interests of the government in pending or contemplated legal proceedings based on the same facts as the suspension would be prejudiced by conducting fact-finding.

(b) You will have an opportunity to challenge the facts if the suspending official determines that—

(1) The conditions in paragraph (a) of this section do not exist; and

(2) Your presentation in opposition raises a genuine dispute over facts material to the suspension.

(c) If you have an opportunity to challenge disputed material facts under this section, the suspending official or designee must conduct additional proceedings to resolve those facts.

§ 29.740 Are suspension proceedings formal?

(a) Suspension proceedings are conducted in a fair and informal manner. The suspending official may use flexible procedures to allow you to present matters in opposition. In so doing, the suspending official is not required to follow formal rules of evidence or procedure in creating an official record upon which the official will base a final suspension decision.

(b) You as a respondent or your representative must submit any documentary evidence you want the suspending official to consider.

§ 29.745 How is fact-finding conducted?

(a) If fact-finding is conducted—

(1) You may present witnesses and other evidence, and confront any witness presented; and

(2) The fact-finder must prepare written findings of fact for the record.

(b) A transcribed record of fact-finding proceedings must be made, unless you as a respondent and the Department of Transportation agree to waive it in advance. If you want a copy of the transcribed record, you may purchase it.

§ 29.750 What does the suspending official consider in deciding whether to continue or terminate my suspension?

(a) The suspending official bases the decision on all information contained in the official record. The record includes—

(1) All information in support of the suspending official's initial decision to suspend you;

(2) Any further information and argument presented in support of, or opposition to, the suspension; and

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(3) Any transcribed record of fact-finding proceedings.

(b) The suspending official may refer disputed material facts to another official for findings of fact. The suspending official may reject any resulting findings, in whole or in part, only after specifically determining them to be arbitrary, capricious, or clearly erroneous.

§ 29.755 When will I know whether the suspension is continued or terminated?

The suspending official must make a written decision whether to continue, modify, or terminate your suspension within 45 days of closing the official record. The official record closes upon the suspending official's receipt of final submissions, information and findings of fact, if any. The suspending official may extend that period for good cause.

§ 29.760 How long may my suspension last?

(a) If legal or debarment proceedings are initiated at the time of, or during your suspension, the suspension may continue until the conclusion of those proceedings. However, if proceedings are not initiated, a suspension may not exceed 12 months.

(b) The suspending official may extend the 12 month limit under paragraph (a) of this section for an additional 6 months if an office of a U.S. Assistant Attorney General, U.S. Attorney, or other responsible prosecuting official requests an extension in writing. In no event may a suspension exceed 18 months without initiating proceedings under paragraph (a) of this section.

(c) The suspending official must notify the appropriate officials under paragraph (b) of this section of an impending termination of a suspension at least 30 days before the 12 month period expires to allow the officials an opportunity to request an extension.

Subpart H—Debarment

§ 29.800 What are the causes for debarment?

We may debar a person for—

(a) Conviction of or civil judgment for—

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(1) Commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public or private agreement or transaction;

(2) Violation of Federal or State anti-trust statutes, including those proscribing price fixing between competitors, allocation of customers between competitors, and bid rigging;

(3) Commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, receiving stolen property, making false claims, or obstruction of justice; or

(4) Commission of any other offense indicating a lack of business integrity or business honesty that seriously and directly affects your present responsibility;

(b) Violation of the terms of a public agreement or transaction so serious as to affect the integrity of an agency program, such as—

(1) A willful failure to perform in accordance with the terms of one or more public agreements or transactions;

(2) A history of failure to perform or of unsatisfactory performance of one or more public agreements or transactions; or

(3) A willful violation of a statutory or regulatory provision or requirement applicable to a public agreement or transaction;

(c) Any of the following causes:

(1) A nonprocurement debarment by any Federal agency taken before October 1, 1988, or a procurement debarment by any Federal agency taken pursuant to 48 CFR part 9, subpart 9.4, before August 25, 1995;

(2) Knowingly doing business with an ineligible person, except as permitted under § 29.120;

(3) Failure to pay a single substantial debt, or a number of outstanding debts (including disallowed costs and overpayments, but not including sums owed the Federal Government under the Internal Revenue Code) owed to any Federal agency or instrumentality, provided the debt is uncontested by the debtor or, if contested, provided that the debtor's legal and administrative remedies have been exhausted;

(4) Violation of a material provision of a voluntary exclusion agreement entered into under §29.640 or of any settlement of a debarment or suspension action; or

(5) Violation of the provisions of the Drug-Free Workplace Act of 1988 (41 U.S.C. 701); or

(d) Any other cause of so serious or compelling a nature that it affects your present responsibility.

§ 29.805 What notice does the debarring official give me if I am proposed for debarment?

After consideration of the causes in §29.800 of this subpart, if the debarring official proposes to debar you, the official sends you a Notice of Proposed Debarment, pursuant to §29.615, advising you—

(a) That the debarring official is considering debarring you;

(b) Of the reasons for proposing to debar you in terms sufficient to put you on notice of the conduct or transactions upon which the proposed debarment is based;

(c) Of the cause(s) under §29.800 upon which the debarring official relied for proposing your debarment;

(d) Of the applicable provisions of this subpart, Subpart F of this part, and any other DOT procedures governing debarment; and

(e) Of the governmentwide effect of a debarment from procurement and non-procurement programs and activities.

§ 29.810 When does a debarment take effect?

A debarment is not effective until the debarring official issues a decision. The debarring official does not issue a decision until the respondent has had an opportunity to contest the proposed debarment.

§ 29.815 How may I contest a proposed debarment?

If you as a respondent wish to contest a proposed debarment, you or your representative must provide the debarring official with information in opposition to the proposed debarment. You may do this orally or in writing, but any information provided orally that you consider important must also be

submitted in writing for the official record.

§ 29.820 How much time do I have to contest a proposed debarment?

(a) As a respondent you or your representative must either send, or make arrangements to appear and present, the information and argument to the debarring official within 30 days after you receive the Notice of Proposed Debarment.

(b) We consider the Notice of Proposed Debarment to be received by you—

(1) When delivered, if we mail the notice to the last known street address, or five days after we send it if the letter is undeliverable;

(2) When sent, if we send the notice by facsimile or five days after we send it if the facsimile is undeliverable; or

(3) When delivered, if we send the notice by e-mail or five days after we send it if the e-mail is undeliverable.

§ 29.825 What information must I provide to the debarring official if I contest a proposed debarment?

(a) In addition to any information and argument in opposition, as a respondent your submission to the debarring official must identify—

(1) Specific facts that contradict the statements contained in the Notice of Proposed Debarment. Include any information about any of the factors listed in §29.860. A general denial is insufficient to raise a genuine dispute over facts material to the debarment;

(2) All existing, proposed, or prior exclusions under regulations implementing E.O. 12549 and all similar actions taken by Federal, State, or local agencies, including administrative agreements that affect only those agencies;

(3) All criminal and civil proceedings not included in the Notice of Proposed Debarment that grew out of facts relevant to the cause(s) stated in the notice; and

(4) All of your affiliates.

(b) If you fail to disclose this information, or provide false information, the Department of Transportation may seek further criminal, civil or administrative action against you, as appropriate.

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§ 29.830 Under what conditions do I get an additional opportunity to challenge the facts on which a proposed debarment is based?

(a) You as a respondent will not have an additional opportunity to challenge the facts if the debarring official determines that—

(1) Your debarment is based upon a conviction or civil judgment;

(2) Your presentation in opposition contains only general denials to information contained in the Notice of Proposed Debarment; or

(3) The issues raised in your presentation in opposition to the proposed debarment are not factual in nature, or are not material to the debarring official's decision whether to debar.

(b) You will have an additional opportunity to challenge the facts if the debarring official determines that—

(1) The conditions in paragraph (a) of this section do not exist; and

(2) Your presentation in opposition raises a genuine dispute over facts material to the proposed debarment.

(c) If you have an opportunity to challenge disputed material facts under this section, the debarring official or designee must conduct additional proceedings to resolve those facts.

§ 29.835 Are debarment proceedings formal?

(a) Debarment proceedings are conducted in a fair and informal manner. The debarring official may use flexible procedures to allow you as a respondent to present matters in opposition. In so doing, the debarring official is not required to follow formal rules of evidence or procedure in creating an official record upon which the official will base the decision whether to debar.

(b) You or your representative must submit any documentary evidence you want the debarring official to consider.

§ 29.840 How is fact-finding conducted?

(a) If fact-finding is conducted—

(1) You may present witnesses and other evidence, and confront any witness presented; and

(2) The fact-finder must prepare written findings of fact for the record.

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(b) A transcribed record of fact-finding proceedings must be made, unless you as a respondent and the Department of Transportation agree to waive it in advance. If you want a copy of the transcribed record, you may purchase it.

§ 29.845 What does the debarring official consider in deciding whether to debar me?

(a) The debarring official may debar you for any of the causes in § 29.800. However, the official need not debar you even if a cause for debarment exists. The official may consider the seriousness of your acts or omissions and the mitigating or aggravating factors set forth at § 29.860.

(b) The debarring official bases the decision on all information contained in the official record. The record includes—

(1) All information in support of the debarring official's proposed debarment;

(2) Any further information and argument presented in support of, or in opposition to, the proposed debarment; and

(3) Any transcribed record of fact-finding proceedings.

(c) The debarring official may refer disputed material facts to another official for findings of fact. The debarring official may reject any resultant findings, in whole or in part, only after specifically determining them to be arbitrary, capricious, or clearly erroneous.

§ 29.850 What is the standard of proof in a debarment action?

(a) In any debarment action, we must establish the cause for debarment by a preponderance of the evidence.

(b) If the proposed debarment is based upon a conviction or civil judgment, the standard of proof is met.

§ 29.855 Who has the burden of proof in a debarment action?

(a) We have the burden to prove that a cause for debarment exists.

(b) Once a cause for debarment is established, you as a respondent have the burden of demonstrating to the satisfaction of the debarring official that

you are presently responsible and that debarment is not necessary.

§ 29.860 What factors may influence the debarring official's decision?

This section lists the mitigating and aggravating factors that the debarring official may consider in determining whether to debar you and the length of your debarment period. The debarring official may consider other factors if appropriate in light of the circumstances of a particular case. The existence or nonexistence of any factor, such as one of those set forth in this section, is not necessarily determinative of your present responsibility. In making a debarment decision, the debarring official may consider the following factors:

(a) The actual or potential harm or impact that results or may result from the wrongdoing.

(b) The frequency of incidents and/or duration of the wrongdoing.

(c) Whether there is a pattern or prior history of wrongdoing. For example, if you have been found by another Federal agency or a State agency to have engaged in wrongdoing similar to that found in the debarment action, the existence of this fact may be used by the debarring official in determining that you have a pattern or prior history of wrongdoing.

(d) Whether you are or have been excluded or disqualified by an agency of the Federal Government or have not been allowed to participate in State or local contracts or assistance agreements on a basis of conduct similar to one or more of the causes for debarment specified in this part.

(e) Whether you have entered into an administrative agreement with a Federal agency or a State or local government that is not governmentwide but is based on conduct similar to one or more of the causes for debarment specified in this part.

(f) Whether and to what extent you planned, initiated, or carried out the wrongdoing.

(g) Whether you have accepted responsibility for the wrongdoing and recognize the seriousness of the misconduct that led to the cause for debarment.

(h) Whether you have paid or agreed to pay all criminal, civil and administrative liabilities for the improper activity, including any investigative or administrative costs incurred by the government, and have made or agreed to make full restitution.

(i) Whether you have cooperated fully with the government agencies during the investigation and any court or administrative action. In determining the extent of cooperation, the debarring official may consider when the cooperation began and whether you disclosed all pertinent information known to you.

(j) Whether the wrongdoing was pervasive within your organization.

(k) The kind of positions held by the individuals involved in the wrongdoing.

(l) Whether your organization took appropriate corrective action or remedial measures, such as establishing ethics training and implementing programs to prevent recurrence.

(m) Whether your principals tolerated the offense.

(n) Whether you brought the activity cited as a basis for the debarment to the attention of the appropriate government agency in a timely manner.

(o) Whether you have fully investigated the circumstances surrounding the cause for debarment and, if so, made the result of the investigation available to the debarring official.

(p) Whether you had effective standards of conduct and internal control systems in place at the time the questioned conduct occurred.

(q) Whether you have taken appropriate disciplinary action against the individuals responsible for the activity which constitutes the cause for debarment.

(r) Whether you have had adequate time to eliminate the circumstances within your organization that led to the cause for the debarment.

(s) Other factors that are appropriate to the circumstances of a particular case.

§ 29.865 How long may my debarment last?

(a) If the debarring official decides to debar you, your period of debarment will be based on the seriousness of the cause(s) upon which your debarment is

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based. Generally, debarment should not exceed three years. However, if circumstances warrant, the debarring official may impose a longer period of debarment.

(b) In determining the period of debarment, the debarring official may consider the factors in § 29.860. If a suspension has preceded your debarment, the debarring official must consider the time you were suspended.

(c) If the debarment is for a violation of the provisions of the Drug-Free Workplace Act of 1988, your period of debarment may not exceed five years.

§ 29.870 When do I know if the debarring official debars me?

(a) The debarring official must make a written decision whether to debar within 45 days of closing the official record. The official record closes upon the debarring official's receipt of final submissions, information and findings of fact, if any. The debarring official may extend that period for good cause.

(b) The debarring official sends you written notice, pursuant to § 29.615 that the official decided, either—

(1) Not to debar you; or

(2) To debar you. In this event, the notice:

(i) Refers to the Notice of Proposed Debarment;

(ii) Specifies the reasons for your debarment;

(iii) States the period of your debarment, including the effective dates; and

(iv) Advises you that your debarment is effective for covered transactions and contracts that are subject to the Federal Acquisition Regulation (48 CFR chapter 1), throughout the executive branch of the Federal Government unless an agency head or an authorized designee grants an exception.

§ 29.875 May I ask the debarring official to reconsider a decision to debar me?

Yes, as a debarred person you may ask the debarring official to reconsider the debarment decision or to reduce the time period or scope of the debarment. However, you must put your request in writing and support it with documentation.

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§ 29.880 What factors may influence the debarring official during reconsideration?

The debarring official may reduce or terminate your debarment based on—

(a) Newly discovered material evidence;

(b) A reversal of the conviction or civil judgment upon which your debarment was based;

(c) A bona fide change in ownership or management;

(d) Elimination of other causes for which the debarment was imposed; or

(e) Other reasons the debarring official finds appropriate.

§ 29.885 May the debarring official extend a debarment?

(a) Yes, the debarring official may extend a debarment for an additional period, if that official determines that an extension is necessary to protect the public interest.

(b) However, the debarring official may not extend a debarment solely on the basis of the facts and circumstances upon which the initial debarment action was based.

(c) If the debarring official decides that a debarment for an additional period is necessary, the debarring official must follow the applicable procedures in this subpart, and subpart F of this part, to extend the debarment.

Subpart I—Definitions

§ 29.900 Adequate evidence.

Adequate evidence means information sufficient to support the reasonable belief that a particular act or omission has occurred.

§ 29.905 Affiliate.

Persons are *affiliates* of each other if, directly or indirectly, either one controls or has the power to control the other or a third person controls or has the power to control both. The ways we use to determine control include, but are not limited to—

(a) Interlocking management or ownership;

(b) Identity of interests among family members;

(c) Shared facilities and equipment;

(d) Common use of employees; or

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(e) A business entity which has been organized following the exclusion of a person which has the same or similar management, ownership, or principal employees as the excluded person.

§ 29.910 Agency.

Agency means any United States executive department, military department, defense agency, or any other agency of the executive branch. Other agencies of the Federal government are not considered “agencies” for the purposes of this part unless they issue regulations adopting the governmentwide Debarment and Suspension system under Executive orders 12549 and 12689.

§ 29.915 Agent or representative.

Agent or representative means any person who acts on behalf of, or who is authorized to commit, a participant in a covered transaction.

§ 29.920 Civil judgment.

Civil judgment means the disposition of a civil action by any court of competent jurisdiction, whether by verdict, decision, settlement, stipulation, other disposition which creates a civil liability for the complained of wrongful acts, or a final determination of liability under the Program Fraud Civil Remedies Act of 1988 (31 U.S.C. 3801–3812).

§ 29.925 Conviction.

Conviction means—

(a) A judgment or any other determination of guilt of a criminal offense by any court of competent jurisdiction, whether entered upon a verdict or plea, including a plea of *nolo contendere*; or

(b) Any other resolution that is the functional equivalent of a judgment, including probation before judgment and deferred prosecution. A disposition without the participation of the court is the functional equivalent of a judgment only if it includes an admission of guilt.

§ 29.930 Debarment.

Debarment means an action taken by a debarring official under subpart H of this part to exclude a person from participating in covered transactions and transactions covered under the Federal

Acquisition Regulation (48 CFR chapter 1). A person so excluded is debarred.

§ 29.935 Debarring official.

(a) *Debarring official* means an agency official who is authorized to impose debarment. A debarring official is either—

(1) The agency head; or
(2) An official designated by the agency head.

(b) For DOT “debaring official” means the designated head of a DOT operating administration, who may delegate any of his or her functions under this part and authorize successive delegations.

§ 29.940 Disqualified.

Disqualified means that a person is prohibited from participating in specified Federal procurement or non-procurement transactions as required under a statute, Executive order (other than Executive Orders 12549 and 12689) or other authority. Examples of disqualifications include persons prohibited under—

(a) The Davis-Bacon Act (40 U.S.C. 276(a));

(b) The equal employment opportunity acts and Executive orders; or

(c) The Clean Air Act (42 U.S.C. 7606), Clean Water Act (33 U.S.C. 1368) and Executive Order 11738 (3 CFR, 1973 Comp., p. 799).

§ 29.945 Excluded or exclusion.

Excluded or exclusion means—

(a) That a person or commodity is prohibited from being a participant in covered transactions, whether the person has been suspended; debarred; proposed for debarment under 48 CFR part 9, subpart 9.4; voluntarily excluded; or
(b) The act of excluding a person.

§ 29.950 Excluded Parties List System

Excluded Parties List System (EPLS) means the list maintained and disseminated by the General Services Administration (GSA) containing the names and other information about persons who are ineligible. The *EPLS* system includes the printed version entitled, “List of Parties Excluded or Disqualified from Federal Procurement and Nonprocurement Programs,” so long as published.

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§ 29.955 Indictment.

Indictment means an indictment for a criminal offense. A presentment, information, or other filing by a competent authority charging a criminal offense shall be given the same effect as an indictment.

§ 29.960 Ineligible or ineligibility.

Ineligible or ineligibility means that a person or commodity is prohibited from covered transactions because of an exclusion or disqualification.

§ 29.965 Legal proceedings.

Legal proceedings means any criminal proceeding or any civil judicial proceeding, including a proceeding under the Program Fraud Civil Remedies Act (31 U.S.C. 3801–3812), to which the Federal Government or a State or local government or quasi-governmental authority is a party. The term also includes appeals from those proceedings.

§ 29.970 Nonprocurement transaction.

(a) *Nonprocurement transaction* means any transaction, regardless of type (except procurement contracts), including, but not limited to the following:

- (1) Grants.
- (2) Cooperative agreements.
- (3) Scholarships.
- (4) Fellowships.
- (5) Contracts of assistance.
- (6) Loans.
- (7) Loan guarantees.
- (8) Subsidies.
- (9) Insurances.
- (10) Payments for specified uses.
- (11) Donation agreements.

(b) A nonprocurement transaction at any tier does not require the transfer of Federal funds.

§ 29.975 Notice.

Notice means a written communication served in person, sent by certified mail or its equivalent, or sent electronically by e-mail or facsimile. (See § 29. 615.)

§ 29.980 Participant.

Participant means any person who submits a proposal for or who enters into a covered transaction, including an agent or representative of a participant.

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§ 29.985 Person.

Person means any individual, corporation, partnership, association, unit of government, or legal entity, however organized.

§ 29.990 Preponderance of the evidence.

Preponderance of the evidence means proof by information that, compared with information opposing it, leads to the conclusion that the fact at issue is more probably true than not.

§ 29.995 Principal.

Principal means—

(a) An officer, director, owner, partner, principal investigator, or other person within a participant with management or supervisory responsibilities related to a covered transaction; or

(b) A consultant or other person, whether or not employed by the participant or paid with Federal funds, who—

(1) Is in a position to handle Federal funds;

(2) Is in a position to influence or control the use of those funds; or,

(3) Occupies a technical or professional position capable of substantially influencing the development or outcome of an activity required to perform the covered transaction.

§ 29.1000 Respondent.

Respondent means a person against whom an agency has initiated a debarment or suspension action.

§ 29.1005 State.

(a) *State* means—

(1) Any of the states of the United States;

(2) The District of Columbia;

(3) The Commonwealth of Puerto Rico;

(4) Any territory or possession of the United States; or

(5) Any agency or instrumentality of a state.

(b) For purposes of this part, *State* does not include institutions of higher education, hospitals, or units of local government.

§ 29.1010 Suspending official.

(a) *Suspending official* means an agency official who is authorized to impose

suspension. The suspending official is either:

- (1) The agency head; or
- (2) An official designated by the agency head.

(b) For DOT “suspending official” means the designated head of a DOT operating administration, who may delegate any of his or her functions under this part and authorize successive delegations.

§ 29.1015 Suspension.

Suspension is an action taken by a suspending official under subpart G of this part that immediately prohibits a person from participating in covered transactions and transactions covered under the Federal Acquisition Regulation (48 CFR chapter 1) for a temporary

period, pending completion of an agency investigation and any judicial or administrative proceedings that may ensue. A person so excluded is suspended.

§ 29.1020 Voluntary exclusion or voluntarily excluded.

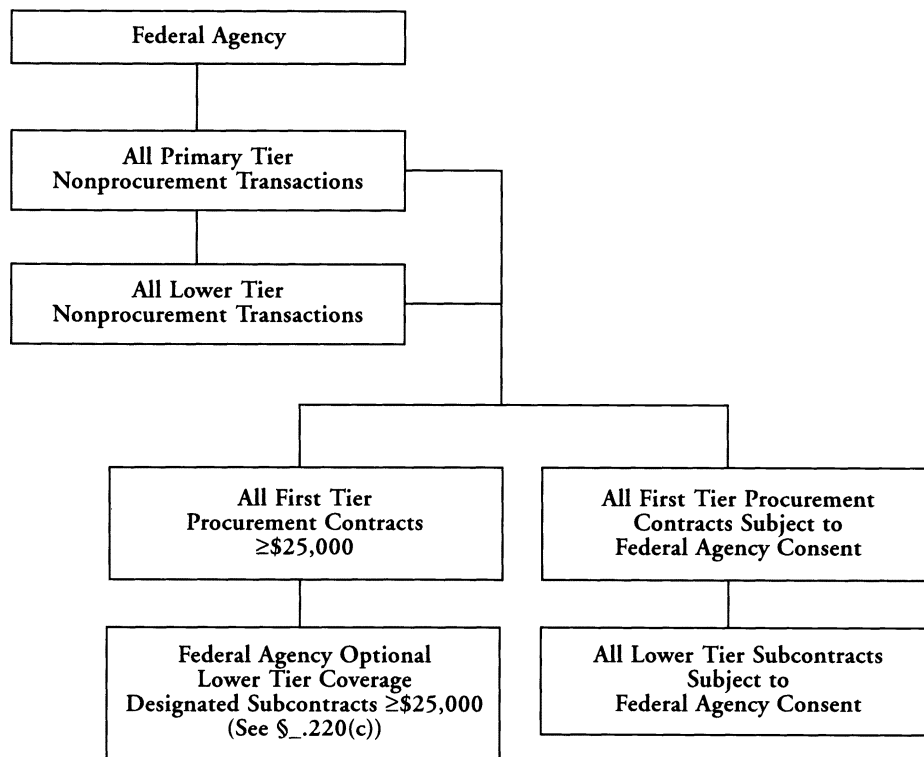
(a) *Voluntary exclusion* means a person’s agreement to be excluded under the terms of a settlement between the person and one or more agencies. Voluntary exclusion must have governmentwide effect.

(b) *Voluntarily excluded* means the status of a person who has agreed to a voluntary exclusion.

Subpart J—[Reserved]

APPENDIX TO PART 29—COVERED TRANSACTIONS

COVERED TRANSACTIONS



7-24 Disadvantaged Business Enterprise Program.

7-24.1 Disadvantaged Business Enterprise Affirmative Action Plan: Prior to award of the Contract, have an approved Disadvantaged Business Enterprise (DBE) Affirmative Action Program Plan filed with the Equal Opportunity Office. Update and resubmit the plan every three years. No Contract will be awarded until the Department approves the Plan. The DBE Affirmative Action Program Plan is incorporated into and made a part of the Contract.

7-24.2 Required Contract and Subcontract DBE Assurance Language: In accordance with 49 CFR 26.13 (b), the Contract FDOT signs with the Contractor (and each subcontract the prime contractor signs with a subcontractor) must include the following assurance: “The Contractor, sub-recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted Contracts. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as the recipient deems appropriate.”

7-24.3 Plan Requirements: Include the following in the DBE Affirmative Action Program Plan:

(a) A policy statement, signed by an authorized representative (president, chief executive officer, or chairman of the contractor), expressing a commitment to use DBEs in all aspects of contracting to the maximum extent feasible, outlining the various levels of responsibility, and stating the objectives of the program. Circulate the policy statement throughout the Contractor’s organization.

(b) The designation of a Liaison Officer within the Contractor’s organization, as well as support staff, necessary and proper to administer the program, and a description of the authority, responsibility, and duties of the Liaison Officer and support staff. The Liaison Officer and staff are responsible for developing, managing, and implementing the program on a day-to-day basis for carrying out technical assistance activities for DBEs and for disseminating information on available business opportunities so that DBEs are provided an equitable opportunity to participate in Contracts let by the Department.

(c) Utilization of techniques to facilitate DBE participation in contracting activities which include, but are not limited to:

1. Soliciting price quotations and arranging a time for the review of plans, quantities, specifications, and delivery schedules, and for the preparation and presentation of quotations.

2. Providing assistance to DBEs in overcoming barriers such as the inability to obtain bonding, financing, or technical assistance.

3. Carrying out information and communication programs or workshops on contracting procedures and specific contracting opportunities in a timely manner, with such programs being bilingual where appropriate.

4. Encouraging eligible DBEs to apply for certification with the Department.

5. Contacting Minority Contractor Associations and city and county agencies with programs for disadvantaged individuals for assistance in recruiting and encouraging eligible DBE contractors to apply for certification with the Department.

7-24.4 DBE Records and Reports: Submit the following through the Equal Opportunity Compliance System:

1. DBE Commitments - at or before the Pre-Construction Conference.

2. Report monthly, through the Equal Opportunity Compliance System on the Department's Website, actual payments (including retainage) made to DBEs for work performed with their own workforce and equipment in the area in which they are certified. Report payments made to all DBE and Minority Business Enterprise (MBE) subcontractors and DBE and MBE construction material and major suppliers.

The Equal Opportunity Office will provide instructions on accessing this system. Develop a record keeping system to monitor DBE affirmative action efforts which include the following:

(a) the procedures adopted to comply with these Specifications;
(b) the number of subordinated Contracts on Department projects awarded to DBEs;

(c) the dollar value of the Contracts awarded to DBEs;
(d) the percentage of the dollar value of all subordinated Contracts awarded to DBEs as a percentage of the total Contract amount;

(e) a description of the general categories of Contracts awarded to DBEs;
and

(f) the specific efforts employed to identify and award Contracts to DBEs.

Upon request, provide the records to the Department for review.

Maintain all such records for a period of five years following acceptance of final payment and have them available for inspection by the Department and the Federal Highway Administration.

7-24.5 Counting DBE Participation and Commercially Useful Functions:

49 CFR Part 26.55 specifies when DBE credit shall be awarded for work performed by a DBE. DBE credit can only be awarded for work actually performed by DBEs themselves for the types of work for which they are certified. When reporting DBE Commitments, only include the dollars that a DBE is expected to earn for work they perform with their own workforce and equipment. Update DBE Commitments to reflect changes to the initial amount that was previously reported or to add DBEs not initially reported.

When a DBE participates in a contract, the value of the work is determined in accordance with 49 CFR Part 26.55, for example:

(a) The Department will count only the value of the work performed by the DBE toward DBE goals. The entire amount of the contract that is performed by the DBE's own forces (including the cost of supplies, equipment and materials obtained by the DBE for the contract work) will be counted as DBE credit.

(b) The Department will count the entire amount of fees or commissions charged by the DBE firm for providing a bona fide service, such as professional, technical, consultant, or managerial services or for providing bonds or insurance specifically required for the performance of a Department-assisted contract, toward DBE goals, provided that the Department determines the fees to be reasonable and not excessive as compared with fees customarily followed for similar services.

(c) When the DBE subcontracts part of the work of its contract to another firm, the Department will count the value of the subcontracted work only if the DBE's subcontractor is itself a DBE. Work that a DBE subcontracts to a non-DBE firm does not count toward DBE goals.

(d) When a DBE performs as a participant in a joint venture, the

Department will count the portion of the dollar value of the contract equal to the distinct, clearly defined portion of the work the DBE performs with its own forces toward DBE goals.

(e) The Contractors shall ensure that only expenditures to DBEs that perform a commercially useful function (CUF) in the work of a contract may be counted toward the voluntary DBE goal.

(f) A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself.

(g) Contractors wishing to use joint checks involving DBE credit must provide written notice to the District Contract Compliance Office prior to issuance of the joint check. The Contractor must also provide a copy of the notice to the DBE subcontractor and maintain a copy with the project records.

(h) To determine whether a DBE is performing a commercially useful function, the Department will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the DBE credit claimed for its performance of the work, and other relevant factors.

(i) A DBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation.

(j) If a DBE does not perform or exercise responsibility for at least 30% of the total cost of its contract with its own workforce, or if the DBE subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work involved, the DBE has not performed a commercially useful function.

7-24.6 Prompt Payments: Meet the requirements of 9-5 for payments to all DBE subcontractors.

General Decision Number: FL160212 01/08/2016 FL212

Superseded General Decision Number: FL20150212

State: Florida

Construction Type: Highway

County: Hillsborough County in Florida.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the solicitation was issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number 0 Publication Date 01/08/2016

* SUFL2013-030 08/19/2013

	Rates	Fringes
CARPENTER, Includes Form Work....	\$ 15.08	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 14.59	0.00
ELECTRICIAN.....	\$ 21.80	0.00
FENCE ERECTOR.....	\$ 13.58	0.00
HIGHWAY/PARKING LOT STRIPING: Operator (Striping Machine)....	\$ 16.69	0.00
HIGHWAY/PARKING LOT STRIPING: Painter.....	\$ 12.13	0.00
INSTALLER - GUARDRAIL.....	\$ 11.39	0.00
IRONWORKER, ORNAMENTAL.....	\$ 13.48	0.00
IRONWORKER, REINFORCING.....	\$ 17.37	0.00
IRONWORKER, STRUCTURAL.....	\$ 16.42	0.00
LABORER (Traffic Control Specialist).....	\$ 12.39	0.00
LABORER: Asphalt, Includes Raker, Shoveler, Spreader and Distributor.....	\$ 12.64	0.00
LABORER: Common or General.....	\$ 11.71	0.00
LABORER: Flagger.....	\$ 11.86	0.00
LABORER: Grade Checker.....	\$ 13.96	0.00
LABORER: Landscape & Irrigation.....	\$ 10.07	0.00
LABORER: Mason Tender - Cement/Concrete.....	\$ 12.56	0.56
LABORER: Pipelayer.....	\$ 14.29	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 16.38	0.00
OPERATOR: Bobcat/Skid		

Steer/Skid Loader.....	\$ 12.88	0.00
OPERATOR: Boom.....	\$ 13.94	1.28
OPERATOR: Broom/Sweeper.....	\$ 13.69	0.00
OPERATOR: Bulldozer.....	\$ 18.11	0.00
OPERATOR: Concrete Finishing Machine.....	\$ 15.44	0.00
OPERATOR: Concrete Pump.....	\$ 19.77	0.00
OPERATOR: Concrete Saw.....	\$ 16.57	0.00
OPERATOR: Crane.....	\$ 22.33	0.00
OPERATOR: Curb Machine.....	\$ 19.67	0.00
OPERATOR: Drill.....	\$ 14.78	0.00
OPERATOR: Forklift.....	\$ 13.52	0.00
OPERATOR: Gradall.....	\$ 14.71	0.00
OPERATOR: Grader/Blade.....	\$ 20.71	0.00
OPERATOR: Loader.....	\$ 14.99	0.00
OPERATOR: Mechanic.....	\$ 17.49	0.00
OPERATOR: Milling Machine Groundsman.....	\$ 16.20	0.00
OPERATOR: Milling Machine.....	\$ 16.26	0.00
OPERATOR: Oiler.....	\$ 17.61	0.00
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 13.51	0.00
OPERATOR: Piledriver.....	\$ 17.23	0.00
OPERATOR: Post Driver (Guardrail/Fences).....	\$ 19.35	0.00
OPERATOR: Roller.....	\$ 14.14	0.00
OPERATOR: Scraper.....	\$ 11.74	0.00
OPERATOR: Screed.....	\$ 16.67	0.00
OPERATOR: Tractor.....	\$ 13.39	0.00
OPERATOR: Trencher.....	\$ 13.78	0.00
PAINTER: Spray.....	\$ 16.38	0.00
TRAFFIC SIGNALIZATION: Traffic Signal Installation.....	\$ 16.54	0.00
TRUCK DRIVER: Dump Truck.....	\$ 12.81	0.00
TRUCK DRIVER: Flatbed Truck.....	\$ 14.13	0.00
TRUCK DRIVER: Lowboy Truck.....	\$ 15.56	0.00
TRUCK DRIVER: Slurry Truck.....	\$ 11.96	0.00
TRUCK DRIVER: Water Truck.....	\$ 12.88	0.00

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

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Unlisted classifications needed for work not included within
the scope of the classifications listed may be added after
award only as provided in the labor standards contract clauses

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

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

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

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

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

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

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

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

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END OF GENERAL DECISION

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 14-C-00053 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 14-C-00053; Downtown Riverwalk from MacDill Park to Curtis Hixon Waterfront Park – Elevator, shall include, but not be limited to, construction of a hydraulic elevator and lobby building on the Riverwalk - Kennedy Boulevard Bridge Segment, including concrete, stone wall cladding system/stone panels, perforated metal screen wall panels, exterior painting electrical work 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. _____

Rachel S. Peterkin, 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 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.

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-5.06 PRELIMINARY FIELD TESTS

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. In the last sentence of this paragraph, add the following words: "...and Shop Drawings".

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 Contract Administration Department – Construction Management Division, 3808 East 26th 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 & 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 Public Works, 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 Public Works, 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:

The Contractor shall provide and maintain an adequate field office, which shall be a structure completely separated from the Contractor's field office, for the exclusive use of the Construction Engineer and/or Architect and engineering technicians within the project limits. No additional payment shall be made for this item. Location of said field office shall be as directed by the Engineer and/or Architect.

Contractor shall provide one (1) desk with chair, one (1) four-drawer metal file cabinet with lock, plan rack to hold a minimum of eight (8) separate sets of plans and one (1) plan table, top shall be minimum of 3'-0" wide x 6'-8" long; also adequate heating, air conditioning, lighting and one (1) window, 36"x36" minimum size, in each of four (4) walls.

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.

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.

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.

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, and/or foundations, structures, etc.

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, and four marked hard copy sets of as-built record drawings clean and damaged free shall also 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.

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 an Authorization to Proceed with Extra Work letter 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.

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.



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 may 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

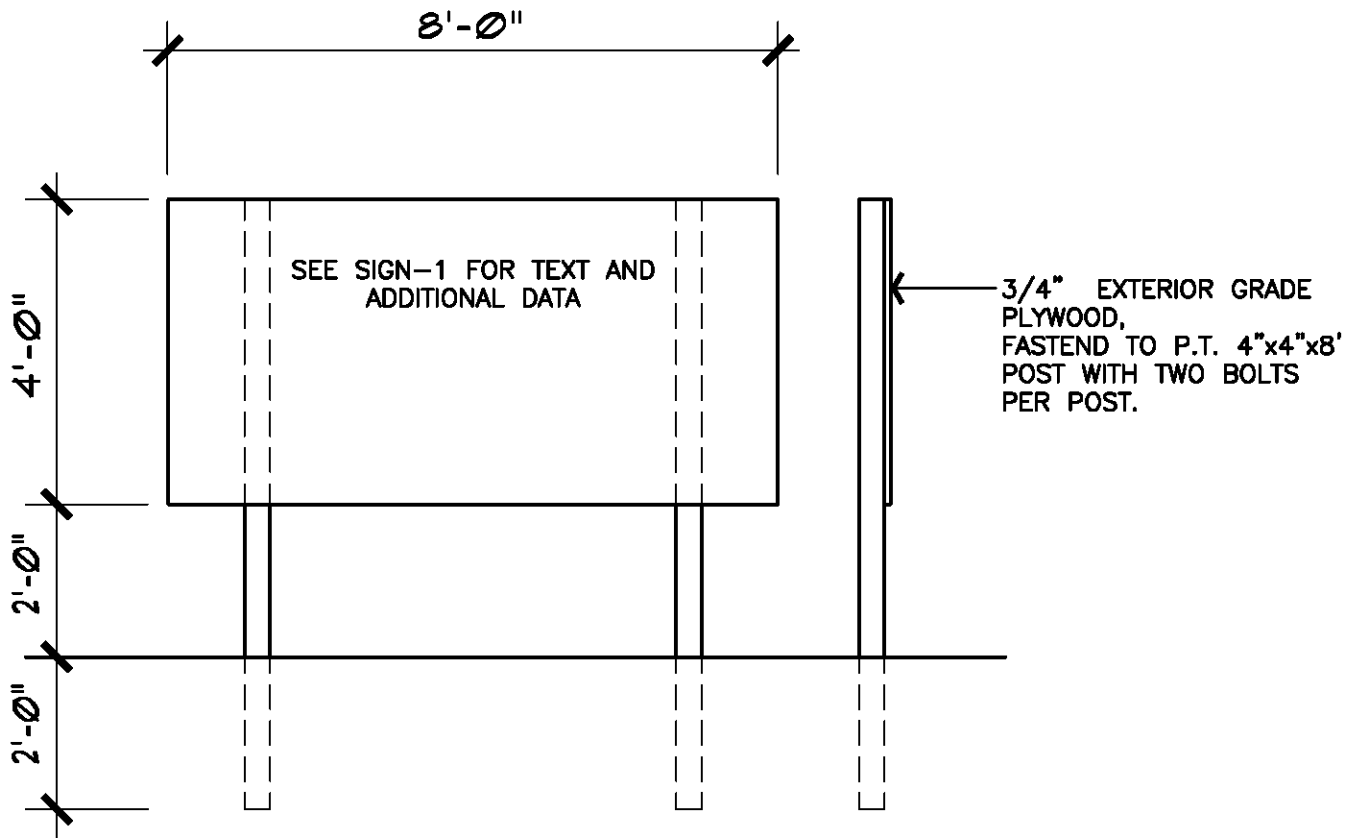
Blue: Sherwin Williams Naval SW6244
Green: Sherwin Williams Center Stage SW6920
White: Sherwin Williams Pure White SW7005

scale: 3" 3"

SIGN EXAMPLE ONLY GRAPHIC TO BE DEVELOPED BY CONTRACTOR

Font

Franklin Gothic



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:

Downtown Riverwalk from MacDill Park to
Curtis Hixon Waterfront Park - Elevator
at
125 W. Kennedy Boulevard
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, construction of a hydraulic elevator and lobby building on the Tampa Riverwalk – Kennedy Boulevard Plaza Bridge segment, including concrete, stone wall cladding system/stone panels, exterior painting, electrical work and installation of directional signage 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:

Not Applicable.

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. GENERAL PROVISIONS, SUPPLEMENTARY GENERAL PROVISIONS, AND SPECIAL CONDITIONS

6.0 SPECIFICATIONS: (DATED: August, 2015)

Divisions: 1, 3, 5, 9, 14, 26.

7.0 DRAWINGS: (DATED: August 2015)

Cover Sheet, G-01, G-02, A-101, A-102, A-201, A-401, S-001, S-002, S-101, S-201, S-301, S-302, C-01, C-02 and E-01 thru E-09.

8.0 ADDENDA AND LETTERS OF CLARIFICATION:

All addenda and letters of clarification issued prior to bid opening time date.

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 \$30,000 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 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-26 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.

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.

END OF SECTION 01040

SECTION 01 43 39
MOCK-UPS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Build indicated mock-up on site for review and approval before proceeding with any construction that may be affected by construction represented by mock-up.

1.2 PROCEDURE FOR MOCK-UP CONSTRUCTION:

- A. Extent, size, form and primary components are indicated on Drawings or in Specifications
- B. Locate mock-up where indicated on drawings or, if not indicated, locate as directed by Architect.
- C. Provide mock-up until corresponding product data, shop drawings, samples and other preparatory submittals are approved.
- D. Mock-up shall be rebuilt as necessary until approved by Architect.
- E. After approval, mock-up shall remain and serve as the standard for judging acceptance or rejection of the appearance characteristics and workmanship of corresponding construction.
- F. After completion and acceptance of the corresponding construction, mock-up shall be removed when directed by Architect unless approved mock-up has been located as part of permanent construction.
- G. Surrounding and other construction affected by mock-up construction or removal shall be completed as indicated or, if construction is not indicated, site shall be restored to condition existing before mock-up construction.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Materials used in initial mock-up construction shall comply as specified in applicable sections for Work and as approved by submittal reviews.
- B. Materials may be modified only to extent required for mock-up approval by Architect.
 - 1. Modified materials shall comply with specified requirements but may differ in appearance characteristics, such as color and texture.
- C. Materials used in construction of approved mock-up construction shall be used in corresponding permanent construction.

PART 3 - EXECUTION

3.1 CONSTRUCTION

- A. Provide initial mock-up construction by methods proposed for corresponding permanent construction.
 - 1. Comply with installation and application requirements for each component as specified in section applicable for Work.
- B. Methods of construction may be modified only to extent required for mock-up approval by Architect.
 - 1. Modified methods of construction shall comply with specified requirements as well as approved details of workmanship.
- C. Methods of construction used for approved mock-up construction shall be used in corresponding permanent construction.

END OF SECTION

SECTION 01 73 29
CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

- A. This section covers all cut and patch work either in remodel, add-on or new construction as necessary for the execution of the Work.
- B. Completely coordinate with the work of other trades.

1.2 QUALITY ASSURANCE

- A. Employ skilled personnel to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
- B. Written Requests:
 - 1. Submit requests in advance of cutting or alteration which affects:
 - a. Structural integrity of any component of Project.
 - b. Integrity of weather-exposed or moisture-resistant component.
 - c. Efficiency, maintenance, or safety of any operational component.
 - d. Visual qualities of sight-exposed components.
 - e. Work of Owner or separate contractor.
 - 2. Include in Request:
 - a. Location and description of affected work.
 - b. Necessity for cutting or alteration.
 - c. Description of proposed work, and products to be used.
 - d. Alternatives to cutting and patching.
 - e. Effect on work of Owner or separate contractor.
 - f. Written permission of affected separate contractor.
 - g. Date and time work will be executed.
- C. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would change their load-carrying capacity or load-deflection ratio.
 - 1. Follow applicable NFPA Standards when torch cutting is required.
- D. To the greatest extent practicable, employ original installer to perform cutting and patching for weather-exposed and moisture-resistant components, and sight-exposed surfaces. On existing work, employ persons experienced with material requiring cutting and patching.
- E. Operational Limitations: do not cut and patch operating elements or related components in a manner that would result in reducing their capacity to perform as intended. Do not cut and patch operating elements or related components in a manner that would result in increased maintenance or decreased operational life or safety.
- F. Visual Requirements: Do not cut and patch construction exposed on exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic or visual qualities. Do no cut and patch construction in a manner that would result in visual evidence of cutting and patching. Remove and replace construction which was cut and patched in a visually unsatisfactory manner.
- G. Warranty or existing warranties: Replace, patch, and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any warranties required or existing.

1.3 DESCRIPTION

- A. Install Work in such a manner and sequence as to preclude or minimize cutting and patching of new Work.
- B. Execute cutting (including excavation), fitting or patching of Work, required to:
 - 1. Make several parts fit properly.
 - 2. Uncover Work to provide for installation of ill timed Work.
 - 3. Remove and replace defective Work.

4. Remove and replace non-conforming Work.
 5. Remove samples of installed Work for testing.
 6. Install specified Work in existing construction.
 7. Provide rerouting penetrations of non-structural surfaces for installation of piping and electrical conduit.
 8. Patch and repair fireproofing damaged after installation of other Work or demolition activities.
 9. Remove and finish construction at connections to other structures.
 10. Remove existing roofing where required by new Work, and patch to match existing roofing.
- C. Do not endanger any Work or any Work of other Contractors, by cutting, excavating, or otherwise altering any Work except with written consent of Contractor subject to review by Architect.
- D. Do not cut into or cut away any structural concrete or other structural members, any other concrete nor dig under any foundations or into structural walls or other parts, or in any case allow same to be done without full knowledge and written consent of Architect.
- E. Be responsible for damage resulting from violation of these provisions.
- F. Use only firms or individual trades qualified to perform Work required under this Section.

1.4 SUBMITTALS

- A. Shop Drawings:
1. Sleeve and Opening Drawings: For only those conditions specified submit dimensioned drawings showing position and size of sleeves and openings in relation to equipment, other structural and non-structural assemblies, and with reference to dimensional grid of building.

1.5 JOB CONDITIONS

- A. Before start of Work, obtain and pay for all permits required by all authorities having jurisdiction and notify all interested utilities companies.
- B. Obtain approval of Owner and authorities having jurisdiction for Work which affects existing exitways, exit stairs, means of egress, or access to, or exit from, areas.
1. Review with and obtain approval of authorities for any temporary construction which affects such areas.
- C. Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- D. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- E. Avoid cutting existing utilities, pipe, conduit, or ductwork serving the building but scheduled to be removed or relocated until alternate provisions have been provided.
- F. Items to be salvaged and delivered to Owner shall be carefully removed and properly stored in an area easily accessible for removal by Owner.

1.6 PAYMENT FOR COSTS

- A. Costs caused by non-coordinated or defective Work, or Work not conforming to Contract Documents, paid by Contractor responsible for non-coordinated, rejected, or non-conforming Work.

PART 2 - PRODUCTS

2.1 MATERIALS - GENERAL

- A. Use materials identical to existing materials.
- B. For exposed surfaces, use materials that visually match existing adjacent surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible if identical materials are unavailable or cannot be used.
- C. Use materials whose installed performance will equal or surpass that of existing materials.
- D. Where applicable, comply with specifications for type of Work to be performed.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Prior to the bid, review all existing facilities that are related to this contract and shall be familiar with all utility requirements and construction.
 - 1. Existing facility documents may be available through the Owner for review.
- B. Perform preliminary investigations as required to ascertain extent of Work.
 - 1. Conditions which would be apparent by such investigation will not be allowed as cause for claims for extra costs.
- C. Inspect existing conditions for work, including elements subject to movement or damage during:
 - 1. Cutting and patching.
- D. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding.
- E. Before proceeding, meet at Project Site with parties involved in cutting and patching, including mechanical and electrical trades.
 - 1. Review areas of potential interference and conflict.
 - 2. Coordinate procedures and resolve potential conflicts before proceeding.
- F. After uncovering existing conditions for Work, inspect conditions affecting installation of new products or Work.

3.2 PREPARATION PRIOR TO CUTTING

- A. Provide adequate shoring, bracing and support as required to maintain structural integrity of Project.
- B. Provide protection for other portions of Project which may be affected.
- C. Provide protection from elements when required.
- D. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- E. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.
- F. Maintain excavations free of water.

3.3 CUTTING AND REMOVAL - GENERAL

- A. Execute fitting and adjustment to provide finished installation to comply with specified tolerances and finishes.
- B. Execute cutting by methods which will prevent damage to existing or other Work and will provide proper surfaces to receive installation of new Work.
- C. Neatly cut and remove materials, and prepare all openings to receive new work.
- D. Remove masonry or concrete in small sections.
- E. Provide shoring, bracing, and other supports to prevent movement, settlement, or collapse of remaining or adjacent wall areas, structure, or facilities.
- F. Arrange shoring, bracing, and supports to prevent overloading of structure.
- G. Take all precautions necessary to prevent damage to existing remaining work or to adjacent facilities.
- H. Execute Work using methods which will prevent interference with use of remaining and adjacent facilities by Owner.
- I. Remove existing work indicated to be removed, or as necessary for installation of new Work.
- J. Provide for cutting, fitting, repairing, patching and finishing of Work disturbed by installation of new Work.
- K. Do not remove or damage fireproofing materials.
 - 1. Install hangers, inserts, supports, and anchors prior to installation of fireproofing.
 - 2. Repair or replace damaged fireproofing.

3.4 CUTTING

- A. Cut existing construction to:
 - 1. Provide for installation of other components or performance of other construction activities, and subsequent fitting and patching to restore surfaces to their original condition.
 - 2. Fit products together, to integrate with other work.
 - 3. Uncover work to install ill-timed work.
 - 4. Remove and replace defective and non-conforming work.
 - 5. Provide openings for mechanical and electrical penetrations.
- B. Cut existing construction using methods least likely to damage components to be retained or adjoining construction. Where possible, review proposed procedures with original installer. Comply with original installer's recommendations.
 - 1. 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.
 - 2. To avoid marring existing finished surfaces, cut or drill from exposed or finished side into concealed surfaces.
 - 3. Cut through concrete and masonry using a carborundum saw or diamond core drill.
 - 4. Comply with requirements of applicable Sections of Division 31, where cutting and patching requires excavating and backfilling.
 - 5. Where portions of utility services are shown or required to be removed, relocated or abandoned, bypass those portions shown to remain before cutting. 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 bypassing and cutting.

3.5 CUTTING IN CONCRETE CONSTRUCTION

- A. Do not cut into nor core drill openings or holes in beams, joists, and columns without prior written approval of Architect.
 - 1. When written approval is obtained, comply with additional requirements and instructions of Architect.
- B. In members other than beams, joists, and columns; where an opening larger than 10 IN in any dimension is required, or where dimension between 2 openings in less than 2 times maximum dimension of largest opening, and condition is not shown on architectural or structural drawings, obtain prior written approval of Architect.
 - 1. At floor slabs and walls to be core drilled or cut, find and mark all reinforcing in both faces located by means of x-ray, ground penetrating radar, pach-ometer, or prof-ometer. Submit sketch showing location of rebar and proposed cuts or cores for review.
 - 2. When written approval is obtained, comply with additional requirements and instructions of Architect.

3.6 CUTTING IN POST TENSIONED CONCRETE CONSTRUCTION

- A. Do not cut into nor core drill openings or holes in beams or joists.
- B. Do not cut into nor core drill openings or holes in slabs without prior written approval of Architect.
 - 1. When approval is obtained, comply with additional requirements and instructions of Architect.
- C. Openings not greater than 6 IN in any dimension are permitted in flat slab portions of construction except that such openings shall not interfere with or disturb strands.
 - 1. Do not place closer than 12 IN to any column face, or closer than 24 IN to any post tensioning strand anchor.

3.7 CUTTING IN PRECAST/PRESTRESSED CONCRETE CONSTRUCTION

- A. Do not cut openings nor core drill vertically nor horizontally through stems of members.
- B. Openings smaller than 6 IN diameter or 6 IN maximum dimension may be cut in flanges of units after obtaining prior written approval of Architect.
 - 1. When approval is obtained, comply with instructions of Architect.

3.8 CUTTING IN STEEL FRAME AND METAL DECK CONSTRUCTION

- A. Do not cut nor drill holes in webs and flanges of columns, beams, purlins, and joists without prior written approval of Architect.
 - 1. When approval is obtained, comply with requirements and instructions of Architect and provide reinforcing at such locations when required.

- B. When openings are cut into metal decks having cast-in-place concrete slab over metal deck:
 - 1. No reinforcing of holes is required for circular openings or sleeves up to 6 IN diameter and for rectangular openings having no side dimension greater than 6 IN.
 - 2. Reinforce openings greater than 6 IN.
 - 3. Obtain prior written approval of Architect for openings not shown on architectural or structural drawings.
 - a. Comply with additional requirements and instructions of Architect.
- C. When openings are cut into metal roof decks that have no concrete cast-in-place (except lightweight insulating cementitious roof fill) over deck:
 - 1. No reinforcing of holes is required for circular openings less than 6 IN diameter and for rectangular openings having no side dimension greater than 6 IN.
 - 2. Reinforce openings between 6 IN and 12 IN, with 20 GA flat steel sheet 12 IN greater in dimension than opening; fusion weld to top surface of deck at each corner and on each side midway between corners.
 - 3. Do not cut openings greater than 12 IN without prior written approval of Architect.
 - a. Comply with requirements and instruction of Architect.

3.9 MATCHING AND PATCHING

- A. Where items are removed from existing walls, ceilings, floors or partitions to remain, repair wall, ceiling, floor or partition disturbed by removal.
- B. Where walls, ceilings, floors or partitions are removed, repair abutting walls, ceilings or floors disturbed by removal.
- C. Where existing construction is cut, removed or otherwise disturbed to permit installation of new Work, match and patch existing disturbed construction.
- D. Use methods and materials similar in appearance, and equal in quality to areas or surfaces being repaired.
- E. Restore Work which has been cut or removed; install new products to provide completed Work in accord with requirements of Contract Documents.
- F. Patch Work must in every way possible match existing work and adjacent surfaces.
- G. Refinish entire surfaces as necessary to provide an even finish to match adjacent finishes.
 - 1. Refinish continuous surfaces to nearest intersections.
 - 2. Assembly - entire refinishing.
- H. In existing areas remove and replace existing ceilings and finishes for installation of Work, if not shown to be removed on Architectural Drawings and Schedules.
 - 1. If existing ceiling cannot be satisfactorily reinstalled, replace with like materials and construction.
 - 2. Replace damaged construction with like materials.
- I. At penetrations of fire-rated walls and partitions, [smoke partitions,] ceiling or floor construction, provide firestopping in accordance with Section 07 84 00.

END OF SECTION

SECTION 03 08 16
CONCRETE TESTING AND EVALUATION - CONTRACTOR

PART 1 - GENERAL

1.1 SUMMARY

- A. Furnish labor, materials, tools, equipment, and services for Concrete Testing and Evaluation - Contractor, as indicated, in accordance with provisions of Contract Documents.
- B. Completely coordinate with work of other trades.
- C. Test concrete materials and operations and inspect as work progresses. Failure to detect defective work or material shall not prevent later rejection when such defect is discovered nor shall it obligate Architect/Engineer for final acceptance.

1.2 QUALITY ASSURANCE

- A. ASTM International (ASTM):
 - 1. ASTM C31 Standard Practice for Making and Curing Concrete Test Specimens in Field.
 - 2. ASTM C39 Standard test Method for Compressive Strength of Cylindrical Concrete Specimens.
 - 3. ASTM C42 Standard test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.
 - 4. ASTM C 138 Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
 - 5. ASTM C143 Standard test method for Test for Slump of Hydraulic Cement Concrete.
 - 6. ASTM C172 Standard Practice for Sampling Freshly Mixed Concrete.
 - 7. ASTM C173 Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method.
 - 8. ASTM C231 Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
 - 9. ASTM C1064 Standard Test Method for Temperature of Freshly Mixed Hydraulic - Cement Concrete
 - 10. ASTM E329 Standard Specification for Agencies Engaged in Construction Inspection and/or Testing
- B. American Concrete Institute (ACI):
 - 1. ACI 318 Building Code requirements for Structural Concrete and Commentary
- C. Testing Agency:
 - 1. Acceptable to Architect.
 - 2. Recent evidence of inspection by Cement and Concrete Reference Laboratory of National Institute of Standards and Technology, with cited deficiencies corrected.
 - 3. Meet requirements of ASTM E 329.
 - 4. Agency and its representatives are not authorized to revoke, alter, relax, enlarge or release requirements, nor approve or accept portion of Contract Documents.

1.3 SUBMITTALS

- A. Project Information:
 - 1. Testing Agency qualifications.
 - 2. Production sample test reports:
 - a. Include same data as required for mix design reports.
 - 3. Reports of Contractor-optional tests.
 - 4. Test reports for in-place testing, if such testing is performed.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.1 DESCRIPTION - GENERAL

- A. Test concrete materials and inspect operations as work progresses.
- B. Failure to detect defective work or material shall not prevent later rejection when such defect is discovered nor shall it obligate Architect for final acceptance.

- C. Following testing services shall be performed by testing agency:
1. Review and check-test Contractor's proposed materials for compliance with specifications.
 2. Review and check-test Contractor's proposed mix design.
 3. Secure production samples of materials at plants or stock-piles during course of work and test for compliance with specifications.
 4. Conduct strength tests of concrete during construction in accordance with following procedures:
 - a. Secure composite samples in accordance with ASTM C172.
 - 1) Obtain each sample from a different batch of concrete on a random basis.
 - 2) Select test batch at random before commencement of concrete placement.
 - b. Mold and cure sufficient specimens from samples in accordance with ASTM C31.
 - 1) Report deviations from requirements.
 - c. Test specimens in accordance with ASTM C39.
 - 1) Test two specimens at 28 days for acceptance and one at 7 days for information.
 - 2) Acceptance test results shall be average of strengths of two specimens tested at 28 days.
 - d. If one specimen in a test manifests evidence of improper sampling, molding or testing, discard; strength of remaining cylinder shall be considered test result.
 - 1) Should both specimens in a test indicate above defects, discard entire test.
 - e. Make at least one strength test for each 75 CU YD or fraction thereof, of each mix design of concrete placed in one day.
 5. Determine slump of concrete for each strength test and whenever consistency of concrete appears to vary, in accordance with ASTM C143.
 6. Determine density, unit weight, of concrete for each strength test in accordance with ASTM C138.
 7. Determine air content of normal weight concrete for each strength test in accordance with ASTM C231.
 8. Determine temperature of concrete in accordance with ASTM C1064 for each strength test.

3.2 ADDITIONAL TESTING SERVICES

- A. Following non-routine services shall be performed on occasions indicated:
1. Additional testing and inspection, whenever changes in materials or proportions are requested by Contractor.
 2. Additional testing of materials or concrete when they fail by test or inspection, to meet specification requirements.
 3. Other testing services needed or required by Contractor, such as:
 - a. Field cured test specimens for determining when concrete may be post-tensioned or when forming shoring or reshoring may be removed.

3.3 DUTIES AND AUTHORITIES OF DESIGNATED TESTING AGENCY

- A. Inspect, sample and test materials and production of concrete. When it appears that material furnished or work performed by Contractor fails to fulfill specification requirements, report such deficiency to Architect/Engineer and Contractor.
- B. Report test and inspection results to Architect and Contractor immediately after performed. Include exact location in work at which batch represented by a test was deposited.
 1. Reports shall include detailed information on storage and curing of specimens prior to testing.
- C. Agency and its representatives are not authorized to alter requirements of Contract Documents, nor to approve or accept any portion of work.

3.4 RESPONSIBILITIES AND DUTIES OF CONTRACTOR

- A. Provide testing services for qualification of proposed materials and establishment of mix designs.
- B. Use of testing service shall not relieve Contractor of responsibility to furnish materials and construction in full compliance with Contract Documents.
- C. Submit concrete materials and concrete mix designs, with results of testing performed to qualify materials and to establish mix designs.
 1. Do not place concrete until Contractor has received approval in writing.
- D. Testing and Inspection:
 1. Furnish labor to assist Testing Agency in obtaining and handling samples or other materials at site.
 2. Advise Testing Agency in advance of operations.
 3. Provide and maintain facilities for storage and curing of concrete test specimens on site for first 24 HRS or until sufficient strength is achieved as required by ASTM C31.

3.5 EVALUATION AND ACCEPTANCE OF COMPRESSIVE STRENGTH TEST RESULTS

- A. Evaluate test results for standard molded and cured test cylinders separately for each concrete mix design.
 - 1. Evaluate each mix design for strength and uniformity by a minimum of five tests.
- B. Strength level of concrete shall be considered acceptable when average of three consecutive strength test sets equal or exceed specified strength (f_c) and no individual strength test result is less than specified strength (f_c) by more than 500 PSI.

3.6 TESTING IN-PLACE CONCRETE

- A. Test concrete in place when compressive strength tests indicate potential strength deficiency to evaluate actual strength.
 - 1. Pay for concrete tests and engineering time and analysis required to evaluate actual in-place concrete strength made necessary by low strength cylinder tests.
- B. Testing by rebound hammer, ultrasonic, or other non-destructive device:
 - 1. Tests shall be used to determine relative strengths at various locations in structure as an aid for selecting areas to be cored.
 - 2. Tests, unless properly calibrated and correlated with other test data, will not be used as a basis for acceptance or rejection.
- C. Core tests:
 - 1. Obtain and test largest practical diameter cores, 2 IN minimum, in accordance with ASTM C42.
 - a. Test dry if concrete in structure will be dry under service conditions,
 - 1) Air dry cores at 60 DegF to 80 DegF, relative humidity less than 60 percent for 7 days before test.
 - b. Test cores after moisture conditioning if concrete in structure is more than superficially wet under service conditions.
 - 2. Take three cores from area of concrete or member considered deficient in strength.
 - a. Location as selected by Architect.
 - b. Replace cores damaged prior or during removal from structure prior to testing.
 - 3. Concrete core test shall be considered acceptable if average strength of cores is equal to at least 85 percent of, with no single core less than 75 percent of specified strength (f_c).
 - 4. Fill core holes with low slump patching compound per Section 03 35 00.

3.7 ACCEPTANCE OR REJECTION OF IN-PLACE CONCRETE

- A. General:
 - 1. Completed concrete work which conforms to requirements of Contract Documents will be accepted without qualification.
 - 2. Concrete work which fails to conform to one or more requirements of Contract Documents shall be rejected and will not be accepted until repaired and proven adequate by concrete testing.
 - 3. Remedial work includes, but is not necessarily limited to, applicable repairs, replacement, reinforcement, engineering, and testing.
 - 4. Repair or replacement of concrete in an approved manner and in conformance with Contract Documents constitutes acceptance.
- B. Dimensional tolerances:
 - 1. Formed surfaces resulting in concrete outlines smaller than permitted by tolerances shall be considered potentially deficient in strength and subject to confirmation of safety by structural analysis or load test.
 - a. When deficiencies are confirmed, replace or reinforce structure as directed.
 - 2. Formed surfaces resulting in concrete outlines larger than permitted by tolerances will be rejected if strength or finish of structure is not acceptable, or function is adversely affected.
 - a. If removal of excess material is permitted, repair of surfaces constitutes acceptance.
 - b. If removal of excess material is not permitted, replacement of surfaces constitute acceptance.
 - 3. Concrete members cast in wrong location will be rejected if: strength or finish is not acceptable, function is adversely affected, and/or interference is encountered with other construction.
 - 4. Inaccurately formed concrete surfaces exceeding tolerances and exposed to view will be rejected.
 - 5. Finished slabs exceeding tolerances may be repaired provided that strength or appearance is not adversely affected. High spots may be removed with a terrazzo grinder, low spots filled with a patching compound, or other remedial measures performed as permitted.
- C. Finish:

1. Architectural concrete with surface exceeding limitations will be rejected.
 2. Concrete exposed to view with defects which adversely affect appearance of specified finish may be repaired only by approved methods.
 3. Slabs:
 - a. Finished slabs exceeding tolerance limits specified in Section 03 35 00 will be rejected if finish is not acceptable and function is adversely affected.
 - 1) If rejected, repair of finished surfaces or replacement of slab in an approved manner and in conformance with Contract Documents will constitute acceptance.
 - b. Repair may involve removing high spots by grinding, filling low spots with patching compound, or remedial measures as permitted.
 4. Formed surfaces:
 - a. Concrete exposed to view with defects which adversely affect appearance of specified finish will be rejected.
 - 1) Repair surface defects in conformance with Section 03 35 00.
 5. Concrete not exposed to view is not subject to rejection for defective finish.
- D. Strength of structure:
1. Concrete in place which control strength of structure will be rejected if it fails to comply with requirements of Contract Documents, including but not necessarily limited to:
 - a. Deficient concrete strength based on compressive strength tests.
 - b. Reinforcing steel size, quantity, strength, position, or arrangement at variance with requirements on reinforcement.
 - c. Concrete which differs from required dimensions or location.
 - d. Curing less than that specified.
 - e. Inadequate protection of concrete from extremes of temperature during early stages of hardening and strength development.
 - f. Mechanical injury, construction fires, accidents or premature removal of formwork.
 - g. Substandard workmanship.
 2. When strength of structure is considered potentially deficient, it will not be accepted until one of following is completed and submitted to Architect for approval prior to action by Contractor.
 - a. Confirmation of safety of structure by structural analysis.
 - b. Core tests shall be performed only when safety of structure is not confirmed by structural analysis.
 - c. Confirmation of safety of structure by load tests performed and evaluated in accordance with ACI 318.
 - d. Replacement of structure deficient in strength.
 - e. Reinforce structure with supplement supports as directed by Architect and approved by Owner.

END OF SECTION

**SECTION 03 11 00
CONCRETE FORMWORK**

PART 1- GENERAL

1.1 SUMMARY

- A. Furnish labor, materials, tools, equipment, and services for Concrete Formwork, as indicated, in accordance with provisions of Contract Documents.
- B. Completely coordinate with work of other trades.

1.2 QUALITY ASSURANCE

- A. Design, engineering, and construction of formwork are responsibility of Contractor.
 - 1. Design, engineer, and construct formwork for applicable gravity and lateral loads and pressures as well as other design considerations or applicable requirements of legal local building code.
 - 2. Develop shoring and re-shoring pattern and sequence so as not to exceed safe structural capacity of supporting structural systems. Confer with Architect, if there is any question, regarding the capacity of the structural system.
- B. Design, prepare formwork drawings and construct formwork in accordance with ACI 347, Guide to Formwork for Concrete.
- C. Layout and measurement of concrete forms and embedment's, required for work, performed by a licensed surveyor employed by the contractor.

1.3 SUBMITTALS

1.4 DESCRIPTION

- A. Definitions:
 - 1. Formwork: Total system of support for freshly placed concrete including mold or sheathing which contacts concrete as well as supporting members, hardware, and necessary bracing.
 - 2. Exposed construction: Exposed to view.
 - 3. Exposed to view: Concrete surfaces seen by the public from eye level from any walking surface in a public location after completion of building.
 - 4. Public location: Building areas accessible to public and employees not responsible for maintenance. Storerooms, unfinished space and large mechanical rooms are considered public locations. Equipment closets, elevator and mechanical penthouses are not public space.
- B. Use forms, wherever necessary, to confine concrete and shape it to required dimensions. Use forms of sufficient strength to withstand pressure resulting from placement and vibration of concrete, with sufficient rigidity to maintain specified tolerances.
- C. See concrete finish requirements in Section 03 35 00.
- D. Use earth side forms for spread footings, pile caps and unfinished grade beams where earth can be shaped to a straight and true surface. Do not use earth cuts as forms for other vertical surfaces unless permitted.

PART 2 - MATERIALS

2.1 MATERIALS

- A. Form facing materials: As indicated under description of finishes required.

- B. Form accessories, partially or wholly embedded in concrete, such as ties and hangers: Shall be of a commercially manufactured type. Do not use non-fabricated wire. Use form ties constructed so ends or end fasteners can be removed without causing appreciable spalling of concrete faces. After ends or end fasteners of form ties have been removed, embedded portion of ties shall terminate not less than 2 diameters or twice minimum dimension of tie from formed faces of concrete to be permanently exposed to view, but in no case less than 3/4 IN. When formed face of concrete is not to be permanently exposed to view, form ties may be cut off flush with formed surfaces. Use ties with 3/4 IN diameter cones on both ends for water retaining structures.

2.2 FABRICATION OF FORMS

- A. Make forms sufficiently tight to prevent loss of cement fines. Place chamfer strips in outside corners of forms to produce 45 degree beveled corners on permanently exposed surfaces. Interior corners on such surfaces and edges of formed joints will not require beveling.
- B. To maintain specified finish tolerances, camber formwork to compensate for anticipated formwork deflections prior to hardening of concrete.
- C. Provide positive means of adjustment (wedges or jacks) of shores and struts and take up settlement during concrete placing operation. Securely brace forms against lateral deflection.
- D. Provide temporary openings at base of column and wall forms and at other points where necessary to facilitate cleaning and observation immediately before concrete is placed.
- E. At construction joints, contact surface of form sheathing for flush surfaces exposed to view shall overlap hardened concrete in previous placement minimum 1 IN. Hold forms against hardened concrete to prevent offsets or loss of mortar at construction joint and to maintain a true surface.
- F. Construct wood forms for wall openings to facilitate loosening, if necessary, to counteract swelling.
- G. Fasten wedges (used for final adjustment of forms prior to concrete placement) in position after final check.
- H. Anchor formwork to shores or other supporting surfaces or members so upward or lateral movement of any part of formwork system is prevented during concrete placement.
- I. Provide runways for moving equipment with struts or legs, supported directly on formwork or structural member without resting on reinforcing steel.

2.3 TOLERANCES

- A. Construct formwork so concrete surfaces will conform to tolerance limits listed: Tolerances non-cumulative. Most restrictive tolerance governs. Tolerance limits noted are maximum deviations (plus or minus) on each side of intended line.
 - 1. Deviation from plumb:
 - a. In lines and surfaces of columns, piers, walls, and in arrises:
 - 1) In any length: 1 in 500 but not less than 1/8 IN.
 - 2) In any story: 3/8 IN.
 - 3) Maximum for entire length: 3/4 IN.
 - b. For exposed corner columns, control-joint grooves, and other conspicuous vertical lines:
 - 1) In any length: 1 in 1000 but not less than 1/8 IN.
 - 2) In any story: 3/16 IN.
 - 3) Maximum for entire length: 1/2 IN.
 - 2. Deviation from level or from grades specified:
 - a. In slab soffits, ceilings, beam soffits and in arrises, measured before removal of supporting shores:
 - 1) In any length: 1 in 750 but not less than 1/8 IN.
 - 2) In any bay: 3/8 IN.
 - 3) Maximum for entire length: 1/2 IN.
 - b. In exposed lintels, sills, parapets, horizontal grooves, and other conspicuous horizontal lines:
 - 1) In any length: 1 in 1000, but not less than 1/8 IN.
 - 2) In any bay: 1/4 IN.
 - 3) Maximum for entire length: 1/2 IN.
 - 3. Deviations from true plane of concrete surface exposed to view caused by bulging of form facing material between supports:

- a. 3/16 IN or 1/300 of span between supports whichever is smaller.
4. Deviation from established position in plan of linear building lines, columns, walls:
 - a. In any length: 1 in 500, but not less than 1/8 IN.
 - b. In any bay: 1/2 IN.
 - c. Maximum for entire length: 3/4 IN.
5. Deviation in sizes and location of sleeves, floor openings, and wall openings: 1/4 IN.
6. Deviation in cross-sectional dimensions of columns and beams and in thickness of slabs and walls:
 - a. Minus: 1/4 IN.
 - b. Plus: 1/2 IN.
- B. Formwork Classifications:
 1. Concrete formwork shall meet the following classification requirements:
 - a. Concrete noted as "Architectural Exposed Concrete: Class A."
 - b. Concrete exposed to view or to receive membrane waterproofing: Class B.
 - c. All other concrete: Class C.
- C. Tolerances apply to concrete dimensions only, not to positioning of vertical reinforcing steel, dowels, or embedded items, except where specifically noted otherwise.
- D. Establish and maintain in undisturbed condition and until final completion of project, sufficient control points and bench marks to be used for reference purposes to check tolerances.
- E. Regardless of tolerances listed allow no portion of building to extend beyond property line of project.

PART 3 - EXECUTION

3.1 PREPARATION OF FORM SURFACES

- A. Clean form surfaces and embedded materials of mortar, grout and foreign material before concrete is placed.
- B. Unless otherwise specified or approved, treat surfaces of forms as follows:
 1. Before placing of reinforcing steel or concrete, cover surfaces of forms with coating material that will effectively prevent absorption of moisture and prevent bond with concrete, and not stain concrete. A field applied form release agent or sealer or factory applied non-absorptive liner may be used.
 2. Do not allow excess form coating material to stand in puddles in forms nor in contact with hardened concrete against which fresh concrete is to be placed.

3.2 REMOVAL OF FORMS

- A. When repair of surface defects or finishing is required at early age, remove forms as soon as concrete has hardened sufficiently to resist damage from removal operations.
- B. Remove top forms on sloping surfaces of concrete as soon as concrete has attained sufficient stiffness to prevent sagging. Perform needed repairs or treatment required on such sloping surfaces at once, followed by specified curing.
- C. Loosen wood forms for wall openings as soon as this can be accomplished without damage to concrete.
- D. Formwork for columns, walls, sides of beams, and other parts not supporting weight of concrete may be removed as soon as concrete has hardened sufficiently to resist damage from removal.
- E. Where no re-shoring is planned, leave forms and shoring used to support weight of concrete in beams, slabs and other concrete members in place until concrete has attained its specified strength. Where re-shoring is planned, supporting formwork may be removed when concrete has reached 70 percent of specified strength, provided re-shoring is installed immediately.
- F. When shores and other vertical supports are arranged so non-load-carrying form-facing material may be removed without loosening or disturbing shores and supports, facing material may be removed at earlier age as permitted.

3.3 RE-SHORING

- A. When re-shoring is permitted or required, plan operations in advance. Follow sequence indicated on formwork drawings as directed by forming system design engineer. While re-shoring is underway, allow no live load on new construction.
- B. During re-shoring do not subject concrete in beam, slab, column or other structural member to combined dead and construction loads in excess of loads permitted by forming system design engineer for developed concrete strength at time of re-shoring. Place re-shores as soon as practicable after stripping operations are complete but in no case later than end of working day on which stripping occurs. Tighten re-shores to carry required loads without overstressing construction. Leave re-shores in place until:
 - 1. Tests representative of concrete being supported have reached specified strength.
 - 2. In-place concrete is at least 7 days old and/or meets the strength required by the forming system design engineer.
 - 3. Loads imposed by construction operations do not exceed design loads.
- C. For floors supporting shores under newly placed concrete leave original supporting shores in place or re-shore. Re-shoring system shall have capacity sufficient to resist anticipated loads and equal to at least one half of capacity of shoring system above. Locate re-shores directly under shore position above unless otherwise permitted.
- D. In multi-story buildings extend re-shoring over sufficient number of stories to distribute weight of newly placed concrete, forms, and construction live loads in such a manner that capacity of floors as determined by design load and developed concrete strength at time of stripping and re-shoring is not exceeded.

3.4 REMOVAL STRENGTH

- A. When removal of formwork or re-shoring is based on concrete reaching specified strength, concrete shall be presumed to have reached this strength when either of following conditions has been met.
 - 1. When test cylinders, field cured along with concrete they represent, have reached specified strength.
 - 2. When concrete has been cured as specified for same length of time as age at test date of laboratory-cured cylinders which reached specified strength. Determine length of time concrete has been cured in structure by cumulative number of days or fractions thereof, not necessarily consecutive, during which temperature of air in contact with concrete is above 50 deg. F and concrete has been damp or sealed from evaporation and loss of moisture.

END OF SECTION

**SECTION 03 15 23
EXPANSION JOINT SEALS IN CONCRETE**

PART 1 - GENERAL

1.1 SUMMARY

- A. Furnish all labor, materials, tools, equipment, and services for Expansion Joint Seals In Concrete, as indicated, in accordance with provisions of Contract Documents.
- B. Completely coordinate with work of other trades.

1.2 QUALITY ASSURANCE

- A. Install Expansion Joints in weather-tight, water-tight fashion.
- B. Extruded Neoprene:
 - 1. Quality complying with ASTM D 3542, and the following properties:

Minimum Physical Properties		
Property	Test Method	Required Value
Tensile strength, min.	ASTM D 412	3447 kPa 2000 PSI
Elongation at break, min.	ASTM D 412	250 percent
Hardness, Type A durometer	ASTM D 2240	55 ±5
Oven aging (70 hours at 100 degC 212 degF): Tensile strength, max. Elongation, max. Hardness, Type A durometer	ASTM D 573	20% loss 20% loss 0 to +10 pts
Max Weight Change due to Oil swell; (#3 Oil for 70 hours at 100 degC 212 degF)	ASTM D 471	45 percent
Ozone resistance, 20 percent strain 70 hours aging, ASTM D 573, 3 ppm in air	ASTM D 1149	No cracks

1.3 SUBMITTALS

- A. Project Information:
 - 1. Manufacturer of listed products.
- B. Contract Closeout Information:
 - 1. Flood Test Results.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Expansion joint seals:
 - 1. Base:
 - a. D.S. Brown.
 - 2. Optional:
 - a. Watson Bowman Acme Corp

2.2 MATERIALS

- A. General:
 - 1. Size material for joint width(s) indicated and in accord with current published recommendations of manufacturer.
 - 2. Use maximum available lengths.
 - 3. Use factory fabricated joints.
 - 4. Use types described below where indicated:

- B. Expansion Joint Seal – Type A:
 - 1. Description:
 - a. Elastomeric, neoprene profiles as indicated.
 - 2. Base Product(s) (refer to plans for where occurs):
 - a. “JP-Series” by D.S. Brown.
 - 3. High-strength, 2-part Epoxy Manufacturer's standard.
 - 4. Use where required.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Assure that joints to receive seal are free from defects with sides straight and parallel to proper width and depth indicated.
 - 1. Temperature at time of joint construction determines width of working joint.
 - 2. Form joints allowing for design temperature variations.
 - 3. Ensure that concrete is cured per manufacturer's recommendations, prior to installing joint.

3.2 PREPARATION

- A. Clean surfaces to receive seal of material which may be detrimental to effective joint sealing.
- B. Do not apply adhesives at temperatures below 5 DegC 40 DegF.
- C. Do not install seals at temperatures above 30 DegC 85 DegF.
- D. Keep adhesives and solvents away from heat or flame.
- E. Apply in well ventilated area.

3.3 INSTALLATION

- A. General:
 - 1. Where pedestrian traffic is anticipated: Utilize material which are ADA compliant.
 - 2. Miter and splice seal at corners where space does not permit a smooth bend.
 - 3. Splice seal using adhesive to provide a permanent, watertight joint.
 - 4. Remove misapplied adhesive immediately, using methylethyl ketone (MEK) or toluene.
- B. Installation – Joint Type A:
 - 1. Decompress seals using vacuum suction.
 - 2. Apply continuous coat of adhesive to both joint interfaces immediately prior to seal installation.
 - 3. Insert into joint void.
 - 4. Release suction, allowing material to expand and apply necessary bonding pressure.
 - a. Exception: Use pressurized air, in lieu of suction, where so recommended by manufacturer.
 - 5. Install with top recessed 3mm 1/8 IN.

3.4 FIELD TESTING

- A. Flood test installed joints for 24 hours.
 - 1. Minimum depth of water: 50mm 2 IN.
- B. Visually inspect area below for signs of water leakage.
- C. Repair areas which permit passage of water and re-test.

END OF SECTION

SECTION 03 20 00
CONCRETE REINFORCING

PART 1 - GENERAL

1.1 SUMMARY

- A. Furnish all labor, materials, tools, equipment, and services for Concrete Reinforcing, as indicated, in accordance with provisions of Contract Documents.
- B. Completely coordinate with work of other trades.

1.2 QUALITY ASSURANCE

- A. Testing of reinforcing steel welding shall be performed by Owner's testing agency at Owner's expense.
- B. Standards:
 - 1. ASTM A663: Standard Specification for Steel Bars, Carbon, Merchant Quality, Mechanical Properties.
 - 2. ASTM-A615: Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.
 - 3. ASTM-A675: Standard Specification for Steel Bars, Carbon, Hot-Wrought, Special Quality, Mechanical Properties.
 - 4. ASTM-A706: Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement.
 - 5. ACI 315: Details and Detailing Concrete Reinforcement.
 - 6. American Welding Society ANSI/AWS-D1.4 Structural Welding Code- Reinforcing Steel.
- C. Initial test for reinforcing bar welding will be paid by Owner. Retests due to failed initial tests shall be paid by Contractor.

1.3 SUBMITTALS

- A. Shop Drawings:
 - 1. Shop drawings indicating size, number, dimensions and locations of reinforcing steel and accessories, in sufficient detail to permit installation of reinforcing without reference to Contract drawings.
 - a. Details of concrete reinforcement and accessories not indicated on Contract Documents shall be in accordance with ACI 315.
- B. Project Information:

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Tension splice couplers:
 - 1. Base:
 - a. Erico Products.
 - b. Dayton Metal Products.
- B. Epoxy adhesive for anchoring reinforcing:
 - 1. Base:
 - a. Hilti, HIT System.

2.2 MATERIALS

- A. Reinforcing - General: Conform to ASTM-A615, Grade-60.
- B. Reinforcing - Welded: Reinforcing to be welded shall conform to ASTM-A706.
- C. Slab on Grade Plate Dowels: May be used as an equal substitute for smooth dowel bars at construction joints. Plate material shall be ASTM A36 steel and shall be Diamond Dowel System, by PNA Construction Technologies, size 1/4" x 4½" dowels or equal. Locate plate dowels per smooth dowel bar requirements. Do not shear plates. Remove burrs at edges of plates.

- D. Tension splice couplers: Shall develop minimum 125 percent of yield strength of bar(s). Where drawings indicate tension splice couplers, provide one of following:
 - 1. “Lenton” threaded tension coupler by Erico Products.
 - 2. “Bar-Grip” tension coupler by Dayton Metal Products of Miamisburg, OH.
 - 3. “Cadweld” tension splice by Erico Products.
 - 4. Bar-Lock lockshear bolt coupling sleeves, manufactured by Dayton Superior
 - 5. “Bartec” Mechanical Couplers as manufactured by Dextra America, Inc.
- E. Epoxy anchored reinforcing: Install reinforcing anchored in concrete with epoxy adhesive, in accordance with epoxy manufacturer’s instructions.

2.3 FABRICATION

- A. Bars used for concrete reinforcement shall meet following requirements for fabricating tolerances:
 - 1. Sheared length: Plus or minus 25 mm 1 IN.
 - 2. Depth of truss bars: Plus 0, minus 13 mm 1/2 IN.
 - 3. Overall dimensions of stirrups, ties, and spirals: Plus or minus 13 mm 1/2 IN.
 - 4. Other bends: Plus or minus 25 mm 1 IN.
- B. For bars with “End Bearing Splice Couplers,” bar ends shall terminate in flat surfaces, within 1-1/2 degrees of a right angle to axis of bars and shall be fitted within 3 degrees of full bearing after assembly.

PART 3 - EXECUTION

3.1 WELDING

- A. Perform welding of reinforcing steel in conformance with AWS-D1.4.
- B. Use E70 electrodes.
- C. Each welder shall place an approved identifying mark near each completed weld.
- D. Cut out welds determined to be defective and reweld and retest at Contractor’s expense.

3.2 PLACING REINFORCEMENT

- A. Provide minimum concrete covering for reinforcement as follows:
 - 1. Concrete deposited against earth: 75 mm 3 IN.
 - 2. Formed surfaces exposed to weather or in contact with earth: 50 mm 2 IN for reinforcing bars No.19 No.6 or larger; 40 mm 1-1/2 IN for reinforcing bars less than No.19 No.6.
 - 3. Interior surfaces: 40 mm 1-1/2 IN for beams, girders, and columns; 20 mm 3/4 IN for slabs, walls and joists with No.36 No.11 bars or smaller, and 40 mm 1-1/2 IN with No.43 No.14 and No.57 No.18 bars.
- B. Place bars to following tolerances:
 - 1. Clear distance to formed surfaces: Plus or minus 6 mm 1/4 IN.
 - 2. Minimum spacing between bars: Minus 6 mm 1/4 IN.
 - 3. Top bars in slabs and beams:
 - a. Members 205 mm 8 IN deep or less: Plus or minus 6 mm 1/4 IN.
 - b. Members between 205 and 610 mm 8 and 24 IN deep: Plus/minus 13 mm 1/2 IN.
 - c. Members more than 610 mm 2 FT deep: Plus or minus 25 mm 1 IN.
 - 4. Crosswise of members: Spaced evenly within 50 mm 2 IN.
 - 5. Lengthwise of members: Plus or minus 50 mm 2 IN.
- C. Bars may be moved as necessary to avoid interference with other reinforcing steel, conduits, or embedded items. If moved more than one bar diameter, or enough to exceed above tolerances, resulting arrangement of bars subject to approval.
- D. Assure that reinforcement, at time concrete is placed, is free of materials that may adversely affect or reduce bond. Reinforcement with rust, mill scale or a combination of both will be accepted as being satisfactory without cleaning or brushing provided dimensions and weights, including heights of deformations, of a cleaned sample is not less than required by applicable ASTM.

- E. Support reinforcement and fasten together to prevent displacement by construction loads or placing of concrete beyond tolerances indicated. On ground, provide supporting concrete blocks or other approved method. Over formwork, use concrete, metal, plastic or other approved bar chairs and spacers. Where concrete surface will be exposed to weather in finished structure, furnish accessories within 13 mm 1/2 IN of concrete surface of non-corrosive material or protect against corrosion.
- F. Overlap welded wire reinforcement wherever successive mats or rolls are continuous, in such a way that overlap measured between outermost cross wires of each fabric sheet is not less than spacing of cross wires plus 50 mm 2 IN. Unless shown otherwise on the drawings, support as required for reinforcing bars by methods of Paragraph E above.
- G. As indicated on drawings, offset vertical bars in columns at least one bar diameter at lapped splices. To ensure proper placement, furnish templates for column vertical bars and dowels.
- H. Splices not specifically indicated shall be subject to approval.
- I. Unless permitted by Architect/Engineer, do not bend reinforcement after embedding in hardened concrete.
- J. Unless permitted by Architect/Engineer, do not tack weld reinforcing.

END OF SECTION

SECTION 03 31 00
CONCRETE MATERIALS AND PROPORTIONING

PART 1 - GENERAL

1.1 SUMMARY

- A. Furnish labor, materials, tools, equipment, and services for Concrete Materials and Proportioning, as indicated, in accordance with provisions of Contract Documents.
- B. Completely coordinate with work of other trades.

1.2 QUALITY ASSURANCE

- A. ASTM designated specifications for material quality and test methods appear throughout this specification.
 - 1. The serial designation prefixed with ASTM shall identify the specification which shall be a part of this specification.
- B. Standards for concrete work: Comply with applicable provisions of following ACI publications (latest edition) except as otherwise indicated.
 - 1. ACI 301 "Specifications for Structural Concrete for Buildings."
- C. Concrete Mixture Proportioning:
 - 1. Employ and pay for testing agency acceptable to Architect and Owner to perform materials evaluation, testing and design of concrete mixes.
 - 2. Certificates, signed by material producer and Contractor, may be submitted in lieu of material testing when approved by Architect.
- D. Concrete Testing:
 - 1. Specified in Section 03 08 16 (Contractor Pays).
 - 2. Contractor to assist with related communication and temporary storage of test cylinders at jobsite.
- E. Pre-Concrete Conference
 - 1. At least 35 days prior to the start of the concrete construction schedule, the contractor shall conduct a meeting to discuss the approved mix designs and to discuss the required methods and procedures to achieve the required concrete construction. The contractor shall send a pre-concrete conference agenda to attendees 20 days prior to the scheduled date of the conference.
 - 2. The contractor shall require responsible representatives of every party who is concerned with the concrete work to attend the conference, including but not limited to the following:
 - a. Architect and/or Engineer
 - b. Contractor's superintendent and quality control representative.
 - c. Laboratory responsible for the concrete design mix
 - d. Owners Testing Agency responsible for field quality control
 - e. Concrete subcontractor
 - f. Ready-mix concrete producer
 - g. Admixture manufacturer
 - h. Concrete pumping equipment manufacturer
 - 3. Minutes of the meeting shall be recorded, typed and printed by the contractor and distributed to parties concerned within 5 days of the meeting. One copy of the minutes shall also be transmitted to the Owner's representative for information purposes.
 - 4. The minutes shall include a statement by the concrete contractor indicating that the proposed mix design, and placing, finishing and curing procedures can produce the concrete quality required by these specifications.

1.3 SUBMITTALS

- A. Product Data:
 - 1. Concrete Mix Designs:
 - a. Submit each Mix Design individually. Do not combine multiple mix designs into a single submittal
 - b. Submit the following data for each concrete mix proposed for use:
 - 1) Intended use of the mix design.
 - 2) Proportions of materials.
 - 3) Slump.

- 4) Air content.
- 5) 7-day and 28-day compression test results of trial mixes or those used for standard deviation analysis of an established mix. Test records for use in standard deviation analysis must have been made within 24 months of the date of the submittal and represent a time span of production of not less than 45 days.
- c. Submit source and certification or proof of quality (and compatibility of admixtures) for each of the constituents of the proposed concrete mixes. Compatibility of admixture must be certified.
 - 1) Cement.
 - 2) Aggregate.
 - 3) Water.
 - 4) Admixtures:
 - a) Air Entraining Admixture.
 - b) High-Range Water Reducer.
 - c) Other.
- d. Submit Concrete Mix Designs using the mix design submittal form included at the end of this specification:

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Normal Weight Concrete: Concrete for which density is not a controlled attribute.
 1. Materials ultimately used in production must be of same quality, properties and proportion as indicated in approved concrete mix design (as approved by Architect).
- B. Cement:
 1. Portland cement conforming to ASTM C150 or blended cements conforming to ASTM C595.
 2. Color: Natural gray.
- C. Aggregates:
 1. General:
 - a. Regard fine and coarse aggregates as separate ingredients.
 - b. Each size of coarse aggregate, as well as combination of sizes when two or more are used, shall conform to grading requirements of applicable ASTM specifications.
 2. Normal Weight Concrete:
 - a. ASTM-C33, also aggregate shall be obtained from a source approved by the State Highway Department for use in concrete for state bridges.
- D. Potable Water:
 1. Conforming to ASTM C1602.
- E. Admixtures:
 1. General:
 - a. Use only when specifically required or permitted by Contract Documents, otherwise must be approved by Architect.
 - b. Trial mixes and tests shall be prepared with job materials, including admixture, to demonstrate that there will be no subsequent reduction in strength or durability of hardened concrete.
 - c. Conform to appropriate following specifications:
 2. Calcium chloride and admixtures containing more than 0.05 percent chloride ions are not permitted.
 3. Air-entraining Admixtures: ASTM C260.
 4. Mid-Range Water Reducer: ASTM C494, Type A.
 5. High-Range Water Reducer :
 - a. ASTM C494, Type F or G. Subject to complying with these specifications, the following manufacturers of High Range Water Reducing Admixtures are approved:
 - 1) Daracem – 100 or Adva Flow Series by Grace Construction Products.
 - 2) MasterRheobuild 1000 , MasterGlenium Series or PS 1466 by BASF Master Builders Solutions.
 - 3) Eucon 37 or Eucon SPJ by Euclid Chemical.
 - 4) PSP-N, PSP-N2, PSP-R, and PSP-L by Procrete Industries.
 6. Water-reducing, Retarding, and Accelerating Admixtures: ASTM C494.
 7. Calcium-nitrite Corrosion Inhibitor:
 - a. Base Products: DCI and DCI S by Grace Construction Products.
 - b. Rheocrete CNI by BASF Master Builders Solutions.
 - c. Eucon CIA by the Euclid Chemical Company
 - d. Incorporate at a rate of 4 G/YD³ in the areas identified.

8. Supplementary Cementitious Materials:
 - a. Fly ash - ASTM C618, Class C or Class F.
 - 1) Samples shall be obtained, prepared, and tested in accordance with ASTM C311.
 - b. Ground Granulated Blast-Furnace Slag: ASTM C989, Grade 100 or 120.

2.2 PROPORTIONING CONCRETE MIXES

- A. General:
 1. Contractor and concrete supplier are responsible to provide concrete, in-place, which satisfies requirements listed in following table.
 2. Contractor and concrete supplier are responsible to adjust the concrete mixes, as needed, to:
 - a. Correct for non-conformance.
 - b. Correct for a variation in the quality of a constituent.
 - c. Compensate for extreme conditions in the field.
- B. Establish concrete material proportions by any of the proportioning methods described in AC1-301 guidelines.

Concrete Properties Table – IP Units							
Use	28-day strength (KSI)	Dry Unit Weight (PCF)	Max Aggregate Size (IN)	Air %	Max. W/C Ratio	Slump (IN)	Cement type
Walls, Grade Beams	4.0		1	4.5	0.50	5	I
Structural floors, girders, slabs, columns	4.0		3/4		0.45	9	I
All other uses	4.0		3/4	6	0.50	4	I

- C. Instructions for use of Table:
 1. Provide concrete mixes with properties indicated in locations identified in Use column.
 2. 28-day Strength:
 - a. Installed concrete must meet or exceed the minimum 28-day compressive strength indicated.
 - b. Laboratory mix design strengths must exceed this strength by the appropriate amount per AC1-301.
 - c. Determine strength in accordance with ASTM C192 and ASTM C39.
 3. Dry Unit Weight:
 - a. If no value is listed, assume normal weight.
 - b. Dry unit weight of light weight mixes shall be maximum air dry unit weight permitted.
 - c. Correlate fresh weight with air dry weight of same mix to use as basis of acceptance on job site. Test in accordance with ASTM C567 and ASTM C138.
 - d. Dry unit weight for concrete for Radiation Shielding shall be minimum air dry unit weight permitted. Use heavy aggregate if necessary.
 4. Maximum Aggregate Size:
 - a. Maximum size of coarse aggregate determined in accordance with:
 - 1) ASTM C33 for normal weight concrete.
 - b. Some mixes are designated 3/4 IN or 1 IN, permitting contractor option.
 5. Air Content:
 - a. Required percentage of entrained and entrapped air as measured by ASTM C231, ASTM C173, or ASTM C138, as appropriate.
 - b. Tolerance of air content as delivered is +/- 1-1/2 percent for normal weight and +/- 2 percent for lightweight concrete.
 - c. When left blank, required air content is not specified.
 6. Water Reducer:
 - a. Mid Range Water Reducer or High Range Water Reducer shall be provided as necessary to achieve slump indicated.
 - b. Contractor, as option, may elect to use Water Reducers to improve workability or permit pumping.
 7. Maximum W/C Ratio:
 - a. Maximum ratio of pounds of water allowed to pounds of cementitious material used in the concrete mix.
 8. Slump:
 - a. Mixes without Water Reducers:
 - 1) Slump tolerance: Up to 1 IN above maximum indicated is allowed, provided the average of 5 consecutive batches does not exceed the indicated amount by more than a 1/2 IN.
 - b. Mixes with Water Reducers:

- 1) Slump indicated is after dosing.
 - 2) Slump tolerance after dosing: +1-1/2 IN and -1 IN is permitted for each batch.
 - c. Determine slump in accordance with ASTM C143.
 - d. Where slump is not specified, provide concrete with slump in accordance with approved mix designs
9. Cement:
- a. Type: Provide cement type indicated.
 - b. As option, the contractor/supplier may use Fly Ash or Ground Blast Furnace Slag for partial replacement of cement.
 - 1) For each unit of cement that is removed, replace with two units of Class F Fly Ash or one unit of Class C Fly Ash.
 - 2) For each unit of cement that is removed, replace with one unit of Ground Blast Furnace Slag.
 - 3) Maximum amount of cement replaced shall not exceed that specified in table 4.2.2.7.b.2 of ACI 301
 - 4) W/C ratio shall be based on total cementitious material content
- D. Admixtures:
1. Use admixtures in accordance with manufacturer's instructions.
 2. Use only approved admixtures.

PART 3 - EXECUTION

3.1 STORAGE OF MATERIALS

- A. Store cement in weather tight buildings, bins, or silos which will exclude moisture and contaminants.
- B. Arrange aggregate stockpiles and use in a manner to avoid excessive segregation and to prevent contamination with other materials or with other sizes of like aggregates.
 1. To insure that this condition is met, perform test for determining conformance to requirements for cleanliness and grading on samples secured from aggregates at point of batching.
 2. Do not use frozen or partially frozen aggregates.
- C. Allow sand to drain until it has reached relatively uniform moisture content before use.
- D. Store admixtures in manner to avoid contamination, evaporation, or damage.
 1. For those used in form of suspensions or non-stable solutions, provide agitating equipment to assure uniform distribution of ingredients.
 2. Protect liquid admixtures from freezing and temperature changes which would adversely affect their characteristics.

3.2 MIXING AND DELIVERY

- A. Batch, mix and transport concrete in accordance with ASTM C94.
- B. Batch and mix admixtures in accordance with manufacturer's instructions.
- C. Concrete shall have a slump of 2 to 4 IN when it arrives at job site.
 1. Water additions at job site shall be limited to comply with W/C Ratio requirements.
 2. Do not allow water to be added to the mix unless the amount allowed is clearly indicated on the truck delivery ticket.
- D. Following addition of High Range Water Reducer, mix for a minimum of 70 revolutions or 5 minutes to assure a consistent mixture.
- E. Reduction of required average strength:
 1. During construction, and after sufficient data becomes available, laboratory strength of mixes may be reduced in accordance with Section 3.11 of AC1-301, subject to approval by the Architect.

END OF SECTION

SECTION 03 31 10
CONCRETE MIXING, PLACING, JOINTING AND CURING

PART 1 - GENERAL

1.1 SUMMARY

- A. Furnish labor, materials, tools, equipment, and services for Concrete Mixing, Placing, Jointing and Curing as indicated, in accordance with provisions of Contract Documents.
- B. Completely coordinate with work of other trades.

1.2 QUALITY ASSURANCE

- A. Materials standards:
 - 1. ASTM C171 Standard Specification for Sheet Materials for Curing Concrete.
 - 2. ASTM C309 Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
 - 3. ASTM C1315 Standard Specification for Liquid Membrane Forming Curing Compounds Having Special Properties for Curing and Sealing Concrete.
- B. Production standards:
 - 1. ASTM C94 Standard Specification for Ready-mixed Concrete.
 - 2. ASTM C138 Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete.
 - 3. ACI 305.1 Hot Weather Concreting.
 - 4. ACI 306.1 Cold Weather Concreting.

1.3 SUBMITTALS

- A. Shop drawings:
 - 1. Placement plans: Indicate proposed locations of construction joints and placement sequence.
 - 2. Screeding and finishing plan.
- B. Product Data:
- C. Project information:
 - 1. Curing compound technical data.
 - 2. Waterstop technical data.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Strippable Curing Compound:
 - 1. Base:
 - a. Kurez DR VOX or Kurez W VOX by Euclid Chemical Company.
 - b. Horncure WB, Horncure WB 30 by Tamms.
 - c. SpecRez by SpecChem, LLC
- B. Chemical Curing Compound :
 - 1. Base:
 - a. L&M Construction Chemicals.
 - 2. Optional:
 - a. Dayton Superior.
 - b. Euclid.
 - c. Sonneborne.
 - d. WR Meadows.
 - e. SpecChem, LLC
- C. Curing Sheet Material
 - 1. Base

- a. Hydracure M5 by PNA Construction Technologies, Inc., Matthews,
 - b. Transguard 4000 by Reef Industries (Armorlon Division), Incorporated,
- D. Self-Expanding Rubber Strip Waterstops:
- 1. Base:
 - a. Greenstreak.
 - 2. Optional:
 - a. Progress Unlimited, Inc.
 - b. Deneef Construction Chemicals.
 - c. Adeka (Mitsubishi).
- E. Vapor Retarders: As noted.

2.2 MATERIALS

- A. Concrete materials and proportioning: See Section 03 31 00.
- B. Expansion joint filler, premolded: Type required, conforming to ASTM D1751 or ASTM D1752.
- C. Strippable Curing Compound:
- 1. Conform to ASTM C309 (Voc Compliant, 350 g/l).
 - 2. For use on slabs receiving subsequent applied finishes and where noted on the drawings.
 - 3. Install in strict accordance with the manufacturer's recommendation and supervision.
- D. Curing Sheet Material:
- 1. Provide where concrete is scheduled to be stained per section 09 67 75.
 - 2. Moisture-Retaining Cover Conforming to ASTM C171: Naturally colored, non-woven polypropylene fabric with a 4-mil non-perforated reflective (white) polyethylene coating.
 - 3. Fabric shall exhibit low permeability and high moisture retention.

2.3 WATERSTOPS

- A. Self-Expanding Rubber Strip Waterstops:
- 1. Bentonite-free hydrophilic polymer modified chloroprene rubber, suitable for adhesive bonding to concrete.
 - 2. Profile: Rectangular or trapezoidal strip unless otherwise indicated.
 - 3. Minimum Dimensions: 3/8 IN by 3/4 IN thick.
 - 4. Provide in maximum practicable length to minimize end joints.
 - 5. Butt splice joints at intersections and at ends of pieces in accordance with manufacturer's instructions.
 - a. Make joints to develop effective water tightness fully equal to that of continuous waterstop material, to permanently develop not less than 50 percent of mechanical strength of parent section, and permanently retain flexibility.
 - 6. Base Products: Hydrotite by Greenstreak; Ultra Seal by Adeka (Mitsubishi); Swellseal by Deneef Construction Chemicals; Superstop by Progress Unlimited, Inc

PART 3 - EXECUTION

3.1 MIXING AND PRODUCTION OF CONCRETE

- A. Batch, mix and transport ready-mixed concrete in accordance with ASTM C94.
- 1. Plant equipment and facilities shall conform to Check List for Certification of Ready Mixed Concrete Production Facilities of National Ready Mixed Concrete Association.
- B. Site batched and mixed concrete will be permitted only after ability to control quality has been demonstrated to satisfaction of Architect.

3.2 MIXING - CONTROL OF ADMIXTURES

- A. Admixtures shall be added in accordance with Manufacturers recommendations.
- B. If two or more admixtures are used, verify compatibility with manufacturers.

3.3 MIXING - TEMPERING AND CONTROL OF MIXING WATER

- A. Mix concrete only in quantities for immediate use. Discard concrete which has set.
- B. When concrete arrives at project with slump below that suitable for placing, water may be added only if neither maximum permissible water-cement ratio nor maximum slump is exceeded.
 - 1. Incorporate water by additional mixing equal to at least half of total mixing required.
 - 2. Do not add water after discharge commences

3.4 MIXING - WEATHER CONDITIONS

- A. Cold weather:
 - 1. Comply with ACI 306.
 - 2. In cold weather, temperature of concrete when delivered at site shall conform to following limitations:
 - 3. For sections with least dimension greater than 36 IN, comply with table 3.1 of ACI 306R

Minimum Concrete Temperature Required at Time of Pour		
Air Temperature @ time of pour	For sections with least dimension less than 12 IN	For sections with least dimension 12 IN to 36 IN
Above 30 DegF	60 DegF	55 DegF
0 to 30 DegF	65 DegF	60 DegF
Below 0 DegF	70 DegF	65 DegF

Minimum Concrete Temperature Required within 24 Hours of Pour		
Air Temp within 24 Hours of pour	For sections with least dimension less than 12 IN	For sections with least dimension 12 IN or greater
Below 32	60 DegF	50 DegF

- 4. If water or aggregate is heated above 100 DegF, combine water with aggregate in mixer before cement is added.
 - a. Do not mix cement with water or with mixtures of water and aggregate having a temperature greater than 100 DegF.
 - b. Final temperature of combined mix shall not exceed 90 DegF or be high enough to cause flash set or loss of slump or workability.

- B. Hot weather:
 - 1. Comply with ACI 305 if high temperature, low slump, flash set, or cold joints are encountered.
 - 2. Cool ingredients before mixing, or add flake ice or well-crushed ice of a size that will melt completely during mixing for all or part of mixing water. Account for water contribution by ice when calculating the quantity if mixing water and insure that specified W/C ration is not exceeded.

3.5 PREPARATION BEFORE PLACING

- A. Equipment:
 - 1. Remove hardened concrete and foreign material from inner surfaces of conveying equipment.
 - 2. Provide spare vibrator on job site during concrete placing operations.
 - 3. In cold weather, have protective blankets ready and heaters operational and in-place before placing concrete.
- B. Forms:
 - 1. Complete formwork: Remove frost, snow, ice, water and foreign material; secure reinforcement in place, position expansion joint material, anchors, and other embedded items and have entire preparation inspected prior to concrete placement.
 - 2. In hot weather when temperature of reinforcing or forms is greater than 120 degF spray forms and reinforcement with water just prior to placing concrete.
- C. Screeds and screed rails:
 - 1. General:
 - a. Develop a screed system to accurately strike off fresh concrete to the surfaces defined on drawings.
 - b. Anticipate deflection of formwork and support systems.

- 1) Provide and place extra concrete as necessary to produce finish surfaces with specified tolerances at designated elevations and contours at no additional cost to the Owner.
- c. When form work is cambered whether shored or un-shored and screeding is performed perpendicular (i.e., up and over) to crown of camber set screed rails to follow camber and provide a slab of uniform thickness.
 - 1) When screeding parallel with the camber set one screed at midspan along crown of camber and one along girder or support.
 - 2) Two passes of the screed is necessary to cover one full bay.
- d. Other screeding methods may be used provided deflection of un-shored formwork is taken into consideration.
- e. On unshored steel framing systems, accurately strike off concrete to produce a level surface after steel supporting system has deflected due to dead weight of fresh concrete.
- f. Slab thickness on cambered steel shall not be less than that indicated on plan.
- g. If not required in documents and subjected to approval of Architect, Contractor as option may camber formwork.
- h. All concrete shall be struck off with a vibrating screed.
- i. Use of a wet screed system will not be permitted unless:
 - 1) Concrete is struck with a pneumatically vibrated floater screed.
 - 2) A highway straight edge is used to true the surface perpendicular to direction of screeding.
 - 3) A satisfactory finish is produced on a trial slab.
- j. Submit a screeding and finishing plan for approval.
 - 1) A representative trial slab pour shall be provided to demonstrate that the specified tolerances and a satisfactory surface can be provided by the proposed method of screeding and finishing.

3.6 PROTECTION

- A. Unless adequate protection is provided and approval is obtained, do not place concrete when temperature is below freezing or during rain, sleet or snow.
- B. Do not allow rainwater to increase mixing water nor to damage surface finish.
- C. Concrete damaged by rain or weather and judged defective by Architect shall be removed and replaced by Contractor at no additional cost to Owner or corrected by procedures listed in Section 03 08 13 [Section 03 08 16].

3.7 CONVEYING

- A. Handle concrete from mixer to place of final deposit as rapidly as practicable by methods which prevent segregation or loss of ingredients and assure that quality is maintained.
- B. Use equipment conforming to ASTM C94.
- C. Use horizontal belt conveyors or mount at a slope which will not cause excessive segregation or loss of ingredients.
 1. Protect concrete against undue drying or rise in temperature.
 2. Handle to prevent segregation.
 3. Do not allow mortar to adhere to belt.
 4. Discharge long runs into a hopper or through a baffle.
- D. Use metal or metal-lined chutes with slope between 1 vertical and 2-3 horizontal.
 1. Chutes more than 20 FT long and chutes not meeting slope requirements may be used provided they discharge into a hopper before distribution.
- E. Pumping or pneumatic conveying equipment shall be of suitable kind with adequate pumping capacity.
 1. Control pneumatic placement so that segregation is not apparent in discharged concrete.
 2. Loss of slump in pumping or pneumatic conveying equipment shall not exceed 2 IN.
 3. Do not convey concrete through pipe made of aluminum or aluminum alloy.

3.8 DEPOSITING IN FORMS

- A. Work includes:
 1. Deposit concrete continuously or in layers of such thickness that no concrete is deposited on concrete which has hardened sufficiently to cause formation of seams or planes of weakness within section.
 2. Place at such a rate that concrete which is being integrated with fresh concrete is still plastic.
 3. Do not deposit concrete which has partially hardened or has been contaminated by foreign materials.

4. Remove temporary spreaders in forms when concrete placing has reached an elevation rendering their service unnecessary.
 5. They may remain embedded in concrete only if made of metal or concrete and if prior approval has been obtained.
- B. Do not start placing concrete in supported elements until concrete previously placed in columns and walls is no longer plastic and has been in place at least two hours.
- C. Deposit concrete as nearly as practicable in its final position to avoid segregation due to re-handling or flowing.
1. Do not subject concrete to procedure which will cause segregation.
 2. Concrete shall not drop more than 6 FT unless approved by the Architect/Engineer. For greater heights, provide special mix design, chutes, spouts, tremies, or other approved method.
- D. Concrete buckets shall be equipped with rubber discharge tubes.
1. Tube size shall be effective in directing flow of concrete directly downward between reinforcing.
 2. Unless it can be demonstrated, no segregation will occur with greater distances, maximum free fall distance of concrete below flexible tube is limited to 4 FT.
- E. Consolidation:
1. Consolidate concrete by vibration, so that concrete is thoroughly worked around reinforcement, around embedded items and into corners of forms eliminating air or stone pockets which may cause honeycombing, pitting, or planes of weakness.
 2. Use internal vibrators having a minimum frequency of 8000 vibrations per minute to consolidate concrete effectively.
 3. Do not use vibrators to transport concrete within forms.
 4. Insert vibrators and withdraw at points approximately 18 IN apart.
 5. At each insertion allow duration sufficient to consolidate concrete but not sufficient to cause segregation; generally from 5 to 15 sec.
 6. Where concrete is to have an as-cast finish, bring a full surface of mortar against form by vibration process, supplemented if necessary by spading, to work coarse aggregate back from formed surface.

3.9 SLAB PLACEMENT

- A. Coordinate mixing and placing with finishing.
1. Do not place concrete on subgrade or forms more rapidly than it can be spread, straight edged, and darbled or bull floated.
 2. Perform these operations before bleed water has an opportunity to collect on surface.
- B. To obtain good surfaces and avoid cold joints, plan size of finishing crews with due regard for effects of concrete temperature and atmospheric conditions on rate of hardening of concrete.
1. If construction joints become necessary, construct as required under joints and embedded items.
- C. Consolidation:
1. Thoroughly consolidate concrete in slabs.
 2. Use internal vibration in beams and girders of framed slabs and along bulkheads of slabs on grade.
 3. Obtain consolidation of slabs with vibrating screeds, roller pipe screeds, internal vibrators, or other approved means.

3.10 JOINTS AND EMBEDDED ITEMS

- A. Construction joints, other than slab on grade:
1. Locate joints not indicated so as to least impair strength of structure.
 - a. Place joints in locations approved by Architect/Engineer.
 2. In general, locate near middle of spans of slabs, beams, and girders unless a beam intersects a girder at this point, in which case, offset joint in girder a distance equal to twice width of beam.
 - a. Locate joints in walls and columns at underside of floors, slabs, beams, or girders and at tops of footings or floor slabs.
 - b. Place beams, girders, brackets, column capitals, haunches, and drop panels at same time as slabs.
 - c. Make joints perpendicular to main reinforcement.
 3. Continue reinforcement across joints.
 4. Clean surface of concrete at joints thoroughly and remove laitance.

- a. Prior to placing adjoining concrete, dampen (but do not saturate) hardened concrete of construction joints.
- B. Expansion joints:
 - 1. Do not permit reinforcement or other embedded metal items bonded to concrete, except dowels in floors bonded on only one side of joints, to extend continuously through expansion joint.
 - 2. Locate expansion joints as indicated.
- C. Place sleeves, inserts, anchors, and embedded items required for adjoining work or for its support, prior to placement of concrete.
 - 1. Give Contractors whose work is related to concrete or supported by it ample notice and opportunity to introduce and/or furnish embedded items before concrete placement.
 - 2. Position expansion joint material, waterstops, and other embedded items accurately and support against displacement.
 - 3. Fill voids in sleeves, inserts and anchor slots temporarily with readily removable material to prevent entry of concrete.

3.11 SLAB FINISHING

- A. See Section 03 35 00.

3.12 CURING AND PROTECTION

- A. Work includes: Beginning immediately after placement, protect concrete from premature drying, hot or cold temperatures, and mechanical injury, and maintain with minimal moisture loss at relatively constant temperature for period necessary for hydration and hardening of concrete. Materials and methods of curing subject to approval.
- B. Preservation of Moisture:
 - 1. Interior Slabs:
 - a. Application of sheet curing materials.
 - b. Application of strippable curing compound.
 - 1) Submit written approval from floor covering manufacturer prior to use.
 - 2) Apply in accord with recommendations of manufacturer immediately after water sheen, which may develop after finishing, has disappeared.
 - 3) Apply continuous film at manufacturer's specified rate.
 - 4) Completely remove prior to application of floor covering material.
 - 2. Other concrete surfaces not in contact with forms apply one of following procedures immediately after completion of placement and finishing:
 - a. Ponding or continuous sprinkling.
 - b. Application of absorptive mats or fabric kept continuously wet.
 - c. Application of sand kept continuously wet.
 - d. Continuous application of mist spray, not exceeding 150 degF.
 - e. Application of sheet curing materials.
 - f. Application of other moisture-retaining covering as approved.
 - g. Application of curing compound.
 - 1) Apply in accord with recommendations of manufacturer immediately after water sheen, which may develop after finishing, has disappeared.
 - 2) Apply continuous film at manufacturer's specified rate.
 - 3) Do not use on surface against which additional concrete or other material is to be bonded, unless it is proven that curing compound will not prevent bond or positive measures are taken to remove curing compound completely from areas to receive bonded applications.
 - 3. Minimize moisture loss from surfaces placed against wooden forms or metal forms exposed to heating by sun by keeping forms wet until they can be safely removed.
 - a. After form removal cure concrete until end of time prescribed.
 - 4. Continue curing in accordance with ACI 318. Seven days for most concrete.
 - a. If tests made of cylinders, kept adjacent to structure and cured by same methods, indicate average compressive strength has reached 70 percent of specified strength, (f_c'), moisture retention methods may be terminated.

- b. If one of curing procedures indicated above is used initially, it may be replaced by one of other procedures indicated any time after concrete is 1 day old, provided concrete is not permitted to become surface dry during transition.
- C. Temperature, wind and humidity:
- 1. Cold weather:
 - a. When mean daily outdoor temperature is less than 40 degF maintain temperature of concrete between 50 and 70 degF for required curing period.
 - b. When necessary make arrangements for heating, covering, insulating, or housing concrete work adequate to maintain required temperature without injury.
 - c. Do not use combustion heaters during first 24 hours unless precautions are taken to prevent exposure of concrete to exhaust gases which contain carbon dioxide.
 - 2. Hot weather:
 - a. When necessary make provision for windbreaks, shading, fog spraying, sprinkling, ponding, or wet covering with a light colored material.
 - b. Take such protective measures as quickly as concrete hardening and finishing operations will allow.
 - 3. Rate of temperature change:
 - a. Keep changes in temperature of air immediately adjacent to concrete during and immediately following curing period as uniform as possible.
 - b. Do not exceed 5 degF in any 1 hour or 50 degF in any 24-hour period.
- D. Protection from mechanical injury:
- 1. During curing period, protect concrete from damaging mechanical disturbances, such as load stresses, heavy shock, and excessive vibration.
 - 2. Protect finished concrete surfaces from damage by construction equipment, materials, or methods, and by rain or running water.
 - 3. Do not load self-supporting structures in such a way as to overstress concrete.
- E. Protection of slabs-on-grade from frost:
- 1. Interior slabs exposed to freezing temperatures shall be adequately protected so that frost does not develop in supporting subgrade.
- 3.13 ELEVATOR DOOR FRAMES
- A. Elevator Door Frames in concrete shafts:
- 1. Block-out as required by Elevator Manufacturer to allow for door frames to be set.
 - 2. After door frames have been set, set forms across void between frame and edge of block-out.
 - 3. Fill in with concrete fill.

END OF SECTION

SECTION 03 33 00
ARCHITECTURAL CAST-IN-PLACE (ACIP) CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

- A. Furnish labor, materials, tools, equipment, and services for Architectural Cast-In-Place (ACIP) Concrete, as indicated, in accordance with provisions of Contract Documents.
- B. Completely coordinate with work of other trades.

1.2 QUALITY ASSURANCE

- A. Requirements of this section shall augment general requirements specified in Section 03 11 00, Section 03 20 00, Section 03 31 00, Section 03 31 10 and Section 03 35 00.
- B. Testing:
 - 1. See Section 03 08 16.
- C. Design Reference Sample:
 - 1. Definition: Sample of approved ACIP color, finish and texture, pre-approved by Architect.

1.3 SUBMITTALS

- A. Shop Drawings:
 - 1. Shop drawings of forms for exposed surfaces showing surface details, jointing of facing panels, locations of form ties, and any necessary alignment bracing.
- B. Samples:
 - 1. Sample:
 - a. Purpose: For pre-selection of colors and textures:
 - b. Minimum Size: 18 IN x 18 IN.

PART 2 - PRODUCTS

2.1 CONCRETE MATERIAL

- A. General:
 - 1. Refer to Section 03 31 00 for general requirements and material quality standards.
 - 2. Comply with following additional requirements listed below.
- B. Portland Cement:
 - 1. Color:
 - a. As necessary to reproduce coloration of Design Reference Sample.
- C. Supplementary Cementitious Materials:
 - 1. Fly ash, silica fume and ground slag: Not permitted in ACIP mixes.
- D. Aggregates:
 - 1. Normal weight, ASTM C33, aggregates for ACIP concrete.
 - a. Lightweight aggregates, ASTM C330, are not allowed for ACIP.
 - 2. Stockpile aggregates for each type exposed finish from a single source for entire project.
 - 3. Color:
 - a. To match selected Design Reference Sample.

2.2 REINFORCING MATERIALS

- A. Reinforcement:
 - 1. See Section 03 20 00.

2.3 CLEANING MATERIALS

- A. Cleaning Products:
 - 1. Per selected product recommendation.

2.4 MIXES

- A. General:
 - 1. See Section 03 31 00 for general requirements.
 - 2. Comply with the following additional requirements listed below.
- B. Mixing:
 - 1. Use same mixture proportions throughout.
 - 2. Avoid volumetric changes in material proportions from batch to batch.
 - 3. Use only:
 - a. One type and brand of cement from same mill.
 - b. One source and maximum size of coarse aggregate.
 - c. One source of fine aggregate.
 - d. One placing process.
- C. Air-entrain Architectural CIP Concrete scheduled for exterior exposure.
 - 1. Maximum water-cement ratio: 0.46 by weight.
- D. Uniformity of final surfaces:
 - 1. Maintain designated colors and uniformity of color.

2.5 FORM MATERIALS

- A. General:
 - 1. See Section 03 11 00 for general requirements.
 - 2. Comply with the following additional requirements listed below.
- B. Form Ties
 - 1. Material: Stainless steel snap ties.
- C. Form Sealants:
 - 1. Use non-staining type sealant.
- D. Form Facing Materials:
 - 1. As required to reproduce finish on Design Reference Sample.
 - 2. Smooth rubbed finish:
 - a. Use smooth forms, liner sheets, or prefabricated panels, true to line, in order that surfaces produced will require little dressing to arrive at true surfaces.

2.6 FABRICATION - FORMS

- A. See Section 03 11 00 for general requirements.
- B. Design forms to produce required finish or finishes.
- C. Limit deflection of facing materials between studs as well as deflection of studs and walers to 0.0025 times span, or as otherwise indicated.
- D. Design forms to permit easy removal.
- E. Use only wooden wedges.
- F. Secure liner panels in forms by cementing or stapling, but not by methods which will permit impressions of nail heads, screw heads, washers, or like to be imparted to surface of concrete.
- G. Seal edges of liner panels to prevent bleeding of grout.
- H. Architectural Rustication Joints:
 - 1. Include items in formwork to create rustication joints where indicated.
 - 2. Size, location, and profile as indicated.

PART 3 - EXECUTION

3.1 FORM WORK

- A. Do not reuse forms if there is any evidence of surface wear or defect which would impair quality of surface.
- B. Thoroughly clean and properly coat forms before reuse.
- C. Observe formwork continuously while concrete is being placed to see there are no deviations from desired elevation, alignment, plumb, or camber.
- D. If weakness develops and false work shows undue settlement or distortion, stop work and remove affected construction if permanently damaged.
- E. Strengthen false work.

3.2 PLACING OF CONCRETE

- A. Comply with general requirements specified in Section 03 31 10.
- B. Where a smooth rubbed or similar finish is required, work coarse aggregate back from forms, leaving a full surface of mortar avoiding production of surface voids.
- C. Do not allow vibrators to contact formwork for exposed concrete surfaces.
- D. Consolidate concrete by vibrating the forms or by other approved methods that produce an acceptable finish.

3.3 REMOVAL OF FORMS

- A. Comply with general requirements specified in Section 03 31 10.
- B. Do not pry against face of concrete.
- C. Repair finish defects including form seam marks, fins, projections, large air bubbles, bug-holes etc.

3.4 FINISHES

- A. General:
 - 1. Comply with general requirements specified in Section 03 35 00.
 - 2. Finished faces: Free of joint marks, grain, and other obvious defects.
 - 3. Corners, including rustication joints: Uniform, straight and sharp.
- B. Exposed Face and Edge Surfaces:
 - 1. Match colors and textures of Design Reference Sample.
 - 2. Exposed Aggregate Finish, retarded:
 - a. Use chemical retarding agents applied to concrete forms and washing and brushing procedures to expose aggregate and surrounding matrix surfaces after form removal.

3.5 PATCHING FINISHES

- A. General:
 - 1. Total patched area may not exceed 1 in 500 of surface.
 - a. This is in addition to form tie patches, if ties are permitted to fall within as-cast areas.
 - 2. Closely match color and texture of surrounding surfaces.
 - a. Determine mix formula for patching mortar by trial to obtain color match with concrete when both patch and concrete are cured and dry.
 - b. After initial set, dress surfaces of patches manually to obtain same texture as surrounding surfaces.

3.6 CURING PATCHES

- A. Cure patches in architectural concrete surface for 7 days.
 - 1. Protect from premature drying.

END OF SECTION

SECTION 03 35 00
CONCRETE FINISHING AND REPAIR OF SURFACE DEFECTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Furnish labor, materials, tools, equipment, and services for Concrete Finishing and Repair of Surface Defects, as indicated, in accordance with provisions of Contract Documents.
- B. Completely coordinate with work of other trades.

1.2 QUALITY ASSURANCE

- A. Floor finish tolerances:
 - 1. Follow F-Number System as defined in ASTM E1155.
 - a. Floor Flatness F-Number: F_F defines maximum floor curvature allowed over 24 IN computed on basis of successive 12 IN elevation differentials.
 - b. Floor Levelness F-Number: F_L defines relative conformity of floor surface to a horizontal plane measured over a 10 FT distance.
 - c. Above number pair to be stated in form: F_F/F_L .
 - d. Specified overall value is enumerated and is based on composite of measured values in a placement.
 - e. Minimum local value (MLV) describes flatness or levelness below which repair or replacement is required. MLV is based on individual placement and applies to minimum local area not crossing construction or control joints.
- B. Trial concrete panels:
 - 1. Provide trial panels to permit evaluation of finishing properties and appearance of concrete proposed for use.
 - 2. Panels size: 8 x 8 FT, of specified thickness, and made with specified materials and proportions, using equipment and personnel comparable to those employed on work.
 - 3. Demonstrate concrete capable of being finished at a slump not exceeding that specified.
 - 4. Construct panels and secure approval prior to proceeding with finish in specified location.
 - 5. Approved panels shall serve as standards by which corresponding finishes in structure will be accepted or rejected.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Bonding agent: Approximately one (1) part Portland cement to one (1) part fine sand passing a No.30 mesh sieve. Mix to consistency of thick cream.
- B. Patching compound: Same materials and approximately same proportions as used for concrete, except omit coarse aggregate. Shall consist of not more than one (1) part Portland cement to two and one half (2-1/2) parts sand loose volume. For exposed concrete, part of Portland cement shall be white to produce a color matching color of surrounding concrete, as determined by a trial patch. Add no more water than necessary for handling and placing. Mix compound in advance and allow to stand with frequent manipulation, without addition of water, until it has reached stiffest consistency that will permit placing.
- C. Grout for grout cleaned rubbed finish: Mix one (1) part Portland cement and one and one-half (1-1/2) parts fine sand with sufficient water to produce a grout with a consistency of thick paint.
- D. Grout for cork floated rubbed finish: Mix one (1) part Portland cement and one (1) part fine sand with sufficient water to produce a stiff grout.
- E. Proprietary materials: At Contractor's option, proprietary compounds for adhesion, patching, or finishing may be used in lieu of or in addition to foregoing grouts. Use such compounds in accordance with manufacturer's recommendations.

- F. Chemical hardener:
 - 1. Base manufacturer:
 - a. BASF Chemical.
 - 2. Optional manufacturer:
 - a. SpecChem,LLC
 - 3. Other manufacturers desiring approval comply with Section 00 26 00.

PART 3 - EXECUTION

3.1 FINISHING - GENERAL

- A. After removal of forms, repair and give surfaces of concrete finishes indicated.
 - 1. Top surface of slabs not included.
- B. Unspecified finish: If finish is not designated, use following finishes as applicable:
 - 1. Unpainted concrete surfaces not exposed to public view: Rough form finish.
 - 2. Unpainted concrete surfaces exposed to public view: Smooth form finish.
 - 3. Concrete surfaces to receive paint: Grout cleaned rubbed finish.
 - 4. Unformed surfaces (except slabs): As indicated.
 - 5. Concrete surfaces to be waterproofed in Section 07 14 13.

3.2 REPAIR OF SURFACE DEFECTS

- A. Repair surface defects immediately after form removal. Remove honeycombed and other defective concrete down to sound concrete. Chip if necessary to make edges perpendicular to surface or slightly undercut. No feather edges will be permitted. Dampen area to be patched and an area at least 6 IN wide surrounding it to prevent absorption of water from patching compound. After surface water has evaporated from area to be patched, brush bonding agent into surface. When bonding agent begins to lose water sheen, apply patching compound. Thoroughly consolidate compound into place and strike off so as to leave patch slightly higher than surrounding surface. To permit initial shrinkage, leave undisturbed for at least 1 HR before final finish. Keep patched area damp for 7 days. Do not use metal tools in finishing a patch which will be exposed.
- B. Tie holes: Unless stainless steel, non-corrosive, or acceptably coated ties are used, tie holes shall be filled. Clean and thoroughly dampen tie holes; fill solid with patching compound.

3.3 AS-CAST FINISHES

- A. Rough form finish: No selected form facing materials are specified for rough form finish surfaces. Concrete surfaces must conform to tolerances in Section 03 11 00 Concrete Formwork. Patch defects and tie holes. Chip or rub off fins exceeding 1/4 IN in height. Otherwise, leave surfaces with texture imparted by forms.
- B. Smooth form finish: Use form facing material to produce a smooth, hard, uniform texture on concrete. It may be plastic coated plywood, metal, plastic liners, or other approved material capable of producing desired finish. Arrange facing material orderly and symmetrical, with number of seams kept to practical minimum. Support by studs or other backing capable of preventing excessive deflection. Do not use material with raised grain, patches, or other defects which will impair texture of concrete surface.
 - 1. Patch tie holes and defects. Remove fins completely.
 - 2. When surface texture is impaired and form joints misaligned by more than 1/8 IN grind bushhammer, or correct affected concrete as directed by Architect. Slurry grout areas evidencing minor mortar leakage to match adjacent concrete. Repair major mortar leakage as a defective area.
- C. Special architecture finish: Produce finish in accord with requirements of Section 03 33 00, Architectural Concrete.
- D. Finishing of related unformed surfaces: (Except Slabs).
 - 1. Strike smooth tops of walls or buttresses, horizontal offsets, and similar unformed surfaces occurring adjacent to formed surfaces after concrete is placed.
 - 2. Float to a texture reasonably consistent with that of formed surfaces.
 - 3. Continue final treatment on formed surfaces uniformly across unformed surfaces.

3.4 RUBBED FINISHES

- A. General: Form and repair concrete surfaces to receive rubbed finishes, in accordance with requirements for smooth form finish. Remove forms and perform necessary patching as soon after placement as possible without jeopardizing structure.
- B. Smooth: Produce smooth rubbed finish on newly hardened concrete no later than day following form removal. Wet surfaces and rub with carborundum brick or other abrasive until uniform color and texture are produced. Use no cement grout other than cement paste drawn from concrete itself by rubbing process.
- C. Grout cleaned: Undertake no cleaning operations until contiguous surfaces are completed and accessible. Wet surface of concrete sufficiently to prevent absorption of water from grout and apply grout uniformly. Immediately after applying grout, scrub surface vigorously with a cork float or stone to coat surface and fill air bubbles and holes. While grout is still plastic, remove excess grout by working surface with a rubber float, sack, or other means. After surface whitens from drying, rub vigorously with clean burlap. Keep finish damp for at least 36 hours after final rubbing.
- D. Cork floated: Remove forms at an early stage, within 2 to 3 days of placement where possible. Remove ties. Remove burrs and fins. Dampen wall surface. Apply grout with firm rubber float or with trowel, filling surface voids. Compress grout into voids. If grout surface dries too rapidly to permit proper compaction and finishing, apply a small amount of water with a fog sprayer. Produce final texture with a cork float using a swirling motion.

3.5 SLAB FINISHING

- A. General:
 - 1. Place slabs to finish tolerances specified.
 - 2. Slab finish: Use following finishes at building locations noted.
 - a. Floated finish (magnesium):
 - 1) Surfaces intended to receive roofing, waterproofing membranes.
 - b. Broom or Belt finish: Access bridge.
 - c. Non-slip finish (interior and exterior): Ramps, docks, stairs specifically noted on drawings.
- B. Finishing tolerances:
 - 1. For shored construction, measurements for conformance with finishing tolerances shall be made as soon as slab can tolerate foot traffic, and before shores are removed.
 - 2. The FI levelness tolerance is not applicable to unshored form work such as cast in place topping on prestressed tees, slabs on unshored steel and metal deck, or unshored-postensioned slabs on steel beams.
 - 3. Horizontal finishes will be accepted provided:
 - a. Applicable specification requirements are satisfied.
 - b. Water does not pond in areas sloped to drain.
 - c. Floor finish tolerances Ff/FI conforms to that specified for particular finish and minimum local valves are not less than 75 percent of the floor finish tolerance specified.
 - 4. Accumulated deviation from intended true plane of finished surface does not exceed 1 IN.
 - 5. Accuracy of floor finish does not adversely affect installation and operation of movable equipment, floor supported items or items fitted to floor (doors, tracks, etc.).
- C. Finishes:
 - 1. Broom or belt finish: Immediately after concrete has received float finish, give it a coarse scored texture by drawing a broom or burlap belt across surface transverse to slope or traffic flow.
 - 2. Non-slip slab finish:
 - a. Aggregate: Crushed ceramically bonded aluminum oxide particles. Apply at 25 LB per 100 SF.
 - b. Blend aggregate with Portland cement in proportions recommended by manufacturer of aggregate.
 - c. Give surface a float finish.
 - d. Apply approximately two-thirds of blended material for required coverage to surface by a method that ensures even coverage without segregation. Begin floating immediately.
 - e. After material has been embedded by floating, apply remainder of blended material to surface at right angles to previous application. Make second application heavier in areas not sufficiently covered by first application. Follow with second floating immediately.
 - f. After selected material has been embedded by two floatings, complete operation with a broomed finish.

END OF SECTION

SECTION 05 12 10
STRUCTURAL STEEL

PART 1 - GENERAL

1.1 SUMMARY

- A. Furnish labor, materials, tools, equipment, and services for Structural Steel, as indicated, in accordance with provisions of Contract Documents.
- B. Completely coordinate with work of other trades.

1.2 QUALITY ASSURANCE

- A. Structural steel work covered herein shall be fabrication and erection of steel framing and bracing members including connections and steel material either supporting or connected to steel members shown on structural plans and not specified in other sections.
- B. Quality standards latest edition of the following standards plus any corresponding published revisions at the time of bidding shall be the applicable standard. The Local Building Code shall govern when conflicts occur.
 - 1. Local Building Code.
 - 2. American Institute of Steel Construction (AISC):
 - a. ANSI/AISC 360 "Specification for Structural Steel Buildings" (referred to herein as the AISC Specification).
 - b. Code of Standard Practice for Steel Buildings and Bridges (referred to as AISC Code of Standard Practice).
 - c. Quality Certification Program.
 - 3. American Welding Society:
 - a. Structural Welding Code - Steel ANSI/AWS-D1.1 (referred to herein as the AWS Code). The AWS Code shall govern the techniques and quality of welding and testing procedures. Statements contained in the AWS Code requiring information to Bidders and/or Contract Documents to define nondestructive testing or statements defining responsibilities and obligations for services and payment shall be disregarded.
 - 4. Research Council on Structural Connections: "Specifications for Structural Joints Using High Strength Bolts" (referred to herein as the RCSC Specification).
 - 5. Steel Structures Painting Council (SSPC): Steel Structures Painting Manual Vol. 2, "System and Specifications" (referred to herein as the SSPC Specification).
- C. Qualifications:
 - 1. Steel fabricator:
 - a. Certified by AISC Quality Certification Program for Structural Steel Fabricators and is designated as AISC Certified Fabricator, Standard for Steel Building Structures.
 - b. Fabricators not certified shall have minimum 10 years experience and shall employ an approved testing agency to inspect fabrication work performed off site. The testing agency shall furnish weekly inspection reports and a final report to the Building Official and the Architect certifying the work was performed in accordance with the specifications and approved shop drawings. The testing agency will inspect shop welding in accordance with Section 6 of the AWS code. The testing agency will also perform the following inspections:
 - 1) Test 10 percent of fillet welds with liquid dye penetrant.
 - 2) Test 100 percent of full penetration welds and partial penetration welds with ultrasonic, radiographic, or magnetic particle testing.
 - 3) Inspect high strength bolting in accordance with section 6 of specification for structural joints.
 - 4) Inspect stud welding in accordance with AWS code.
 - 5) Check 10 percent of members fabricated to verify they meet the dimensional tolerances specified in this Section.
 - 2. Steel erector:
 - a. Minimum 10 years experience in erection of structural steel.
 - b. Certified as Certified Steel Erector by AISC quality Certification Program.
 - 3. Certification by other equivalent programs subject to approval of the Structural Engineer.
- D. Source quality control:
 - 1. Provide access and facilities for testing agency during shop and field inspections.

- E. Testing and inspection: Testing, (except testing to qualify welders and as needed for Contractor's own quality control), will be performed at no cost to Contractor by a Testing/Inspection Agency employed by Owner. Owner's Testing/Inspection Agency may use nondestructive testing methods in addition to visual inspection to verify weld quality. Repair rejected welds as directed by Testing/ Inspection Agency at no additional cost to Owner.
- F. Provide testing and inspection agency with sufficient notification and access so that inspection and testing can be accomplished.
- G. Previous acceptance of material or finished members by testing and inspection agency or Architect/Engineer shall not prevent its rejection at later date if it does not comply with specifications.
- H. Tolerances:
 - 1. Rolling: ASTM-A6.
 - 2. Fabrication and Erection tolerances: AISC Code of Standard Practice.

1.3 SUBMITTALS

- A. Shop Drawings:
 - 1. Indicate details including cuts, copes, connections, holes and welds. Indicate shop and field welds using AWS symbols. Indicate connections where high strength bolts are required.
 - 2. Headed stud placement drawings.
- B. Product Data:
 - 1. Source and certification of quality for high-strength bolts, nuts and washers.
 - 2. Technical data on base plate grout.
- C. Project Information:
 - 1. Fabricator's AISC Certification or name of independent testing agency for use by non-certified fabricator along with proof that fabricator has 10 years experience in fabrication of structural steel for buildings.
 - 2. Inspection reports and certification of shop fabrication by independent testing laboratory for non-certified fabricator.
 - 3. Steel erector's AISC Certification or proof that steel erector has 10 years experience in erection of structural steel.
 - 4. Connection design calculations.
 - 5. Welding Procedure Specification (WPS) for shop and field welds.
- D. Contract closeout information:
 - 1. Certificate by fabricator that steel was fabricated in accordance with the approved construction documents.
 - 2. Certificate by erector that steel was erected in accordance with the approved erection plans and specifications.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Steel, structural "W" shapes and tee's: ASTM A992 (50 ksi yield point).
- B. Other steel shapes and plate: ASTM A36.
- C. Pipe round: ASTM A53, Grade-B.
- D. Tubing square or rectangular: ASTM A500, Grade-B (317 MPa 46 KSI minimum).
- E. Bolts, nuts, and washers, high-strength. Conform to RCSC Specification
 - 1. Twist off style, conform to ASTM F1852
 - a. Approved bolts:
 - 1) Tension control bolt by LeJeune Bolt Company, Burnsville, MN.
 - 2) Tru-Tension Fasteners by Nucor Fastener a Division of Nucor Corporation, St. Joe, Indiana.
 - 3) Lohr Fasteners by Lohr Structural Fasteners, Humble, TX.
- F. Bolts, nuts and washers, standard strength:
 - 1. Bolts: ASTM A307, Type A.
 - 2. Nuts: ASTM A563.
 - 3. Washers plain: ANSI/ASME-B18.22.1.

- G. Anchor bolts, high-strength:
 - 1. Bolts or rod for threading: ASTM F1554-105 ksi. meeting supplementary requirement S4. Pretension to load indicated on plans.
 - 2. Nuts, heavy hex: ASTM-A563.
 - a. Up to 1 1/2 IN diameter: Grade D hex
 - b. Over 1-1/2 IN diameter: grade DH Heavy Hex.
 - 3. Washers:
 - a. Hardened Steel: ASTM F436 type 1
 - b. Load indicator type: Direct Tension Indicating Washers as manufactured by TurnaSure LLC of Langhorne, PA or approved equal, Install per manufacturers recommendations
 - 4. Thread tolerance: ANSI/ASME-B18.1, Class 2A.
- H. Anchor bolts, standard strength:
 - 1. Bolts or rod for threading: ASTM A36 or ASTM F1554-36 ksi.
 - 2. Nuts and washers:
 - a. Nuts: ASTM A563.
 - b. Washers plain: ANSI/ASME-B18.22.1.
 - 3. Thread tolerance: ANSI/ASME-B18.1, Class 2A.
- I. Welding electrodes:
 - 1. Shielded metal-arc: AWS A5.1 or AWS A5.5, E70XX
 - 2. Submerged-arc: AWS A5.17 or A5.23, F7X-EXXX.
 - 3. Gas metal-arc: AWS A5.18, ER70S-X.
 - 4. Flux cored-arc: AWS A5.20, E70T-X (except 2, 3, 10, GS).
- J. Headed studs and deformed bar anchors:
 - 1. Headed studs (HS)
 - a. Fabricated form cold drawn bar stock conforming to ASTM A 108, grades 1010 through 1020.
 - b. AWS D1.1 type B.
 - c. Minimum Yield strength: 51 ksi.
 - d. Minimum tensile strength: 65 ksi over 3/8 IN diameter.
 - e. Minimum tensile strength: 55 ksi 3/8 IN diameter and under.
 - 2. Deformed anchor bars (DBA): Straight, unless otherwise indicated.
 - a. ASTM A496.
 - b. Minimum yield strength: 70 ksi.
 - c. Minimum tensile strength: 80 ksi.
- K. Grout: Pourable.
 - 1. "Duragrout" as manufactured by L&M Construction Chemicals, or equal.
 - 2. Minimum Strength : 4000 PSI at 7 days and 8000 PSI at 28 days.
- L. Expansion anchors:
 - 1. Expansion anchors shall be a single-end expansion shield anchor which complies with the descriptive part of Federal Specification FF-S325, Group II, Type 4, Class 1 for concrete expansion anchors. Anchors shall be Hilti Kwik Bolt TZ Expansion anchor by Hilti fastening systems of Tulsa, OK (ICC Report No. ESR-1917) or equal.
- M. Adhesive anchors:
 - 1. Threaded rods, bolts, etc., indicated as adhesive anchors into concrete or solid masonry:
 - a. HIT HY-150 MAX - SD adhesive by Hilti Fastening Systems of Tulsa, OK (ICC Report No. ESR-3013) or equal.
 - b. Unless indicated otherwise, adhesive anchor bolt shall conform to HAS - E Standard ISO Class 5.8 by Hilti or equal. Do not field cut rods without engineer's approval.

2.2 FABRICATION

- A. General:
 - 1. Fabricate and assemble material in shop to greatest extent possible.
 - 2. Use A325 bolts, twist-off type, unless otherwise indicated.
 - 3. One sided or other types of eccentric connections not indicated, will not be permitted without prior approval.
 - 4. Bevels for field welds may be flame cut provided such cutting is done automatically. Leave free of burrs and slag.
 - 5. Grind flush web fillets at webs notched to receive backup plates for flange groove welds.
 - 6. Flame cut edges of stiffener plates at field or shop butt welds. Do not shear.

7. Cut, drill, or punch holes at right angles to surface of metal.
 - a. Do not make or enlarge holes by burning.
 - b. Make holes clean cut, without torn or ragged edges.
 - c. Remove outside burrs resulting from drilling or reaming operations with tool making 1.6 mm 1/16 IN bevel.
 - d. Provide holes in members to permit connection of work of other trades.
 8. Make splices only as indicated.
 9. Headed stud type shear connectors (H.S.) and deformed bar anchors (D.B.A.), on Drawings: Automatically end welded in accordance with AWS Code.
 - a. When headed stud type shear connectors are to be either shop or field applied, clean top surface of beam flanges in shop to remove oil, scale, rust, dirt and other materials injurious to satisfactory welding.
 - b. Fillet welding of headed studs and deformed anchors is not allowed without prior approval.
 - c. Do not weld studs when temperature is below -18 degC 0 degF or surface is wet with rain or snow.
 - d. After welding, remove ceramic ferrules and maintain clean and free from substances which would interfere with function as anchor or bond of deformed anchor bars.
 - e. Quality control: Weld minimum of 2 studs at start of each production period to determine proper generator, control unit, and stud welder settings.
 - 1) These studs shall be capable of being bent 45 degrees from vertical without weld failure. These studs shall not be included as a part of the required construction.
 - 2) All production studs shall be sounded by a sharp blow with a hammer.
 - 3) If, after welding, a stud does not ring when struck by a hammer or visual inspection reveals that sound weld or full 360 degree fillet has not been obtained for a particular stud, that stud shall be struck with hammer and bent approximately 15 degrees off perpendicular to nearest end of beam.
 - 4) Studs meeting this test shall be considered acceptable and shall be left in this position.
 - 5) Studs bent beyond 15 degrees shall be considered ineffective and replaced.
 - 6) Studs failing under this test shall be replaced.
- B. Welding:
1. Welding, techniques of welding employed, appearance and quality of welds, and methods used to correct defective work shall comply with AWS Code, and requirements indicated.
 2. Test and qualify welding operators and tackers in compliance with AWS Code for position and type of welding to which they will be assigned.
 - a. Conduct tests in presence of approved testing agency.
 - b. Certification within last 12 months from a welding inspector will be acceptable provided samples of welder's work are satisfactory.
 - c. At discretion of testing agency, shop personnel continuously employed at welding process for which they have been qualified may be accepted from older qualification tests.
 3. Qualify joint welding procedures or test in accordance with AWS qualification procedures.
 4. Before start of welding work, meet with testing agency and welders to review and verify procedures.
 5. Comply with AWS Code to minimize shrinkage and distortion stress.
 6. Use back-up plates in accordance with AWS Code, extending minimum of 25 mm 1 IN either side of joint.
 7. Make flange welds before making web welds.
 8. For manual shielded metal-arc welding: Comply with Article 4.6 of AWS Code.
 9. Low hydrogen electrodes: Dry and store electrodes in compliance with AWS Code.
 10. Do not perform welding when ambient temperature is lower than -18 degC 0 degF, or where surfaces are wet or exposed to rain, snow, or high wind, or when welders are exposed to inclement conditions.
 11. Before starting welding:
 - a. Carefully plumb and align members.
 - b. Fully tighten bolts.
 - c. Assembly and surface preparation shall comply with AWS Code.
 - d. Preheat base metal to temperature stated in AWS Code.
 - 1) When no preheat temperature is given and base metal is below 0 degC 32 degF, preheat base metal to at least 21 degC 70 degF.
 - 2) Maintain temperature during welding.
 - 3) Preheating shall bring surface of base metal within distance from point of welding equal to thickness of thicker part being welded or 75 mm 3 IN, whichever is greater, to specified preheat temperature.
 - 4) Maintain this temperature during welding.
 - e. Each welder is to provide identifying mark at welds worked on.

2.3 SURFACE PREPARATION AND SHOP-APPLIED COATINGS

- A. Surfaces not to be coated:
 - 1. Do not coat following surfaces:
 - a. Surfaces to be fireproofed with spray-on material.
 - b. Machined surfaces, surfaces adjacent to field welds, contact surfaces of bolt connections where connection is specified as slip critical, and top of top flanges of beams.
 - c. Other members for which no coating is specified.
 - 2. Clean thoroughly before shipping; remove loose mill scale, rust, dirt, oil and grease.
- B. Hot-dip Galvanized (HDG) members:
 - 1. Galvanize following members:
 - a. Members set in, or in contact with, exterior surface material, including:
 - 1) Brick ledge angles.
 - 2) Embedded items in exterior surfaces.
 - b. Exterior exposed structure not indicated to be shop otherwise shop finished.
 - c. Other members indicated.
 - 2. Clean thoroughly before galvanizing.
 - 3. Galvanize in accordance with ASTM A123.
- C. Exterior Surfaces to be shop-primed for finish paint:
 - 1. Primer: As recommended by finish (top) coat manufacturer for substrate.

PART 3 - EXECUTION

3.1 ERECTION

- A. Safety:
 - 1. Contractor is solely responsible for safety. Construction means and methods and sequencing of work is the prerogative of the Contractor.
- B. Capacity of partially complete construction:
 - 1. Consider that full structural capacity of many structural members is not realized until structural assembly is complete; That is, until slabs, decks and diagonal braces are installed. Partially complete structural members shall not be loaded out of sequence without an investigation.
 - 2. Until elements of the permanent lateral bracing system of the structure are complete, temporary lateral bracing for the partially complete structure will be required.
- C. Temporary bracing:
 - 1. Adequate temporary bracing to provide stability and resist loads to which the partially complete structure may be subjected to including construction activities and operation of equipment is the responsibility of the Contractor.
 - 2. If not obvious from the drawings, confer with the Architect to identify those structural elements that must be complete before the structure's permanent lateral bracing system is effective. The design of the temporary bracing system must consider the sequence and schedule of placement of such elements and effects of loads imposed on the structural steel frame by partially or completely installed work of other trades. Do not remove temporary bracing until the permanent lateral bracing system is effective.
- D. General:
 - 1. Set base and bearing plates accurately and grout immediately as indicated.
 - a. Use metal wedges, shims or setting nuts as required.
 - b. Pack grout solidly between plate and bearing surface.
 - 2. Clean bearing and contact surfaces before assembly.
- E. Field weld as specified in paragraph "Welding."
- F. Do not use gas cutting to correct fabrication errors on major members.
 - 1. Gas cutting on minor members may be permitted when members are not loaded, only after approval by Architect.
- G. Tighten and leave in place erection bolts used in welded construction.
- H. Provide beveled washers to give full bearing to bolt head or nut where bolts are to be used on surfaces having slopes greater than 1:20 with a plane normal to bolt axis.
- I. After installation, touch up damaged or abraded areas of primed steel using same materials used for shop priming.

1. Clean field welds, bolted connections and abraded areas before touching up.
- J. After installation, repair galvanized surfaces damaged or abraded using zinc rich paint in accordance with ASTM A780.
1. Surfaces to be repaired with paint containing zinc dust shall be clean, dry, and free of oil, grease, preexisting paint, corrosion, and / or rust.
 2. Surfaces to be repaired shall be blast cleaned to the requirements of SPC SP10 (near white). Where circumstances do not allow blast or power tool cleaning to be used, then hand tools may be used. Cleaning shall meet the requirements of SSPC SP2 (removal of loose rust, mil scale, or paint to the degree specified by hand chipping, scraping, sanding and wire brushing)
 3. If the areas /surfaces to be repaired include welds, first remove all weld flux residue and weld spatter by blasting, chipping, grinding, or power scaling.
 4. Spray or brush apply the paints containing zinc dust to the prepared surfaces/areas. Apply the paint in accordance with the manufacturer's recommendations in a single application employing multiple passes to achieve a dry film thickness equal to the original zinc coating thickness.

END OF SECTION

SECTION 09 25 23
LIME BASED PLASTERING

PART 1 GENERAL

1.1 SUMMARY:

- A. Section Includes:
 - 1. Lime Based Plastering
- B. Related Requirements:
 - 1. Division 01: Administrative, procedural, and temporary work requirements.
 - 2. Section 03 33 00 - Architectural Cast-in-Place (ACIP) Concrete.

1.2 DEFINITIONS

- A. Control Joint: A joint that accommodates movement of shrinkage and curing per ASTM 1063-08.
- B. Expansion Joint: A joint that accommodates movement beyond shrinking and curing per ASTM 1063-08.

1.3 REFERENCES

- A. ASTM International (ASTM):
 - 1. B117 - Standard Practice for Operating Salt Spray (Fog) Apparatus.
 - 2. C109 - Standard Test Method for Compressive Strength of Cube test Specimens.
 - 3. C136 - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
 - 4. C177 - Standard Test Method for Thermal Transmission Properties
 - 5. C348 - Standard Test Method for Flexural Strength of Hydraulic-Cement Mortars.
 - 6. C926 - Standard Specification for Application of Portland Cement Based Plaster.
 - 7. C932 - Standard Specification for Surface-Applied Bonding Compounds for Exterior Plastering.
 - 8. C979 - Standard Specification for Pigments for Integrally Colored Concrete.
 - 9. C1506 - Standard Test Method for Water Retention of Hydraulic Cement-Based Mortars and Plasters.
 - 10. C1498 – Test Method for Hygroscopic Sorption Isotherms of Building Materials
 - 11. D2794 – Standard Test Method for Impact Resistance of Organic Coatings
 - 12. D4258 - Standard Practice for Surface Cleaning Concrete for Coating.
 - 13. D4259 - Standard Practice for Abrading Concrete.
 - 14. D4260 - Standard Practice for Liquid and Gelled Acid Etching of Concrete.
 - 15. D4261 - Standard Practice for Surface Cleaning Concrete Unit Masonry for Coating.
 - 16. D6904 - Standard Practice for Resistance to Wind-Driven Rain for Exterior Coatings Applied on Masonry.
 - 17. E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 18. E96 - Standard Test Methods for Water Vapor Transmission of Materials.
 - 19. E136 – Standard Test Method for Behavior of Materials in a Vertical Tube Furnace.
 - 20. E2178 – Standard Test Method for Air Permeance of Building Materials
 - 21. G154 - Standard Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials.

1.4 DESIGN REQUIREMENTS

- A. Control Joints:
 - 1. Not required for direct applied applications, (CMU, tiltwall, cast in place, etc.)
 - 2. Design and location of control joints shall be determined by the project design professional in accordance with ASTM 1063 and indicated on the contract drawings. Cut the lath to the control joint accessory so lath is discontinuous at or beneath the accessory. As a minimum, control joints shall be located at the following locations:
 - a. Wall areas no to exceed 144 sqft (13.4 m²)
 - b. Length to width ratios of wall area not to exceed 2.5:1

- c. Maximum spacing of control joints shall not exceed 18ft (5.5cm) in any direction
- d. Corners of openings
- e. At through wall penetrations – i.e. above and below doors or windows
- f. Provide minimum 3/8 inch (9mm) wide joint where the system abuts windows, doors and other through wall penetrations.
- g. Provide appropriate accessories at terminations.
- h. Avoid the use of channel reveal accessories which can interfere with proper stress relief.

B. Expansion Joints

- 1. Design and location of expansion joints shall be determined by the project design professional and indicated on the contract documents. As a minimum expansion joints are required at the following locations:
 - a. Where expansion joints occur in the substrate system.
 - b. Where building expansion joints occur.
 - c. At floor lines.
 - d. Where it abuts dissimilar materials
 - e. Where the substrate changes
 - f. Where significant structural movement occurs such as changes in roofline, building shape or structural system.

1.2 SUBMITTALS

- A. Product Data: Manufacturer's descriptive data, mixing procedures, application instructions, and precautions and limitations in product use.
- B. Shop Drawings: Show locations and installation of expansion joints including plans, elevations sections details of components, and attachments to other work.
- C. Samples for Verification: For each type of finish coat indicated; Provide 7 x 9 inch samples showing texture and color prepared on rigid backing.

1.3 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 20 years experience in manufacture of specified products.
- B. Applicator Qualifications:
 - 1. Minimum 5 years [documented] experience in work of this Section.
 - 2. Successful completion of minimum of 3 projects of similar scope and complexity within past 2 years.
 - 3. Employ applicators experienced in exterior plaster applications and familiar with specified products.
- C. Mock-up:
 - 1. Apply finish system to minimum 16 square feet of actual substrate.
 - 2. Show color and surface texture.
 - 3. Locate where directed.
 - 4. Approved mockup may [not] remain as part of the Work.
- D. Sample Panels:
 - 1. Produce three 24 inch square sample panels that are moveable.
 - 2. Approved sample panels shall be used to judge work.
 - 3. Approved sample panels shall be distributed:
 - a. One to the architect.
 - b. One to the contractor.
 - c. One to the applicator

1.4 DELIVERY, STORAGE AND HANDLING

- A. Store materials under cover, dry, and protected from temperature extremes and contamination.

1.5 PROJECT CONDITIONS

- A. Environmental Requirements:
1. Do not apply finishes at temperatures below 40 degrees F or above 95 degrees F.
 2. Ambient temperatures below 40 degrees F: Provide temporary sheet coverings and supplemental heat to prevent freezing of finish.
 3. Protect applied finishes from direct sun, winds above 5 MPH, dust, dirt, frost, and precipitation for 48 hours after application. Provide screening for surfaces by use of small-sized mesh, tarps, or plastic sheeting.
 4. Do not apply finishes during heavy or extended rain or to saturated or frozen surfaces.

1.6 WARRANTY

- A. Provide manufacturer's 20 year performance warranty.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design Products: Subject to compliance with requirements, provide Chaux et Enduits de Saint-Astier and distributed by Southwest Progressive Enterprises, Thermocromex, or an approved equal product. Southwest Progressive Enterprise contact info: 800-780-7731, info@thermocromex.com, www.thermocromex.com.
- B. Substitution Limitations: Not Permitted.

2.2 MATERIALS

- A. Limestone High Performance Cladding:
1. Type: Limestone high performance cladding based on natural hydraulic lime.
 2. Characteristics:
 - a. Granulometry: 0.8 to 4.0 mm, tested to ASTM C136.
 - b. Compressive strength: 650 PSI average, tested to ASTM C109 at 28 days, 1500 PSI at full cure.
 - c. Air Permeance: 0.002 at 75 Pa, tested to ASTM E2178
 - d. Flexural strength: 2.0 to 2.5 N/sq mm, tested to ASTM C348 at 28 days.
 - e. Water retention: 94 percent plus or minus 2 percent, tested to ASTM C1506 on paste.
 - f. Water vapor transmission rate: 84 PERMS, tested to ASTM E96/E96M Wet Cup Method
 - g. Wind driven rain resistance: Passed, tested to ASTM D6904 (78 percent better than the standard for weight gain).
 - h. Salt fog exposure: No significant change after 300 hours, tested to ASTM B117.
 - i. Sorption Isotherm: Average absorption value at 90%RH is 1.36%, tested to ASTM C1498
 - j. Impact Resistance: Passed 140 Inch-Pound Impact, tested to ASTM D2794
 - k. Accelerated weathering; tested to ASTM G154:
 - 1) Visual color change: None, after 2000 hours.
 - 2) 60 degree gloss change: 3 gloss units after 2000 hours.
 - 3) Blistering: None after 2000 hours.
 - 4) Chalking: None after 2000 hours.
 - 5) Checking: None after 2000 hours.
 - 6) Cracking: None after 2000 hours.
 - 7) Other: None after 2000 hours.
 - l. Thermal conductivity: 1.02 square meters K/W, tested to ASTM C177.
 - m. Modulus of Elasticity: 7584 MPa, tested to ASTM C469.
 - n. Flame spread/smoke developed: Class A, tested to ASTM E84.
 - 1) Flame spread/smoke over OSB Substrate: Class A, tested to ASTM E84.

- 2) Flame spread/smoke over Lath/Scratch Substrate: Class A, tested to ASTM E84.
- 3) Flame spread/smoke over Cementitious Substrate: Class A, tested to ASTM E84.
- o. If applied over a 1 hour approved fire resistant wall assembly Thermocromex being a non-combustible product per ASTM E-136 will not affect in any way that 1 hour fire rated wall assembly.
- p. Volatile organic compound (VOC) content: 0

2.3 MIXES

- A. Mix materials in accordance with manufacturer's instructions using mechanical mixing equipment.
- B. Add water to premixed bagged material at rate of 1-1/4 to 1-1/2 gallons per bag until desired consistency is achieved. Use same amount of water per bag for subsequent batches.
- C. Add coloring admixture in accordance with manufacturer's instructions; color to match approved samples.
- D. Continue mixing for 6 to 7 minutes total.
- E. Clean mixer thoroughly at end of each work day, when work is suspended for an extended period, and when changing colors.
- F. Discard mixes not used within 60 minutes after mixing.
- G. Source Quality Control:
 - 1. Perform slump and weight density test on first batch daily and whenever equipment is not in use for more than 30 minutes using materials discharged directly from mixer before application on wall.
 - 2. Record results of each batch using form provided by manufacturer.
 - 3. Record location of each batch number on copy of exterior building elevations.
 - 4. Ensure consistent compliance with manufacturer's slump and weight density requirements.
 - 5. Discard batches not complying with slump and density weight requirements and adjust subsequent mixes as required.
 - 6. If batches fail to meet required slump and weight requirements, remove applied finishes back to last verifiable point at no additional cost to Owner.
 - 7. Owner and or Architect may request additional testing at any time during mixing.

2.4 ACCESSORIES

- A. Coloring Admixture: ASTM C979, color [to be selected from manufacturer's full color range].
- B. Bonding Agent: ASTM C932; Weld-Crete by Larsen Products Corp. (if required).
- C. Water: Clean and potable.
- D. Lath:
 - 1. Mega Lath by Structa Wire in compliance with ASTM C847-10a
 - 2. Diamond mesh that is self-furred, galvanized steel at a minimum 3.4 lb/yd² in compliance with ASTM C847-10a.
 - 3. Welded wire lath that is self-furred, galvanized steel at minimum 1.95lb/yd² in compliance with ASTM C933-1.
- E. Foam Board/SPF: The Foam Coalition has published the Guide to Attaching Exterior Wall Coverings through Foam Sheathing to Wood or Steel Framing. Link: www.foamsheathing.org

PART 3- EXECUTION

3.1 PREPARATION

- A. Clean surfaces of loose and foreign matter that could interfere with adhesion of finish, including dust, paint, salts, oils, and organic matter.
- B. Concrete Substrates:
 - 1. Clean surfaces using ASTM D4258, D4259, or D4260 methods.
 - 2. Completely remove form oils and bond breakers.
 - 3. On very smooth and non-porous surfaces apply bonding agent in accordance with manufacturer's instructions or create mechanical key by chiseling or sanding surface.
- C. Masonry Substrates:
 - 1. Allow new masonry to cure minimum of 28 days before applying finishes.
 - 2. Clean surfaces using ASTM D4261 method.
 - 3. If vertical head joints are not filled, float joints flush.
- D. Sheathing Substrates:
 - 1. Exterior Gypsum
 - 2. Ensure that sheathing joints are treated per manufacturer's recommendations.
 - 3. Install metal lath according to ASTM C1063.
- E. Plaster Base Coat Substrates:
 - 1. Ensure plaster base coat conforms to ASTM C926, minimum 1/2 inch thickness, pre-blended only.
 - 2. Achieve the levelness and appearance of a brown coat.
 - 3. Allow new plaster to cure per specific manufacturer's instructions.
- F. One-Coat Stucco Substrates:
 - 1. Ensure stucco has been applied to minimum 1/2 inch thickness.
 - 2. Achieve the levelness and appearance of a brown coat.
 - 3. Allow new plaster to cure per specific manufacturer's instructions.
- G. Dampen surfaces when required to prevent excess suction due to porosity of substrate or climatic conditions. Lightly wet surfaces but do not saturate.

3.2 APPLICATION

- A. Apply finish in accordance with manufacturer's instructions.
- B. Dampen surfaces when required to prevent excess suction due to porosity of substrate or climatic conditions. Lightly wet surfaces but do not saturate.
- C. Apply finish to minimum 3/8 inch thickness (Over hard dense concrete surfaces such as tilt-wall/ PIP/ CIP the minimum is 1/4 inch thickness). When overall thickness exceeds 3/4 inch, apply in two coats. Do not exceed 1-1/2 inch overall thickness. Measure depth using depth gage or equivalent; ensure consistent thickness.
- D. Apply finish to Corbeaux finish.
- E. Finish surfaces true to plane, plumb and with neat, sharp corners and intersections.
- F. Work in panels to nearest natural break formed by intersections, corners, trim, and accessories.
- G. Not Acceptable: Lines caused by variations in application or finishing techniques, cold joints, and other surface defects visible when viewed from a distance of 10 feet.

- H. Debris netting is required when winds are 5 MPH and above.
- I. Cure applied finishes with light water mist 3 to 4 times daily for 2 to 3 days after application. Prevent uneven and excessive evaporation from surfaces.
- J. Installation Tolerance:
Surface tolerance: Maximum 1/8 inch in 10 feet variation from surface flatness.
- K. Do not specify Thermocromex for use below grade. Provide minimum 4 inch clearance above earth grade, at grade for hardscape. Provide increased clearance in freeze/thaw climate zones.
- L. Commence the installation of Thermocromex after completion of all floor, roof construction and other construction that imposes dead loads on the walls to prevent excessive deflection and potential cracking. Sequence interior work such as drywall installation prior to Thermocromex installation to prevent stud distortion and potential cracking.

3.3 FIELD QUALITY CONTROL

- A. If current project is applicator's first application of specified product, manufacturer of finish to provide on-site applicator training for minimum of one day, including review of manufacturer's application instructions, equipment, application procedures, and curing.

3.4 ADJUSTING

- A. Repair or replace damaged, discolored, and defective finishes.
- B. Match patched areas to adjacent surfaces.

3.5 CLEANING

- A. Remove finish from adjacent and underlying surfaces before it sets.

END OF SECTION

SECTION 14 24 23
HYDRAULIC ELEVATOR

PART 1 GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Shop Drawings and Samples of exposed finishes for simplex passenger elevator.
 - 1. Provide Owner with inspection and acceptance certificates and operating permits, as required by authorities having jurisdiction.
 - 2. Submit maintenance manuals, including parts list with sources indicated, and emergency instructions. Submit for Owner's information at contract closeout.

1.2 REGULATORY REQUIREMENTS

- A. In addition to local governing regulations, the following adopted standards shall be complied with:
 - 1. ASME A17.1, "Safety Code for Elevators and Escalators", 2007 Edition including the 2008 and 2009 addenda 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, most recently adopted edition
 - 5. ASME A17.5 Code for Electrical Equipment
 - 6. ASCE-24, Flood Resistant Design and Construction, 2005 Edition
 - 7. Florida Statute Chapter 399
 - 8. Florida Administrative Code Chapter 61-C5
 - 9. Accessibility Requirements: Section 4.10 in the Americans with Disabilities Act (ADA) and Florida Building Code, Accessibility.
- B. Maintenance: Beginning at Substantial Completion, provide 12 months' full maintenance service. Include monthly preventive maintenance, repair, or replacement of worn or defective components, lubrication, cleaning, and adjusting, with included 24-hour call back service, 7 days a week.
- C. Project's Seismic Risk Zone: 0 or 1.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Prequalified Elevator Contractors:
 - 1. Otis Elevator Company
 - 2. Schindler Elevator Corporation
 - 3. ThyssenKrupp Elevator Company
 - 4. Delaware Elevator
 - 5. Skyline Elevator
 - 6. Mowrey Elevator
- B. Approved Manufacturers: Only approved elevator manufacturers, as mentioned hereinafter, and their products, may be used on this project. The use of any alternate manufacturer's equipment or services must receive approval of the Architect.
- C. Elevator Equipment Manufacturers (General):
 - 1. Otis Elevator Company
 - 2. Schindler Elevator Corporation
 - 3. ThyssenKrupp
 - 4. Cemcolift
 - 5. Delaware Elevator
 - 6. Minnesota Elevator
 - 7. Mowrey Elevator

- D. Car Slide Guide Assemblies: Manufacturer's Standard.
- E. Elevator Controller: Motion Control Engineering only (controller and floor selector equipment - City wide standardization to Motion Control Engineering (MCE) as upgraded at Tampa Municipal Office Building (TMOB), Tampa Police Department (TPD), Old City Hall (OCH) and Poe Garage.
- F. Door Detection/Protection Device: Tri-Tronics' Leading Edge, Janus Elevator's Pana 40, or equivalent.
- G. Door Equipment: Manufacturer's standard or GAL
- H. Hydraulic Fluid: Hydro Safe Oil Division grade ISO VG-32 or equivalent
- I. All elevator equipment shall be NON-PROPRIETARY as determined by the elevator consultant.

2.2 RELATED WORK SPECIFIED ELSEWHERE (NOT BY ELEVATOR CONTRACTOR)

A. Legal Hoistway and Pit: Clear plumb elevator hoistway with variations not to exceed 1" at any point.

1. Bevel cants (75 degrees from horizontal) above and below any ledge, beam, projection or setback occurring in the hoistway wall exceeding 4 inches, excluding those required for the installation of the elevator equipment. (Not required for hoistway divider beams).
2. Installation of guide rail bracket supports in concrete. Elevator Contractor to furnish inserts or embeds, if used.
3. Wall blockouts for piping, control and signal fixtures. Elevator Contractor to furnish inserts.
4. Erection of front elevator hoistway wall after elevator entrances are installed.
5. Grouting around hoistway entrances and under sills after installation.
6. Pit access ladders made of non-combustible material in the pit of each elevator, extending not less than 48" above the lowest landing door sill, equipped with 16" wide rungs, cleats or steps spaced 12" on center. If unavoidable obstructions are encountered, the width of the rungs, cleats or steps may be reduced to as wide as possible, but not less than 12". The clear distance from the rungs, cleats or steps to the nearest permanent object behind the ladder shall be not less than 4.5".
7. Structural supports for jack units, buffer impact and guide rail loads.
8. A waterproof pit including sump with a pump capable of removing 3,000 GPH. Sump to have a cover approximately level with pit floor.
9. Protection of open elevator hoistways and entrances during construction per OSHA Regulations.
10. Protection of cabs, door entrance assemblies and special metal finishes from damage after installation.
11. Externally guarded pit illumination to measure a minimum of ten (10) foot-candles throughout all areas of the pit floor, from a separate branch circuit. Required lighting shall not be connected to the load side terminals of the ground-fault circuit-interrupter receptacles.
12. Pit light switch easily accessible from the pit access door, 18" above floor level.
13. Ground-fault circuit-interrupter type duplex receptacle, not less than 15 amp/120 volt, adjacent to the pit light switch.
14. Ground-fault circuit-interrupter type duplex receptacle or non-GFCI type single receptacle for the installed sump pump. The sump pump shall be provided with an approved alarm or shall be provided with an oil separator per the Florida Plumbing Code.
15. Chase work or architectural covering of piping and conduit between hoistway and machine space.

B. Legal Machine Room/space:

1. Fire-resistant and soundproof enclosure.
2. Self-closing and self-locking access door of fire resistive construction as required by the Building Code, openable from inside without a key.
3. "Danger-Authorized Personnel Only" sign on the exterior surface of the elevator machine/control space/room access door.
4. Painting of elevator machine room walls and ceiling prior to the Elevator Contractor painting machine room floor and machine room equipment.
5. Class ABC fire extinguisher inside the elevator machine room, convenient to the elevator machine room access door.

C. Electrical Service, Conductors and Devices:

1. Lighting and GFI convenience outlets in the elevator pit and machine room. Pit receptacle to be duplex GFI type, with a single non-GFI receptacle for the sump pump, the machine room receptacles to be GFI type or GFI protected. The machine space requires 19 foot-candle illumination minimum, the pit requires 10 foot-candle minimum.
2. 3-phase mainline power feeders to terminals of the elevator controller with protected, lockable "off", fused disconnect switch or circuit breaker. An auxiliary normally closed contact is required to be wired to the elevator controls to deactivate battery lowering.
3. Power feeders to each elevator controller for elevator car interior lighting, receptacles, auxiliary lighting power source and exhaust blower. Individual disconnect switch or circuit breaker at controller location shown on Elevator Contractor's shop drawings.
4. System-type products-of-combustion sensors (smoke or heat detectors) conforming to the requirements of UL 268 installed within 21 feet of each elevator entrance, and in the elevator machine space, in accordance with NFPA 72, Chapter 3, to initiate Phase I (Recall), Firefighters' Operation. Three separate sets of dry contacts shall be provided and wired to the elevator controller for recall.
5. Temporary power and illumination to install, test and adjust elevator equipment.
6. Telephone service and wire installation to the elevator controller.

2.3 SYSTEM DESCRIPTION

- A. One new hole-less hydraulic passenger elevator to be located at the Riverwalk Project, at the North-East side of the Kennedy Boulevard Bridge, Tampa, Florida.
1. Number of elevators: 1
 2. Capacity: 3500 lbs.
 3. Speed: 125 feet per minute
 4. Operational control: Simplex selective-collective
 5. Motor control: Single speed ac, solid-state reduced voltage starting
 6. Power characteristics: Verification by elevator contractor is required
 7. Stops: 2
 8. Openings: one front @ 2nd level, one rear @ 1st level
 9. Landings served: 1, 2
 10. Travel: 21 feet, 0 inches (+/-) (field verify)
 11. Platform size: Elevator contractor's standard product
 12. Inside clear size: Elevator contractor's standard product
 13. Entrance size: 3'6" wide x 7'0" high
 14. Entrance type: Single Side Slide
 15. Entrance finish: Stainless no. 4 satin finish hoistway doors and frames at all floors
 16. Door operation: Standard product
 17. Pump unit: Dual plunger hole-less hydraulic with automatic 2-way leveling
 18. Hydraulic fluid: Bio-degradable vegetable based
 19. Guide rails: Planed steel "T" section car guide rails
 20. Buffers: Spring buffers with blocking
 21. Car enclosure: Manufacturer's standard vandal-resistant finishes product. Submit samples for review by architect.
 22. Signals -
 23. Registration lights: Car and corridor pushbuttons, single corridor riser and single car station in front return
 24. Position indicators: Digital car position indicator inside elevator car, with floor-arriving signal, mounted in the car station, with minimum 2" high floor designations; digital hall position indicator above entrance frames or within hall call stations at both floors, with direction arrows and minimum 2" high floor designations
- B. Communication system: hands-free, self-dialing, two-way, car communication instrument, integral to car stations, with shielded wiring to car controllers in machine rooms (no compartments). Line monitoring indicator per A17.1 to be at second level. Provide a discount price if owner has Kings III provide phone instrument prior to job completion.
- C. Fixture submittals: submit brochures depicting manufacturer's proposed products and designs with bid and 4 sets of approval drawings to the elevator consultant.
- D. Additional features:
1. Non-lubricated slide guides

2. Car top inspection station
3. Firefighters' Recall Operation per ASME a17.1, rule 2.27.3, including alternate floor return feature
4. Single car operating panel in front return, hinged and flush mounted
5. Independent service feature
6. Key switch in lower hall call station for by calling car during timed hall call cutout
7. Car/jack unit isolation
8. Victaulic oil line connectors
9. Oil-line muffler
10. Constant-speed (pressure feedback) control valve
11. Extruded aluminum hoistway and car sills
12. 12-month warranty maintenance with included 24-hour call back service, 7 days a week
13. Pump unit and controller sound isolation
14. 2 sets of "As-built" wiring diagrams, operating instructions, parts ordering information and 3 keys for each keyed switch
15. Emergency car lighting recessed mounted at top of car operating panel with alarm, battery pack and trickle charger, with separate test button in service cabinet
16. Engrave firefighters' instructions above firefighters' key switch at the upper (designated) level, filled in red
17. Certificate frame, sized for Florida certificate of operation, on door of service cabinet
18. Equipment identification, stencil painted or applied 4" numbers on machine/pump units, controllers, disconnects, car tops, and identify hoistway side of hoistway doors. No ink markers permitted.
19. Auxiliary (battery) power lowering device (supplied by the City)

2.4 PERFORMANCE

Speed: +/- 10% of contract speed under any loading condition.

Capacity: Safely lower, stop and hold up to 125% of rated load.

Stopping Accuracy: +/- 1/4" under any loading condition.

Door Opening Time: (Door operating times are measured from 2" from fully open to 2" from fully closed).

Door Open:

Side Opening 42" wide	2.5 seconds minimum	3.5 seconds maximum
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Door Close:

Side Opening 42" wide	3.5 seconds minimum	4.5 seconds maximum
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Minimum closing times to maintain 7 LBF maximum kinetic energy in both normal and nudging speed shall be posted on the operator.

Floor-to-Floor Performance Times: start to stop one floor run:

Stabilized leveling: 4 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 0.1 second.

Kinetic Energy and Door Closing Force: The kinetic energy of car and hoistway doors, and all parts rigidly connected thereto (includes the sum of the weights of the hoistway and car doors and related parts), computed for the average closing speed, shall not exceed 7 FT LBS. The force necessary to prevent closing of car and hoistway doors from rest, shall not exceed 25 LBF.

Door Hold Open Delay For Hall Calls: Seconds from doors reaching the fully open position to the start of door closing, in response to a hall call: 5 seconds (adjustable 5-8 seconds)

Door Hold Open Delay For Car Calls: Seconds from doors reaching the fully open position to the start of door closing, in response to a car call: 3 seconds (adjustable 3-5 seconds)

Interrupted Ray Door Time: Seconds from doors reaching the fully open position to the start of door closing, after door protection devices have been interrupted: 2 seconds

PART 3 EXECUTION

3.1 ELEVATORS

- A. Controller - The new Elevator Controller shall be supplied by the City of Tampa, but installed, wired, and adjusted by the elevator contractor.
- B. Programmable options and parameters shall be stored in nonvolatile memory. As a minimum, there shall be an alphanumeric display used for programming and diagnostics. The microprocessor boards shall be equipped with on-board diagnostics for ease of troubleshooting and field programmability of specific control variables. Field changes shall be stored permanently, using non-volatile memory.
- C. Field selectable pre-programmed Fire Service operations compliant with the following: ASME A17.1b 2009 or the latest edition adopted by the AHJ at the time of the permit application.
- D. The controller shall have field programmable inputs to initiate special operations based on customer needs. These functions can be inputs as listed below.
 - Independent Service Input
 - Home landing timer adjustment
 - Hall call cutout timer adjustment
- E. Microprocessor-based, Simplex Selective Collective: Operate elevator without attendants from buttons in cars and at each landing. When car is idle, park car at floor 2 after 10 minute delay.
- F. Slow down and stop car automatically at floors corresponding to registered calls in each direction of travel. As slow down is initiated for a hall call, automatically cancel that call. Cancel car calls in the same manner.
- G. Hold car at arrival floor an adjustable time interval to allow passenger transfer. Compliance with ADA is required for all timing features. (See Section 2.4)
- H. Illuminate the appropriate button to indicate call registration. Extinguish light when call is answered.
- I. Door Operation: Open doors automatically when the car arrives at a floor to permit transfer of passengers. Automatically close doors after a timed interval. (see Section 2.4)
- J. Automatic Stopping Accuracy: 2-way automatic with re-leveling feature. Stop car within 1/4" above or below the landing sill. Avoid over travel, as well as under travel, and maintain stopping accuracy regardless of load in car or direction of travel.
- K. Independent Service: Provide controls for operation of each elevator from car buttons only. Close doors by constant or momentary pressure on desired destination floor button. Open doors automatically upon arrival at selected floor.
- L. Hall call cutout timer fully adjustable for times and days
- M. Low-Oil Control: In the event oil level is insufficient for travel to the top floor, provide controls to return elevator to the main level and park until oil is added.
- N. Motion Control: AC type with unit valve suitable for operation specified and capable of providing smooth, comfortable acceleration, retardation and deceleration. Limit the difference in speed between full load and no load to not more than +/-10% of the contract speed, regardless of the travel direction.
- O. Firefighters' Operation: Per Code, to operate and recall elevator to designated or alternate designated floors during a fire or other emergency condition. Provide sensor signal wiring from hoistway connection point to elevator controller terminals. Operate visual/audible signal in the car and an audible signal at the controller until return is complete or automatic operation restored.
- P. Standby Lighting and Alarm: Mounted at the top of the car operating panel with alarm bell and lighting, per Code.
- Q. Battery lowering device supplied by MCE to bring car to lower level and cycle the doors in the event of a power failure.

3.2 MACHINE ROOM/SPACE EQUIPMENT

- A. Arrange equipment in elevator machine spaces as shown on bid drawings. Provide identifying numbers, stencil painted or applied numbers, on pump unit, controller, main line disconnect switches and car light disconnect switches. Verify size of space shown on construction drawings is adequate.
- B. Pump Unit:

Assembled or submersible unit consisting of positive-displacement pump; induction motor; master-pressure, feedback-type control valves combining safety features, holding, direction, bypass, stopping and manual-lowering functions; shut-off valve; oil reservoir with protected-vent opening, oil gage or dipstick and outlet strainer, all mounted on isolating pads. Provide thermal unit or comparable means to maintain oil at manufacturer's specified operating temperature.
- C. Hydraulic fluid:

Supply biodegradable vegetable oil based hydraulic fluid specially compounded for use in hydraulic elevators. The oil must be delivered to the building in sealed containers that are marked by the manufacturer of the product. The fluid must be the same or equal to the product manufactured by Hydro Safe Oil Division, Inc. Kendale Blvd. STE. 310, East Lansing, MI 48823, grade ISO VG-32. Certification must be provided to Owner and Elevator Consultant as to the source of the product as well as the Material Safety Data Sheet information.

The pumping unit reservoir must be thoroughly cleaned and the entire system filled to a level of at least 15 gallons reserve capacity above the amount that is required to move the elevator to the top landing. Attach a permanent engraved laminated plastic sign on the pumping unit that identifies the manufacturer of the fluid and product identification for the fluid installed in the system.

Vegetable oil blended with or contaminated with mineral or petroleum based products will not be acceptable.
- D. Selector: Relay, tape, solid-state or moving crosshead type, electrically or mechanically coupled to the elevator car. If selector tape is utilized, provide stainless steel tape.
- E. Controller- (supplied by City of Tampa) Provide all necessary information required for the MCE controller order form so that the controller will interface with and operate all other elevator equipment being provided and installed by the elevator contractor.
- F. Muffler: Provide in discharge oil line near pump unit. Design to dampen and absorb pulsation and noise in the flow of hydraulic fluid.
- G. Piping and Oil: Provide piping from jacks to pump unit, connections, and specified bio-degradable hydraulic fluid. Use victaulic type isolated couplings between the pump unit and oil lines. The Elevator Contractor shall be responsible for all piping runs and clearances with other construction.
- H. Shut-Off Valve: Manual valve in line adjacent to pump unit. Provide second valve in pit.
- I. Noise and Vibration Control:
 - 1. To minimize noise and vibration, mechanically isolate elevator equipment from the structure; electrically isolate controllers and pump motor. Limit noise level relating to elevator equipment and its operation to no more than 60 DBA in elevator cars under any condition including door operation and exhaust blower on highest speed.

3.3 HOISTWAY EQUIPMENT

- A. Guide Rails: Steel "T" profile guide rails suitable for elevator travel and car weight, with brackets for attachment to building structure. Brackets to be galvanized steel.
- B. Buffers: Spring type with galvanized steel blocking and supports.
- C. Cylinders: Seamless steel pipe. Provide means to collect oil at cylinder head; plastic pit can(s) to be provided.
- D. Plungers: Polished seamless steel tubing or pipe. If multi-section plungers are used, join sections by internal threaded couplings. Factory polish multiple section jack units while assembled and mark for proper future reassembly.
- E. Normal and Final Terminal Stopping Devices: Per A17.1.
- F. Electrical Wiring and Wiring Connections:

1. Conductors and Connections: Solid copper throughout with individual wires coded and connections on identified studs or terminal blocks. Use no splices or similar connections in wiring except at terminal blocks and control cabinets. Provide 10% spare conductors throughout. Provide two (2) pairs of shielded communication wires (in the travel cable) in addition to those required to connect specified items. Run spare wires from car connection points to elevator controller in the machine space. Tag spares so they can easily identified in the elevator machine room.
 2. Conduit, Etc.: Use non-metallic conduit from the machine space to the hoistway and to the greatest extent possible elsewhere due to the installation being over water. Galvanized steel conduit and duct is acceptable. Conduit size, 1/2" minimum. Do not use unprotected flexible metallic conduit on flat portions of the car top. Flexible heavy-duty service cord may be used between fixed car wiring and car door switches for door protective devices.
 3. Traveling Cables: Flame and moisture-resistant outer cover. Prevent traveling cables from rubbing or chafing against hoistway or elevator equipment within hoistway. Provide 10% spare wires and two (2) spare sets of shielded communication wires in the traveling cable.
- G. Entrance Equipment:
1. Door hangers: 2-point suspension with upthrust adjustment and auxiliary retainers. Tire hanger rollers so that no metal-to-metal contact exists. Provide removable hanger assemblies for easy replacement.
 2. Door Tracks: Bar, or formed, cold-drawn steel with smooth hanger contact surface and zinc plated or galvanized finish. Provide removable tracks or track surface for easy replacement.
 3. Fascia: Galvanized sheet metal.
 4. Interlocks: Provide fire-resistant wiring N.E.C Type SF-2 or equivalent.
 5. Closers: SmarTork spirator type only.
- H. Pit Stop Switch: Installed per A17.1.
- I. Floor Numbers: Stencil painted, or applied, 4" high floor numbers on hoistway side of hoistway doors, per Code. Ink markers shall not be used.

3.4 HOISTWAY ENTRANCES

- A. Complete entrances bearing UL fire labels per equipment summaries.
1. Frames: Stainless steel, No. 4 satin finish hollow-metal, bolted construction to form a one-piece unit, without binder angles. Show jamb and head depth and profiles on approval drawings. Permanently attach handicapped, floor designations 2" high (minimum), raised 0.030", with lettering, style, and color selected by the Architect, 60" above the floor.
 2. Door Panels: Stainless steel, No. 4 satin finish, hollow metal, single speed, side opening, bolted construction to form a one-piece unit, without binder angles. Provide a minimum of two (2) gibbs per door panel, one (1) at leading and one (1) at trailing edge with gibbs engaging the sill groove their entire length of travel.
 3. Sight Guards: Same material/finish as hoistway entrance door panels.
 4. All headers, stiles, sill supports, and other entrance frame metals not specified above to be galvanized.

3.5 CAR EQUIPMENT

- A. Car Door Electrical Contact: Arrange so that elevator cannot operate unless doors are closed within tolerance allowed by Code.
- B. Car Door Clutches: Heavy-duty clutches, linkage arms, drive blocks and pickup rollers or cams to provide positive, smooth, quiet door operation. Design clutches so car doors can be closed for maintenance purposes, while hoistway doors remain open. Equip with manufacturer's compliant device for restricted door opening.
- C. Door Operator and Operation: Manufacturer's standard or GAL closed-loop door operator. Open doors automatically when car arrives at a floor to permit egress of passengers. Close doors automatically after a timed interval.
- D. Door Protection Devices: non-contact electronic edge as specified in Section 2.1.
1. Design device to stop and reverse doors at normal speed if obstructed while doors are closing.
 2. Interrupted Beam Time: If light beams are interrupted while doors are closing, reduce time doors normally remain fully open to 2 seconds after light beams are re-established.
 3. Nudging Buzzer: If the detector light beams are obstructed for a predetermined time (20 seconds minimum), sound buzzer and close on reduce kinetic energy (shall not exceed 3.5 J (2.5 ft-lbf). Stop and reverse the doors during closing if the detector is obstructed momentarily. Allow door to close after the obstruction is removed. The door-nudging feature is required.

- E. Elevator Car Station:
1. One elevator car control station with faceplate, consisting of a metal box containing the operating fixtures mounted behind the car enclosure stationary front return panel.
 2. Suitably identify floor buttons, alarm button, door open and door close buttons. Locate operating controls no higher than 48" above the car floor; not less than 35" for stop switch and alarm button. Comply with ADA Rule 4.10.12 in all respects, including Braille designations.
 3. Provide raised floor pushbuttons (3/4" minimum diameter) which illuminate to indicate call registration. Include engraved Braille designation of the floors served adjacent to the face of each button.
 4. Provide illuminating alarm button at bottom of station to ring bell located on elevator.
 5. Provide keyed stop switch in panel faceplate with markings to show "run" and "stop" positions.
 6. Provide door open button to stop and reopen closing doors. Make button operable while car is stopped at landing, regardless of special operational features, except Firefighters' Operation.
 7. Provide Firefighter's Operation key switch as required by ASME A17.1, rule 2.27.3 under a locked cover located at the top of the car operating panel, arranged as shown in figure (Fig. 2.27.3.3.7 Panel Layout). The Firefighter's Operation key shall be of a tubular, 7 pin, style 137 construction and shall have a biting code of 6143521. The key shall be coded "FEO-K1." The outside surface of the door shall be identified by the words "FIREFIGHTERS' OPERATION" engraved and back filled in red with letters at least 10 mm (0.4 in.) high. The required operating instructions shall be located on the inside of the access door.
 8. Provide a lockable service panel with recessed, flush door matching the car operating panel faceplate. Incorporate vandal-resistant certificate window into door, sized for Florida certificate. Include the following controls with purpose and operating positions and properly identify.
 9. Emergency light test button.
 10. Light switch.
 11. Two-position exhaust blower switch.
 12. Independent service switch to permit selection of independent or automatic operation.
 13. Duplex 120-volt, AC, electrical convenience outlet.
 14. Engraving: Provide black paint filled engraving with size and style approved by the Elevator Consultant as follows:
 15. Elevator identification number
 16. Elevator State Serial Number
 17. "No Smoking."
 18. Elevator capacity in pounds.
- F. Finish: Stainless steel No. 4 satin finish.
- G. Communication Systems: Hands-free, "Push-to-Talk," two-way, car communication instrument, integral to the car operating panel, with shielded wiring to machine room controllers. (See 2.3 B) Monitoring to be per A17.1 with the indicator signals to be at the upper level.
- H. Car Top Control Station: Per A17.1.
- I. Emergency Exit: Car top, per A17.1.
- J. Work Light and Convenience Plug Receptacle: At top of elevator car, integral to the new car top inspection station. Provide Pendant type work light with bulb guard. On-off switch to be accessible from the entrance sill. Provide a duplex 120v GFCI type receptacle.
- K. Platform Guard: Galvanized.
- L. Car Doors, Hangers and Tracks: Single side opening. Provide as specified for hoistway entrance doors, hangers and tracks.
- M. Header: Construct of galvanized steel; shape to provide stiffening flanges.
- N. Car sling and safety plank: Construct of galvanized steel

3.6 CAR ENCLOSURES

- A. Provide manufacturers' standard car enclosures as follows:
1. Shell: Wood or Reinforced steel with baked enamel interior finish. Apply sound-deadening sheets to exterior.
 2. Top: Wood or reinforced or steel with hinged exit.
 3. Metal cab components, where used, shall have corrosion-resistant coating.
 4. Stationary front return panels with integral entrance columns, finished with a stainless steel No. 4 satin finish.

5. Transom: Stainless steel No. 4 satin finish.
6. Car Door Panels: Stainless steel, No. 4 satin finish, single speed, side opening, same construction as hoistway door panels.
7. Side and Rear Elevator Car Walls: Removable wood panels faced and edged with accepted cab finishes. 2 panels per side wall. Color selection by Architect. Compliance with ADA for cab interior measurements is required.
8. Base And Trim: Recessed, stainless steel No. 4 satin finish, with concealed ventilation cutouts, at the base of the elevator car interior.
9. Handrails: Single Line, 2" X 3/8" flat, stainless steel No. 4 satin finish bars on sides walls.
10. Ventilation: 2-speed exhaust blower with diffuser and grille.
11. Lighting: Energy efficient and environmentally conscious T-8 electronic ballasts or LED.
12. Suspended Ceiling: Manufacturer's standard design. Provide the project Architect with brochures depicting manufacturer's standard designs.

3.7 LANDING CONTROL STATIONS

- A. Pushbuttons: flush mounted at both floors which illuminate to indicate call registration.
- B. Hall Station: "Designated Floor": In addition to the call button faceplate with the engraving mentioned above, provide a Firefighter's Recall Operation key switch at the upper level. The key shall be of a tubular, 7 pin, style 137 construction and shall have a bitting code of 6143521. The key shall be coded "FEO-K1." Additional engraving shall be provided to include the Firefighter's Recall Operation instructions, filled in red.
- C. Fire recall switch, indicators and signage to be at the upper (designated) level.
- D. Telephone line monitoring signals to be at the upper level.
- E. A keyed switch to call car during timed hall call cutout hours to be at the lower level.
- F. Faceplate Material and Finish: Stainless steel, No. 4 satin finish.

3.8 SIGNALS

- A. Car Direction Indicator: Provide car direction lanterns in both car door jambs. Illuminate appropriate direction arrow and sound electronic tone as doors open to indicate intended car direction. Sound tone once for up direction, twice for down direction. Comply with ADA Rule 4.10.4.
- B. Car Position Indicator: Digital indicator type representing floors served and direction of car travel, located in the transom above the car entrance or at top of car operating station. When a car leaves or arrives at a floor, illuminate numeral representing position of the car in the hoistway. Illuminate proper direction arrow to indicate the direction of travel. Use LED type units. Provide audible signal which will sound when car is stopping at a landing. Comply with ADA Rule 4.10.13.
- C. Corridor Car Position Indicator: Digital indicators representing floors served and direction of travel, located above hoistway entrance frame or in the hall station at each floor. When a car leaves or arrives at a floor, illuminate numeral representing position of the car in the hoistway. Illuminate direction arrow to indicate direction of travel. Use LED units.
- D. Faceplate Material and Finish:
 1. Car Direction Indicators: Stainless steel, No. 4 satin finish.
 2. Car Position Indicators: Stainless steel, No. 4 satin finish.
 3. Corridor Position Indicators: Stainless steel, No. 4 satin finish.

3.9 EXECUTION

- A. Site Condition Inspection:
 1. Prior to beginning installation of equipment, examine hoistway and machine space areas. Verify that no irregularities exist which affect execution of work specified.
 2. Do not proceed with installation until work in place conforms to project requirements.
 3. Product Delivery, Storage and Handling:
 - (a). Deliver materials in manufacturer's original, unopened protective packaging.
 - (b). Store material in original protective packaging. Prevent soiling, physical damage, and wetting.
 - (c). Protect equipment and exposed finishes during transportation, erection, and construction, against damage and stains.

- E. Installation:
1. Install each equipment item in accordance with manufacturer's direction, referenced codes, and specifications.
 2. Install machine space equipment with clearances in accordance with referenced codes and specifications.
 3. Install items so they may be easily removed for maintenance repair.
 4. Install items so access for maintenance is safe/readily available.
 5. Clean the following items of oil, grease, scale, and other foreign matter, and apply one coat of field-applied machinery enamel.
 - a. All exposed equipment and metal work installed as part of the Work which does not have architectural finish.
 - b. Machine room equipment.
 - c. Field paint factory-painted surfaces with original paint and color. Protect machine-finish surfaces against corrosion.
- F. Field Quality Control:
1. Work at the jobsite will be checked during the course of installation. Full cooperation with reviewing personnel is mandatory. Accomplish corrective work required, prior to performing further installation.
 2. Have Code Enforcing Authority acceptance inspection performed and complete corrective work.
 3. Adjustments:
 - a. Align guide rails vertically with tolerance of 1/8" in 100'. Secure joints without gaps and file any irregularities to a smooth surface.
 - b. Balance car to equalize pressure of guide shoes on rails.
 - c. Lubricate all equipment in accordance with manufacturer's instructions.
 - d. Adjust motors, controllers, leveling switches, limit switches, stopping switches, door operators, interlocks and safety devices, etc., to achieve required performance levels.
 - e. Fabricate and assemble various parts in shop to minimize field assembly. Assemble parts, which require close field fit, in the shop and mark for field erection.
- G. Cleanup:
1. Keep work areas orderly and free from debris during progress of project. Remove packaging materials from the site on a daily basis as equipment is installed.
 2. Remove all loose materials and filings resulting from the Work.
 3. Clean machine room equipment and floor of dirt, oil and grease.
 4. Clean hoistways, car tops, car enclosures, entrances, operating and signal fixtures and trim of dirt, oil, grease, and fingerprints.
- H. Painting and Finishes:
1. All equipment and metal work installed as part of this project, which does not have a galvanized, baked enamel, or special architectural finish, and which is exposed in the hoistway, shall be cleaned and painted one field coat of enamel. This includes car tops, car top equipment and car bottoms. The shank and base of the guide rails shall be thoroughly cleaned and painted one field coat of black metal enamel.
 2. All machine room equipment shall be painted upon completion of the installation with the manufacturer's standard machinery enamel.
 3. All natural metals shall be of the best grade and shall have the grain of belting in the direction of the longest dimension with a fine brushed finish. All surfaces shall be smooth and without waves.
 4. Rust shall be removed from all elevator equipment, including guide rail surfaces.
- I. Acceptance, Inspection and Tests:
1. General: furnish labor, materials, and equipment necessary for tests. Notify the Elevator Consultant 5 days in advance when ready for Final Acceptance Review of the elevator equipment installation. Final Acceptance* of the installation will be made only after all field quality control reviews have been completed, identified deficiencies have been corrected, an inspection is completed by the Owner's Representative, HDR, through the Prime Consultant's subconsultant, Vertical Assessment Associates, meeting the requirements for obtaining a Certificate of Operation from the State of Florida, all submittals have been received, and the following items have been completed to the satisfaction of the Owner and Elevator Consultant. Final acceptance includes but is not limited to the satisfactory operation of the completed elevator system for 30 (thirty) consecutive calendar days. Satisfactory operation for the purposes of this specification is defined as trouble free-uninterrupted service. The elevator operational performance will be evaluated monthly by the consultant for final acceptance. The completion of this important milestone will evidence the beginning of the contract maintenance and warranty periods)
 2. Workmanship and equipment comply with specification.

3. Contract speed, capacity and floor-to-floor performance times meet specification requirements.
4. Performance of following is satisfactory:
 - a. Starting, accelerating and running.
 - b. Deceleration and stopping accuracy.
 - c. Door operation and closing force.
 - d. Equipment noise levels.
 - e. Signal fixture utility.
 - f. Overall ride quality.
5. Test Results:
 - a. Under all test conditions, obtain specified speed, performance times, floor accuracy without releveling, and ride quality to the satisfaction of the Owner and Elevator Consultant.
 - b. If unit temperature rise exceeds to 50 degrees Celsius above ambient, conduct a full-capacity, one-hour running test, stopping at each floor for 10 seconds in up and down directions.
 - c. Replace equipment if equipment performance is questionable in Elevator Consultant's opinion.
- J. Performance Guarantee: If tests reveal defects, poor workmanship, variance or noncompliance with requirements of specified codes and/or ordinances, or variance or noncompliance with the requirements of specifications, complete corrective work to the satisfaction of the Owner and Elevator Consultant, at no additional cost:
 1. Replace equipment that does not meet code or specification.
 2. Perform work and furnish labor, materials and equipment necessary to meet specified operation and performance requirements.
 3. Perform and assume cost for retesting required by Code Enforcing Authorities, the Elevator Consultant or the Owner to verify specified operation and/or performance.
- K. Field Review Scheduling: The Elevator Consultant shall schedule all installation progress reviews and final equipment and installation reviews with the Elevator Contractor. The Consultant anticipates that schedules shall be met. The Elevator Contractor is required to reply in writing to all corrective measures indicated on Elevator Consultant's progress and/or final review reports.
- L. Owner's Information:
 1. Submittals: Provide written information necessary for proper maintenance and adjustment of the equipment prior to Final Acceptance. Final retention will be held until the following data is accepted by the Elevator Consultant and delivered to the Owner.
 2. Provide two (2) sets of straight line wiring diagrams of as-installed elevator circuits, with index of location and function of all components, to the building owner for their file. One (1) set shall be a reproducible master copy. Do not mark "Property Of..." or "Copyright" or add any other wording to the drawings that would restrict the building owner from reproducing the drawings. Provide one (1) set of straight-line wiring diagrams, mounted in the elevator machine room, protected in plastic (envelope), to prevent soiling and fading.
 3. Provide two (2) neatly bound copies of lubricating instructions, including the recommended grade and lubricants to be used throughout the elevator installation.
 4. Prior to the Final Acceptance Review by the Elevator Consultant, provide maintenance check charts and call back logs on the controller of each elevator.
 5. Provide a one (1) year written warranty for all new equipment installed at the project.
 6. Provide two (2) sets of neatly bound instruction manuals explaining all operational features of the elevator system, including associated equipment. The instruction manuals must provide information necessary to maintain the equipment in proper operation with the use of required instruments/tools used to maintain, adjust or alter the operation of the elevators and also without the use of such instruments.
 7. Provide one each of any/all necessary instruments/tools that are used to maintain, adjust or alter the elevator operation to the building owner.
 8. Provide two (2) complete sets of parts catalogs listing all replaceable parts, whether fabricated by the installing manufacturer or purchased from outside sources.

END OF SECTION

SECTION 26 05 00
ELECTRICAL: BASIC REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Basic requirements for electrical systems.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Division 26 - Electrical.
 - 2. Section 26 05 19 - Wire and Cable - 600 Volt and Below.
 - 3. Section 26 05 33 - Raceways and Boxes.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. Aluminum Association (AA).
 - 2. American Iron and Steel Institute (AISI).
 - 3. ASTM International (ASTM):
 - a. A123/A123M, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - b. A153/A153M, Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
 - 4. ETL Testing Laboratories (ETL).
 - 5. Institute of Electrical and Electronics Engineers, Inc. (IEEE):
 - a. C2, National Electrical Safety Code (NESC).
 - 6. National Electrical Manufacturers Association (NEMA):
 - a. 250, Enclosures for Electrical Equipment (1000 Volts Maximum).
 - 7. National Fire Protection Association (NFPA):
 - a. 70, National Electrical Code (NEC).
 - 8. Underwriters Laboratories, Inc. (UL).
- B. Where UL test procedures have been established for the product type, use UL or ETL approved electrical equipment and provide with the UL or ETL label.

1.3 DEFINITIONS

- A. For the purposes of providing materials and installing electrical work the following definitions shall be used.
 - 1. Outdoor area: Exterior locations where the equipment is normally exposed to the weather and including below grade structures, such as vaults, manholes, handholes and in-ground pump stations.
 - 2. Architecturally finished interior area: Offices, laboratories, conference rooms, restrooms, corridors and other similar occupied spaces.
 - 3. Non-architecturally finished interior area: Pump, chemical, mechanical, electrical rooms and other similar process type rooms.
 - 4. Highly corrosive and corrosive area: Areas identified on the Drawings where there is a varying degree of spillage or splashing of corrosive materials such as water, wastewater or chemical solutions; or chronic exposure to corrosive, caustic or acidic agents, chemicals, chemical fumes or chemical mixtures.
 - 5. Hazardous areas: Class I, II or III areas as defined in NFPA 70.
 - 6. Shop fabricated: Manufactured or assembled equipment for which a UL test procedure has not been established.

1.4 SUBMITTALS

- A. Shop Drawings:
 - 1. General requirements:
 - a. Provide manufacturer's technical information on products to be used, including product descriptive bulletin.
 - b. Include data sheets that include manufacturer's name and product model number.

- 1) Clearly identify all optional accessories.
- c. Acknowledgement that products are UL or ETL listed or are constructed utilizing UL or ETL recognized components.
- d. Manufacturer's delivery, storage, handling and installation instructions.
- e. Product installation details.
- f. See individual specification sections for any additional requirements.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Protect nameplates on electrical equipment to prevent defacing.

1.6 AREA DESIGNATIONS

- A. Designation of an area will determine the NEMA rating of the electrical equipment enclosures, types of conduits and installation methods to be used in that area.
 1. Outdoor areas:
 - a. Wet.
 - b. Also, corrosive and/or hazardous when specifically designated on the Drawings or in the Specifications.
 2. Indoor areas:
 - a. Dry.
 - b. Also, wet, corrosive and/or hazardous when specifically designated on the Drawings or in the Specifications.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Subject to compliance with the Contract Documents, refer to specific Division 26 Specification Sections and specific material paragraphs below for acceptable manufacturers.
- B. Submit request for substitution when not submitting materials from an acceptable manufacturer as specified in the specific Division 26 Specification Section.
- C. Provide all components of a similar type by one (1) manufacturer.

2.2 MATERIALS

- A. Electrical Equipment Support Pedestals and/or Racks:
 1. Approved manufacturers:
 - a. Modular strut:
 - 1) Unistrut Building Systems.
 - 2) Eaton B-Line.
 - 3) Globe Strut.
 - 4) Thomas & Betts Superstrut.
 2. Material requirements:
 - a. Modular strut:
 - 1) Galvanized steel: ASTM A123/123M or ASTM A153/A153M.
 - 2) Stainless steel: AISI Type 316.
 - 3) PVC coated galvanized steel: ASTM A123/A123M or ASTM A153/A153M and 20 mil PVC coating.
 - 4) Aluminum: AA Type 6063-T6.
 - b. Mounting hardware:
 - 1) Galvanized steel.
 - 2) Stainless steel.
 - c. Anchorage per Specification Section 05 50 00.
- B. Field touch-up of galvanized surfaces.
 1. Zinc-rich primer.
 - a. One (1) coat, 3.0 mils, ZRC by ZRC Products.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install and wire all equipment, including prepurchased equipment, and perform all tests necessary to assure conformance to the Drawings and Specification Sections and ensure that equipment is ready and safe for energization.
- B. Install equipment in accordance with the requirements of:
 - 1. NFPA 70.
 - 2. IEEE C2.
 - 3. The manufacturer's instructions.
- C. In general, conduit routing is not shown on the Drawings.
 - 1. The Contractor is responsible for routing all conduits including those shown on one-line and control block diagrams and home runs shown on floor plans.
 - 2. Conduit routings and stub-up locations that are shown are approximate; exact routing to be as required for equipment furnished and field conditions.
- D. When complete branch circuiting is not shown on the Drawings:
 - 1. A homerun indicating panelboard name and circuit number will be shown and the circuit number will be shown adjacent to the additional devices (e.g., light fixture and receptacles) on the same circuit.
 - 2. The Contractor is to furnish and install all conduit and conductors required for proper operation of the circuit.
 - 3. The indicated home run conduit and conductor size shall be used for the entire branch circuit.
 - 4. See Specification Section 26 05 19 for combining multiple branch circuits in a common conduit.
- E. Do not use equipment that exceed dimensions or reduce clearances indicated on the Drawings or as required by the NFPA 70.
- F. Install equipment plumb, square and true with construction features and securely fastened.
- G. Install electrical equipment, including pull and junction boxes, minimum of 6 IN from process, gas, air and water piping and equipment.
- H. Install equipment so it is readily accessible for operation and maintenance, is not blocked or concealed and does not interfere with normal operation and maintenance requirements of other equipment.
- I. Device Mounting Schedule:
 - 1. Unless indicated otherwise on the Drawings, mounting heights are as indicated below:
 - a. Light switch (to center): 48 IN.
 - b. Receptacle in architecturally finished areas (to center): 18 IN.
 - c. Receptacle on exterior wall of building (to center): 18 IN.
 - d. Receptacle in non-architecturally finished areas (to center): 48 IN.
 - e. Telephone outlet in architecturally finished areas (to center): 18 IN.
 - f. Telephone outlet for wall-mounted phone (to center): 54 IN.
 - g. Safety switch (to center of operating handle): 54 IN.
 - h. Separately mounted motor starter (to center of operating handle): 54 IN.
 - i. Pushbutton or selector switch control station (to center): 48 IN.
 - j. Panelboard (to top): 72 IN.
- J. Avoid interference of electrical equipment operation and maintenance with structural members, building features and equipment of other trades.
 - 1. When it is necessary to adjust the intended location of electrical equipment, unless specifically dimensioned or detailed, the Contractor may make adjustments of up to 6 IN in equipment location with the Engineer's approval.
- K. Provide electrical equipment support system per the following area designations:
 - 1. Dry areas:
 - a. Galvanized system consisting of galvanized steel channels and fittings, nuts and hardware.
 - b. Field touch-up cut ends and scratches of galvanized components with the specified primer during the installation, before rust appears.

2. Wet areas:
 - a. Galvanized system consisting of galvanized steel channels and fittings, nuts and hardware.
 - b. Field touch-up cut ends and scratches of galvanized components with the specified primer during the installation, before rust appears.
 3. Corrosive areas:
 - a. Aluminum system consisting of aluminum channels and fittings with stainless steel nuts and hardware.
 - b. PVC coated steel system consisting of PVC coated steel channels and fittings with stainless steel nuts and hardware.
 - L. Provide all necessary anchoring devices and supports rated for the equipment load based on dimensions and weights verified from approved submittals, or as recommended by the manufacturer.
 1. Do not cut, or weld to, building structural members.
 2. Do not mount safety switches or other equipment to equipment enclosures, unless enclosure mounting surface is properly braced to accept mounting of external equipment.
 - M. Provide corrosion resistant spacers to maintain 1/4 IN separation between metallic equipment and/or metallic equipment supports and mounting surface in wet areas, on below grade walls and on walls of liquid containment or processing areas such as Basins, Clarifiers, Digesters, Reservoirs, etc.
 - N. Do not place equipment fabricated from aluminum in direct contact with earth or concrete.
 - O. Screen or seal all openings into equipment mounted outdoors to prevent the entrance of rodents and insects.
 - P. Do not use materials that may cause the walls or roof of a building to discolor or rust.
- 3.2 FIELD QUALITY CONTROL
- A. Verify exact rough-in location and dimensions for connection to electrified equipment, provided by others.
 - B. Replace equipment and systems found inoperative or defective and re-test.
 - C. The protective coating integrity of support structures and equipment enclosures shall be maintained.
 1. Repair galvanized components utilizing a zinc rich paint.
 2. Repair painted components utilizing touch up paint provided by or approved by the manufacturer.
 3. Repair PVC coated components utilizing a patching compound, of the same material as the coating, provided by the manufacturer of the component.
 4. Repair surfaces which will be inaccessible after installation prior to installation.
 5. See Specification Section 26 05 33 for requirements for conduits and associated accessories.
 - D. Replace nameplates damaged during installation.
- 3.3 DEMONSTRATION
- A. Demonstrate equipment is in operating condition. Coordinated demonstration with Engineer.

END OF SECTION

SECTION 26 05 19
WIRE AND CABLE: 600 VOLT AND BELOW

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Material and installation requirements for:
 - a. Building wire.
 - b. Power cable.
 - c. Control cable.
 - d. Wire connectors.
 - e. Insulating tape.
 - f. Pulling lubricant.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Section 26 05 00 - Electrical: Basic Requirements.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. Insulated Cable Engineers Association (ICEA):
 - a. S-58-679, Standard for Control Cable Conductor Identification.
 - b. ICS 4, Industrial Control and Systems: Terminal Blocks.
 - 2. National Electrical Manufacturers Association/Insulated Cable Engineers Association (NEMA/ICEA):
 - a. WC 57/S-73-532, Standard for Control Cables.
 - b. WC 70/S-95-658, Non-Shielded Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy.
 - 3. National Fire Protection Association (NFPA):
 - a. 70, National Electrical Code (NEC).
 - b. 262, Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces.
 - 4. Telecommunications Industry Association/Electronic Industries Alliance/American National Standards Institute (TIA/EIA/ANSI):
 - a. 568, Commercial Building Telecommunications Cabling Standard.
 - 5. Underwriters Laboratories, Inc. (UL):
 - a. 44, Standard for Safety Thermoset-Insulated Wires and Cables.
 - b. 83, Standard for Safety Thermoplastic-Insulated Wires and Cables.
 - c. 467, Standard for Safety Grounding and Bonding Equipment.
 - d. 486A, Standard for Safety Wire Connectors and Soldering Lugs for use with Copper Conductors.
 - e. 486C, Standard for Safety Splicing Wire Connections.
 - f. 510, Standard for Safety Polyvinyl Chloride, Polyethylene and Rubber Insulating Tape.
 - g. 1277, Standard for Safety Electrical Power and Control Tray Cables with Optional Optical-Fiber Members.
 - h. 1581, Standard for Safety Reference Standard for Electrical Wires, Cables, and Flexible Cords.
 - i. 2250, Standard for Safety Instrumentation Tray Cable.

1.3 DEFINITIONS

- A. Cable: Multi-conductor, insulated, with outer sheath containing either building wire or instrumentation wire.
- B. Power Cable: Multi-conductor, insulated, with outer sheath containing building wire, No. 8 AWG and larger.
- C. Control Cable: Multi-conductor, insulated, with outer sheath containing building wires, No. 14, No. 12 or No. 10 AWG.
- D. Building Wire: Single conductor, insulated, with or without outer jacket depending upon type.

1.4 SUBMITTALS

- A. Shop Drawings:
 - 1. Product technical data:
 - a. Provide submittal data for all products specified in PART 2 of this Specification Section except:
 - 1) Wire connectors.
 - 2) Insulating tape.
 - 3) Cable lubricant.
 - b. See Specification Section 26 05 00 for additional requirements.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. See Specification Section 26 05 00.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Subject to compliance with the Contract Documents, the following manufacturers are acceptable:
 - 1. Building wire, power and control cable:
 - a. Aetna Insulated Wire.
 - b. Alphawire.
 - c. Cerrowire.
 - d. Encore Wire Corporation.
 - e. General Cable.
 - f. Okonite Company.
 - g. Southwire Company.
 - 2. Wire connectors:
 - a. Burndy Corporation.
 - b. Buchanan.
 - c. Ideal.
 - d. IlSCO.
 - e. 3M Co.
 - f. Teledyne Penn Union.
 - g. Thomas and Betts.
 - h. Phoenix Contact.
 - 3. Insulating and color coding tape:
 - a. 3M Co.
 - b. Plymouth Bishop Tapes.
 - c. Red Seal Electric Co.

2.2 MANUFACTURED UNITS

- A. Building Wire:
 - 1. Conductor shall be copper with 600 V rated insulation.
 - 2. Conductors shall be stranded, except for conductors used in lighting and receptacle circuits which may be stranded or solid.
 - 3. Surface mark with manufacturer's name or trademark, conductor size, insulation type and UL label.
 - 4. Conform to NEMA/ICEA WC 70/S-95-658 and UL 83 for type THHN/THWN and THHN/THWN-2 insulation.
 - 5. Conform to NEMA/ICEA WC 70/S-95-658 and UL 44 for type XHHW-2 insulation.
- B. Power Cable:
 - 1. Conductor shall be copper with 600 V rated insulation.
 - 2. Surface mark with manufacturer's name or trademark, conductor size, insulation type and UL label.
 - 3. Conform to NEMA/ICEA WC 70/S-95-658 and UL 83 and UL 1277 for type THHN/THWN insulation with an overall PVC jacket.
 - 4. Individual conductor color coding:
 - a. ICEA S-58-679, Method 4.

- b. See PART 3 of this Specification Section for additional requirements.
 5. Conform to NFPA 70 Type TC.
- C. Control Cable:
1. Conductor shall be copper with 600 V rated insulation.
 2. Surface mark with manufacturer's name or trademark, conductor size, insulation type and UL label.
 3. Conform to NEMA/ICEA WC 57/S-73-532 and UL 83 and UL 1277 for type THHN/THWN insulation with an overall PVC jacket.
 4. Number of conductors as required, provided with or without bare ground conductor of the same AWG size.
 - a. When a bare ground conductor is not provided, an additional insulated conductor shall be provided and used as the ground conductor (e.g., 6/c No. 14 w/g and 7/c No. 14 are equal).
 5. Individual conductor color coding:
 - a. ICEA S-58-679, Method 1, Table E-2.
 - b. See PART 3 of this Specification Section for additional requirements.
 6. Conform to NFPA 70 Type TC.
- D. Electrical Equipment Control Wire:
1. Conductor shall be copper with 600 V rated insulation.
 2. Conductors shall be stranded.
 3. Surface mark with manufacturer's name or trademark, conductor size, insulation type and UL label.
 4. Conform to UL 44 for Type SIS insulation.
 5. Conform to UL 83 for Type MTW insulation.
- E. Wire Connectors:
1. Twist/screw on type:
 - a. Insulated pressure or spring type solderless connector.
 - b. 600 V rated.
 - c. Ground conductors: Conform to UL 486C and/or UL 467 when required by local codes.
 - d. Phase and neutral conductors: Conform to UL 486C.
 2. Compression and mechanical screw type:
 - a. 600 V rated.
 - b. Ground conductors: Conform to UL 467.
 - c. Phase and neutral conductors: Conform to UL 486A.
 3. Terminal block type:
 - a. High density, screw-post barrier-type with white center marker strip.
 - b. 600 V and ampere rating as required, for power circuits.
 - c. 600 V, 20 ampere rated for control circuits.
 - d. 300 V, 15 ampere rated for instrumentation circuits.
 - e. Conform to NEMA ICS 4 and UL 486A.
- F. Insulating and Color Coding Tape:
1. Pressure sensitive vinyl.
 2. Premium grade.
 3. Heat, cold, moisture, and sunlight resistant.
 4. Thickness, depending on use conditions: 7, 8.5, or 10 mil.
 5. For cold weather or outdoor location, tape must also be all-weather.
 6. Color:
 - a. Insulating tape: Black.
 - b. Color coding tape: Fade-resistant color as specified herein.
 7. Comply with UL 510.
- G. Pulling Lubricant: Cable manufacturer's standard containing no petroleum or other products which will deteriorate insulation.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Permitted Usage of Insulation Types:
 - 1. Type XHHW-2:
 - a. Building wire and power and control cable in architectural and non-architectural finished areas.
 - b. Building wire and power and control cable in conduit below grade.
 - 2. Type THHN/THWN and THHN/THWN-2:
 - a. Building wire and power and control cable No. 8 AWG and smaller in architectural and non-architectural finished areas.
 - 3. Type SIS and MTW:
 - a. For the wiring of control equipment within control panels and field wiring of control equipment within switchgear, switchboards, motor control centers.
- B. Conductor Size Limitations:
 - 1. Feeder and branch power conductors shall not be smaller than No. 12 AWG unless otherwise indicated on the Drawings.
 - 2. Control conductors shall not be smaller than No. 14 AWG unless otherwise indicated on the Drawings.
 - 3. Instrumentation conductors shall not be smaller than No. 18 AWG unless otherwise indicated on the Drawings.
- C. Color Code All Wiring as Follows:
 - 1. Building wire:

	240 V, 208 V, 240/120 V, 208/120 V	480 V, 480/277 V
Phase 1	Black	Brown
Phase 2	Red *	Orange
Phase 3	Blue	Yellow
Neutral	White	White or Gray
Ground	Green	Green

* Orange when it is a high leg of a 120/240 V Delta system.

- a. Conductors No. 6 AWG and smaller: Insulated phase, neutral and ground conductors shall be identified by a continuous colored outer finish along its entire length.
- b. Conductors larger than No. 6 AWG:
 - 1) Insulated phase and neutral conductors shall be identified by one (1) of the following methods:
 - a) Continuous colored outer finish along its entire length.
 - b) 3 IN of colored tape applied at the termination.
 - 2) Insulated grounding conductor shall be identified by one (1) of the following methods:
 - a) Continuous green outer finish along its entire length.
 - b) Stripping the insulation from the entire exposed length.
 - c) Using green tape to cover the entire exposed length.
 - 3) The color coding shall be applied at all accessible locations, including but not limited to: Junction and pull boxes, wireways, manholes and handholes.
- 2. Power cables ICEA S-58-679, Method 4 with:
 - a. Phase and neutral conductors identified with 3 IN of colored tape, per the Table herein, applied at the terminations.
 - b. Ground conductor: Bare.
- 3. Control cables ICEA S-58-679, Method 1, Table E-2:
 - a. When a bare ground is not provided, one (1) of the colored insulated conductors shall be re-identified by stripping the insulation from the entire exposed length or using green tape to cover the entire exposed length.
 - b. When used in power applications the colored insulated conductors used as phase and neutral conductors may have to be re-identified with 3 IN of colored tape, per the Table herein, applied at the terminations.

- D. Install all wiring in raceway unless otherwise indicated on the Drawings.
- E. Feeder, branch, control and instrumentation circuits shall not be combined in a raceway, cable tray, junction or pull box, except as permitted in the following:
 - 1. Where specifically indicated on the Drawings.
 - 2. Where field conditions dictate and written permission is obtained from the Engineer.
 - 3. Control circuits shall be isolated from feeder and branch power and instrumentation circuits but combining of control circuits is permitted.
 - a. The combinations shall comply with the following:
 - 1) 12 Vdc, 24 Vdc and 48 Vdc may be combined.
 - 2) 125 Vdc shall be isolated from all other AC and DC circuits.
 - 3) AC control circuits shall be isolated from all DC circuits.
 - 4. Multiple branch circuits for lighting, receptacle and other 120 Vac circuits are allowed to be combined into a common raceway.
 - a. Contractor is responsible for making the required adjustments in conductor and raceway size, in accordance with all requirements of the NFPA 70, including but not limited to:
 - 1) Up sizing conductor size for required ampacity de-ratings for the number of current carrying conductors in the raceway.
 - 2) The neutral conductor may be shared on sequential circuits (e.g., circuit numbers 1,3,5) if multiple circuit breakers are provided. The neutral conductors may not be shared.
 - 3) Up sizing raceway size for the size and quantity of conductors.
- F. Splices and terminations for the following circuit types shall be made in the indicated enclosure type using the indicated method.
 - 1. Feeder and branch power circuits:
 - a. Device outlet boxes:
 - 1) Twist/screw on type connectors.
 - b. Junction and pull boxes and wireways:
 - 1) Twist/screw on type connectors for use on No. 8 and smaller wire.
 - 2) Compression, mechanical screw or terminal block or terminal strip type connectors for use on No. 6 AWG and larger wire.
 - c. Motor terminal boxes:
 - 1) Twist/screw on type connectors for use on No. 10 AWG and smaller wire.
 - 2) Insulated mechanical screw type connectors for use on No. 8 AWG and larger wire.
 - d. Manholes or handholes:
 - 1) Twist/screw on type connectors pre-filled with epoxy for use on No. 8 AWG and smaller wire.
 - 2) Watertight compression or mechanical screw type connectors for use on No. 6 AWG and larger wire.
 - 2. Control circuits:
 - a. Junction and pull boxes: Terminal block type connector.
 - b. Manholes or handholes: Twist/screw on type connectors pre-filled with epoxy.
 - c. Control panels and motor control centers: Terminal block or strips provided within the equipment or field installed within the equipment by the Contractor.
 - 3. Non-insulated compression and mechanical screw type connectors shall be insulated with tape or hot or cold shrink type insulation to the insulation level of the conductors.
- G. Insulating Tape Usage:
 - 1. For insulating connections of No. 8 AWG wire and smaller: 7 mil vinyl tape.
 - 2. For insulating splices and taps of No. 6 AWG wire or larger: 10 mil vinyl tape.
 - 3. For insulating connections made in cold weather or in outdoor locations: 8.5 mil, all weather vinyl tape.
- H. Color Coding Tape Usage: For color coding of conductors.

END OF SECTION

SECTION 26 05 26
GROUNDING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Material and installation requirements for grounding system(s).
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Section 26 05 00 - Electrical: Basic Requirements.
 - 2. Section 26 05 19 - Wire and Cable - 600 Volt and Below.
 - 3. Section 26 05 33 - Raceways and Boxes.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. ASTM International (ASTM):
 - a. B8, Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft.
 - 2. Institute of Electrical and Electronics Engineers, Inc. (IEEE):
 - a. 837, Standard for Qualifying Permanent Connections Used in Substation Grounding.
 - 3. National Fire Protection Association (NFPA):
 - a. 70, National Electrical Code (NEC).
 - 1) Article 250, Grounding and Bonding.
 - 2) Article 610, Cranes and Hoists.
 - 3) Article 620, Elevators, Dumbwaiters, Escalators, Moving Walks, Platform Lifts, and Stairway Chairlifts.
 - 4. Underwriters Laboratories, Inc. (UL):
 - a. 467, Grounding and Bonding Equipment.
- B. Assure ground continuity is continuous throughout the entire Project.

1.3 SUBMITTALS

- A. Shop Drawings:
 - 1. Product technical data.
 - a. Provide submittal data for all products specified in PART 2 of this Specification Section except:
 - 1) Grounding clamps, terminals and connectors.
 - 2) Exothermic welding system.
 - b. See Specification Section 26 05 00 for additional requirements.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Subject to compliance with the Contract Documents, the following manufacturers are acceptable:
 - 1. Ground rods and bars and grounding clamps, connectors and terminals:
 - a. Burndy.
 - b. Harger Lightning Protection.
 - c. Heary Brothers.
 - d. Joslyn.
 - e. Robbins Lightning Protection.
 - f. Thomas & Betts Blackburn.
 - g. Thompson.
 - 2. Exothermic weld connections:
 - a. Erico Products Inc., Cadweld.
 - b. Harger Lightning Protection.
 - c. Thermoweld.

- d. Thomas & Betts Furseweld.
- 3. Prefabricated composite test stations:
 - a. Quazite Composolite.
 - b. Armorcast Products Company.

2.2 COMPONENTS

- A. Wire and Cable:
 - 1. Bare conductors: Soft drawn stranded copper meeting ASTM B8.
 - 2. Insulated conductors: Color coded green, per Specification Section 26 05 19.
- B. Conduit: As specified in Specification Section 26 05 33.
- C. Ground Bars:
 - 1. Solid copper:
 - a. 1/4 IN thick.
 - b. 2 or 4 IN wide.
 - c. 24 IN long minimum in main service entrance electrical rooms, 12 IN long elsewhere.
 - 2. Predrilled grounding lug mounting holes.
 - 3. Stainless steel or galvanized steel mounting brackets.
 - 4. Insulated standoffs.
- D. Ground Rods:
 - 1. 3/4 IN x 10 FT.
 - 2. Copperclad:
 - a. Heavy uniform coating of electrolytic copper molecularly bonded to a rigid steel core.
 - b. Corrosion resistant bond between the copper and steel.
 - c. Hard drawn for a scar-resistant surface.
- E. Grounding Clamps, Connectors and Terminals:
 - 1. Mechanical type:
 - a. Standards: UL 467.
 - b. High copper alloy content.
 - 2. Compression type for interior locations:
 - a. Standards: UL 467.
 - b. High copper alloy content.
 - c. Non-reversible.
 - d. Terminals for connection to bus bars shall have two bolt holes.
 - 3. Compression type suitable for direct burial in earth or concrete:
 - a. Standards: UL 467, IEEE 837.
 - b. High copper alloy content.
 - c. Non-reversible.
- F. Exothermic Weld Connections:
 - 1. Copper oxide reduction by aluminum process.
 - 2. Molds properly sized for each application.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General:
 - 1. Install products in accordance with manufacturer's instructions.
 - 2. Size grounding conductors and bonding jumpers in accordance with NFPA 70, Article 250, except where larger sizes are indicated on the Drawings.
 - 3. Remove paint, rust, or other nonconducting material from contact surfaces before making ground connections.
 - 4. Where ground conductors pass through floor slabs or building walls provide nonmetallic sleeves.
 - 5. Do not splice grounding conductors except at ground rods.
 - 6. Install ground rods and grounding conductors in undisturbed, firm soil.
 - a. Provide excavation required for installation of ground rods and ground conductors.
 - b. Use driving studs or other suitable means to prevent damage to threaded ends of sectional rods.

- c. Unless otherwise specified, connect conductors to ground rods with compressor type connectors or exothermic weld.
 - d. Provide sufficient slack in grounding conductor to prevent conductor breakage during backfill or due to ground movement.
 - e. Backfill excavation completely, thoroughly tamping to provide good contact between backfill materials and ground rods and conductors.
 7. Do not use exothermic welding if it will damage the structure the grounding conductor is being welded to.
- B. Grounding Electrode System:
1. Provide a grounding electrode system in accordance with NFPA 70, Article 250 and as indicated on the Drawings.
 2. Grounding conductor terminations:
 - a. Ground bars mounted on wall, use compression type terminal and bolt it to the ground bar with two bolts.
 - b. Ground bars in electrical equipment, use compression type terminal and bolt it to the ground bar.
 - c. Piping systems use mechanical type connections.
 - d. Building steel, below grade and encased in concrete, use compression type connector or exothermic weld.
- C. Supplemental Grounding Electrode:
1. Provide the following grounding in addition to the equipment ground conductor supplied with the feeder conductors whether or not shown on the Drawings.
 2. Equipment support rack and pedestals mounted outdoors:
 - a. Connect metallic structure to a ground rod.
 - b. Grounding conductor: #6 AWG minimum.
- D. Low Voltage Transformer Separately Derived Grounding System:
1. Ground separately mounted step-down transformers XO terminal to one of the following:
 - a. Closest building steel using mechanical type terminal bolted to the steel, compression type connection or exothermic weld.
 - b. Closest water pipe using a mechanical type connection.
- E. Raceway Bonding/Grounding:
1. All metallic conduit shall be installed so that it is electrically continuous.
 2. All conduits to contain a grounding conductor with insulation identical to the phase conductors, unless otherwise indicated on the Drawings.
 3. NFPA 70 required grounding bushings shall be of the insulating type.
 4. Provide double locknuts at all panels.
 5. Bond all conduit, at entrance and exit of equipment, to the equipment ground bus or lug.
 6. Provide bonding jumpers if conduits are installed in concentric knockouts.
 7. Make all metallic raceway fittings and grounding clamps tight to ensure equipment grounding system will operate continuously at ground potential to provide low impedance current path for proper operation of overcurrent devices during possible ground fault conditions.
- F. Equipment Grounding:
1. All utilization equipment shall be grounded with an equipment ground conductor.
- G. Manhole and Handhole Grounding:
1. Provide a ground rod and ground bar, when indicated or as needed, in each manhole and handhole with exposed metal parts.
 - a. Expose a minimum of 4 IN of the rod above the floor for field connections to the rod.
 2. Connect all exposed metal parts (e.g., conduits and cable racks) to the ground rod.
- 3.2 FIELD QUALITY CONTROL
- A. Leave grounding system uncovered until observed by Owner.

END OF SECTION

SECTION 26 05 33
RACEWAYS AND BOXES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Material and installation requirements for:
 - a. Conduits.
 - b. Conduit fittings.
 - c. Conduit supports.
 - d. Wireways.
 - e. Outlet boxes.
 - f. Pull and junction boxes.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Section 26 05 00 - Electrical: Basic Requirements.
 - 2. Section 26 27 26 - Wiring Devices.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. American Iron and Steel Institute (AISI).
 - 2. ASTM International (ASTM):
 - a. A123/A123M, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - b. A153/A153M, Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
 - c. D2564, Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems.
 - 3. National Electrical Manufacturers Association (NEMA):
 - a. 250, Enclosures for Electrical Equipment (1000 Volts Maximum).
 - b. RN 1, Polyvinyl Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit (IMC).
 - c. TC 2, Electrical Polyvinyl Chloride (PVC) Tubing and Conduit.
 - d. TC 3, Polyvinyl Chloride (PVC) Fittings for Use with Rigid PVC Conduit and Tubing.
 - 4. National Electrical Manufacturers Association/American National Standards Institute (NEMA/ANSI):
 - a. C80.1, Electric Rigid Steel Conduit (ERSC).
 - b. C80.3, Steel Electrical Metallic Tubing (EMT).
 - c. OS 1, Sheet-Steel Outlet Boxes, Device Boxes, Covers, and Box Supports.
 - 5. National Fire Protection Association (NFPA):
 - a. 70, National Electrical Code (NEC).
 - 6. Underwriters Laboratories, Inc. (UL):
 - a. 1, Standard for Flexible Metal Conduit.
 - b. 6, Standard for Electrical Rigid Metal Conduit - Steel.
 - c. 50, Enclosures for Electrical Equipment, Non-Environmental Considerations.
 - d. 360, Standard for Liquid-Tight Flexible Steel Conduit.
 - e. 467, Grounding and Bonding Equipment.
 - f. 514A, Metallic Outlet Boxes.
 - g. 514B, Conduit, Tubing, and Cable Fittings.
 - h. 651, Standard for Schedule 40 and 80 Rigid PVC Conduit and Fittings.
 - i. 797, Electrical Metallic Tubing - Steel.
 - j. 870, Standard for Wireways, Auxiliary Gutters, and Associated Fittings.
 - k. 886, Standard for Outlet Boxes and Fittings for Use in Hazardous (Classified) Locations.

1.3 SUBMITTALS

- A. Shop Drawings:
 - 1. Product technical data:
 - a. Provide submittal data for all products specified in PART 2 of this Specification Section except:
 - 1) Conduit fittings.
 - 2) Support systems.
 - b. See Specification Section 26 05 00 for additional requirements.
 - 2. Fabrication and/or layout drawings:
 - a. Identify dimensional size of pull and junction boxes to be used.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Subject to compliance with the Contract Documents, the following manufacturers are acceptable:
 - 1. Rigid metallic conduits:
 - a. Allied Tube and Conduit Corporation.
 - b. Triangle PWC Inc.
 - c. Western Tube and Conduit Corporation.
 - d. Wheatland Tube Company.
 - e. LTV Steel Company.
 - 2. PVC coated rigid metallic conduits and repair kits:
 - a. Thomas & Betts Occidental.
 - b. Perma-Cote.
 - c. Rob-Roy Ind.
 - d. Raychem "GelTek" tape.
 - 3. Rigid nonmetallic conduit:
 - a. Carlon.
 - b. Cantex.
 - c. Osburn Associates.
 - 4. Flexible conduit:
 - a. AFC Cable Systems.
 - b. Anamet, Inc.
 - c. Electri-Flex.
 - d. Flexible Metal Hose Company.
 - e. International Metal Hose Company.
 - f. Triangle PWC Inc.
 - g. LTV Steel Company.
 - 5. Conduit fittings and accessories:
 - a. Appleton Electric Co.
 - b. Carlon.
 - c. Cantex.
 - d. Crouse-Hinds.
 - e. Killark.
 - f. Osburn Associates.
 - g. OZ Gedney Company.
 - h. RACO.
 - i. Steel City.
 - j. Thomas & Betts.
 - 6. Support systems:
 - a. Unistrut Building Systems.
 - b. Eaton B-Line.
 - c. Kindorf.
 - d. Minerallac Fastening Systems.
 - e. Caddy.

- f. Thomas & Betts Superstrut.
- 7. Outlet, pull and junction boxes:
 - a. Appleton Electric Co.
 - b. Eaton Crouse-Hinds.
 - c. Killark.
 - d. O-Z/Gedney.
 - e. Thomas & Betts Steel City.
 - f. Raco.
 - g. Bell.
 - h. Hoffman Engineering Co.
 - i. Wiegmann.
 - j. Eaton B-Line.
 - k. Adalet.
 - l. Rittal.
 - m. Stahlin.

2.2 RIGID METALLIC CONDUITS

- A. Rigid Galvanized Steel Conduit (RGS):
 - 1. Mild steel with continuous welded seam.
 - 2. Metallic zinc applied by hot-dip galvanizing or electro-galvanizing.
 - 3. Threads galvanized after cutting.
 - 4. Internal coating: Baked lacquer, varnish or enamel for a smooth surface.
 - 5. Standards: NEMA/ANSI C80.1, UL 6.
- B. PVC-Coated Rigid Steel Conduit (PVC-RGS):
 - 1. Nominal 40 mil Polyvinyl Chloride Exterior Coating:
 - a. Coating: Bonded to hot-dipped galvanized rigid steel conduit conforming to NEMA/ANSI C80.1.
 - b. The bond between the PVC coating and the conduit surface: Greater than the tensile strength of the coating.
 - 2. Nominal 2 mil, minimum, urethane interior coating.
 - 3. Urethane coating on threads.
 - 4. Conduit: Epoxy prime coated prior to application of PVC and urethane coatings.
 - 5. Female Ends:
 - a. Have a plastic sleeve extending a minimum of 1 pipe diameter or 2 IN, whichever is less beyond the opening.
 - b. The inside diameter of the sleeve shall be the same as the outside diameter of the conduit to be used with it.
 - 6. Standards: NEMA/ANSI C80.1, UL 6, NEMA RN 1.
- C. Electrical Metallic Tubing (EMT):
 - 1. Mild steel with continuous welded seam.
 - 2. Metallic zinc applied by hot-dip galvanizing or electro-galvanizing.
 - 3. Internal coating: Baked lacquer, varnish, or enamel for a smooth surface.
 - 4. Standards: NEMA/ANSI C80.3, UL 797.

2.3 RIGID NONMETALLIC CONDUIT

- A. Schedules 40 (PVC-40) and 80 (PVC-80):
 - 1. Polyvinyl-chloride (PVC) plastic compound which includes inert modifiers to improve weatherability and heat distribution.
 - 2. Rated for direct sunlight exposure.
 - 3. Fire retardant and low smoke emission.
 - 4. Shall be suitable for use with 90 DegC wire and shall be marked "maximum 90 DegC".
 - 5. Standards: NEMA TC 2, UL 651.

2.4 FLEXIBLE CONDUIT

- A. Flexible Galvanized Steel Conduit (FLEX):

1. Formed of continuous, spiral wound, hot-dip galvanized steel strip with successive convolutions securely interlocked.
 2. Standard: UL 1.
- B. PVC-Coated Flexible Galvanized Steel (liquid-tight) Conduit (FLEX-LT):
1. Core formed of continuous, spiral wound, hot-dip galvanized steel strip with successive convolutions securely interlocked.
 2. Extruded PVC outer jacket positively locked to the steel core.
 3. Liquid and vaportight.
 4. Standard: UL 360.

2.5 CONDUIT FITTINGS AND ACCESSORIES

- A. Fittings for Use with RGS:
1. Locknuts:
 - a. Threaded steel or malleable iron.
 - b. Gasketed or non-gasketed.
 - c. Grounding or non-grounding type.
 2. Bushings:
 - a. Threaded, insulated metallic.
 - b. Grounding or non-grounding type.
 3. Hubs: Threaded, insulated and gasketed metallic for raintight connection.
 4. Couplings:
 - a. Threaded straight type: Same material and finish as the conduit with which they are used on.
 - b. Threadless type: Gland compression or self-threading type, concrete tight.
 5. Unions: Threaded galvanized steel or zinc plated malleable iron.
 6. Conduit bodies (ells and tees):
 - a. Body: Zinc plated cast iron or cast copper free aluminum with threaded hubs.
 - b. Standard and mogul size.
 - c. Cover:
 - 1) Clip-on type with stainless steel screws.
 - 2) Gasketed or non-gasketed galvanized steel, zinc plated cast iron or cast copper free aluminum.
 7. Conduit bodies (round):
 - a. Body: Zinc plated cast iron or cast copper free aluminum with threaded hubs.
 - b. Cover: Threaded screw on type, gasketed, galvanized steel, zinc plated cast iron or cast copper free aluminum.
 8. Sealing fittings:
 - a. Body: Zinc plated cast iron or cast copper free aluminum with threaded hubs.
 - b. Standard and mogul size.
 - c. With or without drain and breather.
 - d. Fiber and sealing compound: UL listed for use with the sealing fitting.
 9. Expansion couplings:
 - a. 2 IN nominal straight-line conduit movement in either direction.
 - b. Galvanized steel with insulated bushing.
 - c. Gasketed for wet locations.
 - d. Internally or externally grounded.
 10. Expansion/deflection couplings:
 - a. 3/4 IN nominal straight-line conduit movement in either direction.
 - b. 30-degree nominal deflection from the normal in all directions.
 - c. Metallic hubs, neoprene outer jacket and stainless steel jacket clamps.
 - d. Internally or externally grounded.
 - e. Watertight, raintight and concrete tight.
 11. Standards: UL 467, UL 514B, UL 886.
- B. Fittings for Use with PVC-RGS:
1. The same material and construction as those fittings listed under paragraph "Fittings for Use with RGS" and coated as defined under paragraph "PVC Coated Rigid Steel Conduit (PVC-RGS)."

- C. Fittings for Use with EMT:
 - 1. Connectors:
 - a. Straight, angle and offset types furnished with locknuts.
 - b. Zinc plated steel.
 - c. Insulated gland compression type.
 - d. Concrete and raintight.
 - 2. Couplings:
 - a. Zinc plated steel.
 - b. Gland compression type.
 - c. Concrete and raintight.
 - 3. Conduit bodies (ells and tees):
 - a. Body: Copper free aluminum with threaded hubs.
 - b. Standard and mogul size.
 - c. Cover:
 - 1) Screw down type with steel screws.
 - 2) Gasketed or non-gasketed galvanized steel or copper free aluminum.
 - 4. Standard: UL 514B.
- D. Fittings for Use with FLEX:
 - 1. Connector:
 - a. Zinc plated malleable iron.
 - b. Squeeze or clamp-type.
 - 2. Standard: UL 514B.
- E. Fittings for Use with FLEX-LT:
 - 1. Connector:
 - a. Straight or angle type.
 - b. Metal construction, insulated and gasketed.
 - c. Composed of locknut, grounding ferrule and gland compression nut.
 - d. Liquid tight.
 - 2. Standards: UL 467, UL 514B.
- F. Fittings for Use with Rigid Nonmetallic PVC Conduit:
 - 1. Coupling, adapters and conduit bodies:
 - a. Same material, thickness, and construction as the conduits with which they are used.
 - b. Homogeneous plastic free from visible cracks, holes or foreign inclusions.
 - c. Bore smooth and free of blisters, nicks or other imperfections which could damage the conductor.
 - 2. Solvent cement for welding fittings shall be supplied by the same manufacturer as the conduit and fittings.
 - 3. Standards: ASTM D2564, NEMA TC 3, UL 651, UL 514B.
- G. Weather and Corrosion Protection Tape:
 - 1. PVC based tape, 10 mils thick.
 - 2. Protection against moisture, acids, alkalis, salts and sewage and suitable for direct bury.
 - 3. Used with appropriate pipe primer.

2.6 ALL RACEWAY AND FITTINGS

- A. Mark Products:
 - 1. Identify the nominal trade size on the product.
 - 2. Stamp with the name or trademark of the manufacturer.

2.7 OUTLET BOXES

- A. Metallic Outlet Boxes:
 - 1. Hot-dip galvanized steel.
 - 2. Conduit knockouts and grounding pigtail.
 - 3. Styles:
 - a. 2 IN x 3 IN rectangle.
 - b. 4 IN square.

- c. 4 IN octagon.
 - d. Masonry/tile.
 - 4. Accessories:
 - a. Flat blank cover plates.
 - b. Barriers.
 - c. Extension, plaster or tile rings.
 - d. Box supporting brackets in stud walls.
 - e. Adjustable bar hangers.
 - 5. Standards: NEMA/ANSI OS 1, UL 514A.
- B. Cast Outlet Boxes:
- 1. Zinc plated cast iron or die-cast copper free aluminum with manufacturers standard finish.
 - 2. Threaded hubs and grounding screw.
 - 3. Styles:
 - a. "FS" or "FD".
 - b. "Bell".
 - c. Single or multiple gang and tandem.
 - d. "EDS" or "EFS" for hazardous locations.
 - 4. Accessories: 40 mil PVC exterior coating and 2 mil urethane interior coating.
 - 5. Standards: UL 514A, UL 886.

2.8 PULL AND JUNCTION BOXES

- A. NEMA 1 Rated:
- 1. Body and cover: 14 GA minimum, galvanized steel or 14 GA minimum, steel finished with rust inhibiting primer and manufacturers standard paint inside and out.
 - 2. With or without concentric knockouts on four (4) sides.
 - 3. Flat cover fastened with screws.
- B. NEMA 4 Rated:
- 1. Body and cover: 14 GA steel finished with rust inhibiting primer and manufacturers standard paint inside and out.
 - 2. Seams continuously welded and ground smooth.
 - 3. No knockouts.
 - 4. External mounting flanges.
 - 5. Hinged or non-hinged cover held closed with stainless steel screws and clamps.
 - 6. Cover with oil resistant gasket.
- C. NEMA 4X Rated (metallic):
- 1. Body and cover: 14 GA Type 304 or 316 stainless steel.
 - 2. Seams continuously welded and ground smooth.
 - 3. No knockouts.
 - 4. External mounting flanges.
 - 5. Hinged door and stainless steel screws and clamps.
 - 6. Door with oil-resistant gasket.
- D. NEMA 4X Rated (Nonmetallic):
- 1. Body and cover: Ultraviolet light protected fiberglass-reinforced polyester boxes.
 - 2. No knockouts.
 - 3. External mounting flanges.
 - 4. Hinged door with quick release latches and padlocking hasp.
 - 5. Door with oil resistant gasket.
- E. NEMA 7 and NEMA 9 Rated:
- 1. Cast gray iron alloy or copper-free aluminum with manufacturers standard finish.
 - 2. Drilled and tapped openings or tapered threaded hub.
 - 3. Cover bolted-down with stainless steel bolts or threaded cover with neoprene gasket.
 - 4. External mounting flanges.
 - 5. Grounding lug.

6. Accessories: 40 mil PVC exterior coating and 2 mil urethane interior coating.
- F. NEMA 12 Rated:
1. Body and cover:
 - a. 14 GA steel finished with rust inhibiting primer and manufacturers standard paint inside and out.
 - b. Type 5052 H-32 aluminum, unpainted.
 2. Seams continuously welded and ground smooth.
 3. No knockouts.
 4. External mounting flanges.
 5. Non-hinged cover held closed with captivated cover screws threaded into sealed wells or hinged cover held closed with stainless steel screws and clamps.
 6. Flat door with oil resistant gasket.
- G. Miscellaneous Accessories:
1. Rigid handles for covers larger than 9 SF or heavier than 25 LBS.
 2. Split covers when heavier than 25 LBS.
 3. Weldnuts for mounting optional panels and terminal kits.
 4. Terminal blocks: Screw-post barrier-type, rated 600 volt and 20 ampere minimum.
- H. Standards: NEMA 250, UL 50.

2.9 SUPPORT SYSTEMS

- A. Multi-conduit Surface or Trapeze Type Support and Pull or Junction Box Supports:
1. Material requirements:
 - a. Galvanized steel: ASTM A123/A123M or ASTM A153/A153M.
 - b. Stainless steel: AISI Type 316.
 - c. PVC coat galvanized steel: ASTM A123/A123M or ASTM A153/A153M and 20 mil PVC coating.
- B. Single Conduit and Outlet Box Support Fasteners:
1. Material requirements:
 - a. Zinc plated steel.
 - b. Stainless steel.
 - c. Malleable iron.
 - d. PVC coat malleable iron or steel: 20 mil PVC coating.
 - e. Steel protected with zinc phosphate and oil finish.

2.10 OPENINGS AND PENETRATIONS IN WALLS AND FLOORS

- A. Sleeves, smoke and fire stop fitting through walls and floors as required.

PART 3 - EXECUTION

3.1 RACEWAY INSTALLATION - GENERAL

- A. Shall be in accordance with the requirements of:
1. NFPA 70.
 2. Manufacturer instructions.
- B. Size of Raceways:
1. Raceway sizes are shown on the Drawings, if not shown on the Drawings, then size in accordance with NFPA 70.
 2. Unless specifically indicated otherwise, the minimum raceway size shall be:
 - a. Conduit: 3/4 IN.
 - b. Wireway: 2-1/2 IN x 2-1/2 IN.
- C. Field Bending and Cutting of Conduits:
1. Utilize tools and equipment recommended by the manufacturer of the conduit, designed for the purpose and the conduit material to make all field bends and cuts.
 2. Do not reduce the internal diameter of the conduit when making conduit bends.

3. Prepare tools and equipment to prevent damage to the PVC coating.
 4. Degrease threads after threading and apply a zinc rich paint.
 5. Debur interior and exterior after cutting.
- D. Male threads of conduit systems shall be coated with an electrically conductive anti-seize compound.
- E. The protective coating integrity of conduits, fittings, outlet, pull and junction boxes and accessories shall be maintained.
1. Repair galvanized components utilizing a zinc rich paint.
 2. Repair painted components utilizing touch up paint provided by or approved by the manufacturer.
 3. Repair PVC coated components utilizing a patching compound, of the same material as the coating, provided by the manufacturer of the conduit; or a self-adhesive, highly conformable, cross-linked silicone composition strip, followed by a protective coating of vinyl tape.
 - a. Total nominal thickness: 40 mil.
 4. Repair surfaces which will be inaccessible after installation prior to installation.
- F. Remove moisture and debris from conduit before wire is pulled into place.
1. Pull mandrel with diameter nominally 1/4 IN smaller than the interior of the conduit, to remove obstructions.
 2. Swab conduit by pulling a clean, tight-fitting rag through the conduit.
 3. Tightly plug ends of conduit with tapered wood plugs or plastic inserts until wire is pulled.
- G. Only nylon or polyethylene rope shall be used to pull wire and cable in conduit systems.
- H. Where portions of a raceway are subject to different temperatures and where condensation is known to be a problem, as in cold storage areas of buildings or where passing from the interior to the exterior of a building, the raceway shall be sealed to prevent circulation of warm air to colder section of the raceway.
- I. Fill openings in walls, floors, and ceilings and finish flush with surface.

3.2 RACEWAY ROUTING

- A. Raceways shall be routed in the field unless otherwise indicated.
1. Conduit and fittings shall be installed, as required, for a complete system that has a neat appearance and is in compliance with all applicable codes.
 2. Run in straight lines parallel to or at right angles to building lines.
 3. Do not route conduits:
 - a. Through areas of high ambient temperature or radiant heat.
 - b. In suspended concrete slabs.
 4. Conduit shall not interfere with, or prevent access to, piping, valves, ductwork, or other equipment for operation, maintenance and repair.
 5. Provide pull boxes or conduit bodies as needed so that there is a maximum of 360 degrees of bends in the conduit run or in long straight runs to limit pulling tensions.
- B. All rigid conduits within a structure shall be installed exposed except as follows:
1. As indicated on the Drawings.
 2. Concealed above gypsum wall board or acoustical tile suspended ceilings.
 3. Concealed within stud frame, poured concrete, concrete block and brick walls of an architecturally finished area.
 4. Embedded in floor slabs or buried under floor slabs where shown on the Contract Drawings or with the Engineer's permission.
- C. Maintain minimum spacing between parallel conduit and piping runs in accordance with the following when the runs are greater than 30 FT:
1. Between instrumentation and telecommunication: 1 IN.
 2. Between instrumentation and 125 V, 48 V and 24 Vdc, 2 IN.
 3. Between instrumentation and 600 V and less AC power or control: 6 IN.
 4. Between instrumentation and greater than 600 Vac power: 12 IN.
 5. Between telecommunication and 125 V, 48 V and 24 Vdc, 2 IN.
 6. Between telecommunication and 600 V and less AC power or control: 6 IN.
 7. Between telecommunication and greater than 600 Vac power: 12 IN.
 8. Between 125 V, 48 V and 24 Vdc and 600 V and less AC power or control: 2 IN.
 9. Between 125 V, 48 V and 24 Vdc and greater than 600 Vac power: 2 IN.

10. Between 600 V and less AC and greater than 600 Vac: 2 IN.
 11. Between process, gas, air and water pipes: 6 IN.
- D. Conduits shall be installed to eliminate moisture pockets.
1. Where water cannot drain to openings, provide drain fittings in the low spots of the conduit run.
- E. Conduit shall not be routed on the exterior of structures except as specifically indicated on the Drawings.
- F. Where sufficient room exists within the housing of roof-mounted equipment, the conduit shall be stubbed up inside the housing.
- G. Provide all required openings in walls, floors, and ceilings for conduit penetration.

3.3 RACEWAY APPLICATIONS

- A. Permitted Raceway Types Per Wire or Cable Types:
1. Power wire or cables: All raceway types.
 2. Control wire or cables: All raceway types.
 3. Telecommunication cables: All raceway types.
- B. Permitted Raceway Types Per Area Designations:
1. Dry areas:
 - a. RGS.
 2. Wet areas:
 - a. RGS.
 3. Corrosive areas:
 - a. PVC-RGS.
 - b. Fiberglass.
 4. Highly corrosive areas:
 - a. PVC-RGS.
 - b. PVC-80.
 - c. Fiberglass.
 5. NFPA 70 hazardous areas:
 - a. RGS.
- C. Permitted Raceway Types Per Routing Locations:
1. In stud framed walls:
 - a. EMT.
 2. In concrete block or brick walls:
 - a. PVC-40.
 3. Above acoustical tile ceilings:
 - a. EMT.
 - b. NEMA 1 rated wireway.
 4. Embedded in poured concrete walls and floors:
 - a. PVC-40.
 - b. Fiberglass.
 - c. Fiberglass when emerging from concrete into areas designated as wet, corrosive or highly corrosive.
 - d. PVC-RGS when emerging from concrete into areas designated as wet, corrosive or highly corrosive.
 5. Beneath floor slab-on-grade:
 - a. PVC-40.
 - b. Fiberglass.
 6. Through floor penetrations:
 - a. Fiberglass in areas designated as wet, corrosive or highly corrosive.
 - b. PVC-RGS in areas designated as wet, corrosive or highly corrosive.
 7. Direct buried conduits and ductbanks:
 - a. PVC-80.
 - b. Fiberglass.
 - c. 90 degree elbows for transitions to above grade:
 - 1) PVC-RGS.
 - 2) Fiberglass.

- d. Long sweeping bends greater than 15 degrees:
 - 1) PVC-RGS.
 - 2) Fiberglass.
- 8. Concrete encased ductbanks:
 - a. PVC-40.
 - b. PVC-EB.
 - c. Fiberglass.
 - d. 90 degree elbows for transitions to above grade:
 - 1) PVC-RGS.
 - 2) Fiberglass.
 - e. Long sweeping bends greater than 15 degrees:
 - 1) RGS for sizes 2 IN and larger.
 - 2) Fiberglass.
- D. FLEX conduits shall be installed for connections to light fixtures, HVAC equipment and other similar devices above the ceilings.
 - 1. The maximum length shall not exceed:
 - a. 6 FT to light fixtures.
 - b. 3 FT to all other equipment.
- E. FLEX-LT conduits shall be install as the final conduit connection to light fixtures, dry type transformers, motors, electrically operated valves, instrumentation primary elements, and other electrical equipment that is liable to vibrate.
 - 1. The maximum length shall not exceed:
 - a. 6 FT to light fixtures.
 - b. 3 FT to motors.
 - c. 2 FT to all other equipment.
- F. NEMA 3R Wiring Trough:
 - 1. Surface mounted in exterior locations.

3.4 CONDUIT FITTINGS AND ACCESSORIES

- A. Rigid nonmetallic conduit and fittings shall be joined utilizing solvent cement.
 - 1. Immediately after installation of conduit and fitting, the fitting or conduit shall be rotated 1/4 turn to provide uniform contact.
- B. Install Expansion Fittings:
 - 1. Where conduits are exposed to the sun and conduit run is greater than 200 FT.
 - 2. Elsewhere as identified on the Drawings.
- C. Install Expansion/Deflection Fittings:
 - 1. Where conduits enter a structure.
 - a. Except electrical manholes and handholes.
 - b. Except where the ductbank is tied to the structure with rebar.
 - 2. Where conduits span structural expansions joints.
 - 3. Elsewhere as identified on the Drawings.
- D. Threaded connections shall be made wrench-tight.
- E. Conduit joints shall be watertight:
 - 1. Where subjected to possible submersion.
 - 2. In areas classified as wet.
 - 3. Underground.
- F. Terminate Conduits:
 - 1. In metallic outlet boxes:
 - a. RGS:
 - 1) Conduit hub and locknut.
 - 2) Insulated bushing and two (2) locknuts.
 - 3) Use grounding type locknut or bushing when required by NFPA 70.
 - b. EMT: Compression type connector and locknut.

2. In NEMA 1 rated enclosures:
 - a. RGS:
 - 1) Conduit hub and locknut.
 - 2) Insulated bushing and two (2) locknuts.
 - 3) Use grounding type locknut or bushing when required by NFPA 70.
 - b. EMT: Compression type connector and locknut.
 3. In NEMA 12 rated enclosures:
 - a. Watertight, insulated and gasketed hub and locknut.
 - b. Use grounding type locknut or bushing when required by NFPA 70.
 4. In NEMA 4 and NEMA 4X rated enclosures:
 - a. Watertight, insulated and gasketed hub and locknut.
 5. In NEMA 7 and NEMA 9 rated enclosures:
 - a. Into an integral threaded hub.
 6. When stubbed up through the floor into floor mount equipment:
 - a. With an insulated grounding bushing on metallic conduits.
 - b. With end bells on nonmetallic conduits.
- G. Threadless couplings shall only be used to join new conduit to existing conduit when the existing conduit end is not threaded and it is not practical or possible to cut threads on the existing conduit with a pipe threader.

3.5 CONDUIT SUPPORT

- A. Permitted multi-conduit surface or trapeze type support system per area designations and conduit types:
 1. Dry or wet and/or hazardous areas:
 - a. Galvanized system consisting of: Galvanized steel channels and fittings, nuts and hardware and conduit clamps.
 - b. Aluminum system consisting of: Aluminum channels, fittings and conduit clamps with stainless steel nuts and hardware.
 2. Corrosive areas:
 - a. Aluminum system consisting of: Aluminum channels, fittings and conduit clamps with stainless steel nuts and hardware.
 - b. PVC coated steel system consisting of: PVC coated galvanized steel channels and fittings and conduit clamps with stainless steel nuts and hardware.
 3. Highly corrosive areas:
 - a. PVC coated steel system consisting of: PVC coated galvanized steel channels and fittings and conduit clamps with stainless steel nuts and hardware.
 - b. Fiberglass system consisting of: Fiberglass channels and fittings, nuts and hardware and conduit clamps.
 4. Conduit type shall be compatible with the support system material.
 - a. Galvanized steel system may be used with RGS and EMT.
 - b. Stainless steel system may be used with RGS and PVC-RGS.
 - c. PVC coated galvanized steel system may be used with PVC-RGS and PVC-40 and PVC-80 and Fiberglass.
 - d. Fiberglass system may be used with PVC-40 and PVC-80 and PVC-RGS and Fiberglass.
- B. Permitted single conduit support fasteners per area designations and conduit types:
 1. Architecturally finished areas:
 - a. Material: Zinc plated steel, or steel protected with zinc phosphate and oil finish.
 - b. Types of fasteners: Spring type hangers and clips, straps, hangers with bolts, clamps with bolts and bolt on beam clamps.
 - c. Provide anti-rattle conduit supports when conduits are routed through metal studs.
 2. Dry or wet and/or hazardous areas:
 - a. Material: Zinc plated steel, stainless steel and malleable iron.
 - b. Types of fasteners: Straps, hangers with bolts, clamps with bolts and bolt on beam clamps.
 3. Corrosive areas:
 - a. Material: Stainless steel and PVC coat malleable iron or steel.
 - b. Types of fasteners: Straps, hangers with bolts, clamps with bolts and bolt on beam clamps.
 4. Highly corrosive areas:
 - a. Material: PVC coat malleable iron or steel.

- b. Types of fasteners: Straps, hangers with bolts, clamps with bolts and bolt on beam clamps.
- 5. Conduit type shall be compatible with the support fastener material.
 - a. Zinc plated steel, steel protected with zinc phosphate and oil finish and malleable iron fasteners may be used with RGS and EMT.
 - b. Stainless steel system may be used with RGS and PVC-RGS.
 - c. PVC coated fasteners may be used with PVC-RGS and PVC-40 and PVC-80.
 - d. Nonmetallic fasteners may be used with PVC-40, PVC-80 and fiberglass.
- C. Conduit Support General Requirements:
 - 1. Maximum spacing between conduit supports per NFPA 70.
 - 2. Support conduit from the building structure.
 - 3. Do not support conduit from process, gas, air or water piping; or from other conduits.
 - 4. Provide hangers and brackets to limit the maximum uniform load on a single support to 25 LBS or to the maximum uniform load recommended by the manufacturer if the support is rated less than 25 LBS.
 - a. Do not exceed maximum concentrated load recommended by the manufacturer on any support.
 - b. Conduit hangers:
 - 1) Continuous threaded rods combined with struts or conduit clamps: Do not use perforated strap hangers and iron bailing wire.
 - c. Do not use suspended ceiling support systems to support raceways.
 - d. Hangers in metal roof decks:
 - 1) Utilize fender washers.
 - 2) Not extend above top of ribs.
 - 3) Not interfere with vapor barrier, insulation, or roofing.
 - 5. Conduit support system fasteners:
 - a. Use sleeve-type expansion anchors as fasteners in masonry wall construction.
 - b. Do not use concrete nails and powder-driven fasteners.

3.6 OUTLET, PULL AND JUNCTION BOX INSTALLATION

- A. General:
 - 1. Install products in accordance with manufacturer's instructions.
 - 2. See Specification Section 26 05 00 and the Drawings for area classifications.
 - 3. Fill unused punched-out, tapped, or threaded hub openings with insert plugs.
 - 4. Size boxes to accommodate quantity of conductors enclosed and quantity of conduits connected to the box.
- B. Outlet Boxes:
 - 1. Permitted uses of metallic outlet boxes:
 - a. Housing of wiring devices:
 - 1) Recessed in all stud framed walls and ceilings.
 - 2) Recessed in poured concrete, concrete block and brick walls of architecturally finished areas and exterior building walls.
 - b. Pull or junction box:
 - 1) Above gypsum wall board or acoustical tile ceilings.
 - 2) Above 10 FT in an architecturally finished area where there is no ceiling.
 - 2. Permitted uses of cast outlet boxes:
 - a. Housing of wiring devices surface mounted in non-architecturally finished dry, wet, corrosive, highly corrosive and hazardous areas.
 - b. Pull and junction box surface mounted in non-architecturally finished dry, wet, corrosive and highly corrosive areas.
 - 3. Mount device outlet boxes where indicated on the Drawings and at heights as scheduled in Specification Section 26 05 00.
 - 4. Set device outlet boxes plumb and vertical to the floor.
 - 5. Outlet boxes recessed in walls:
 - a. Install with appropriate stud wall support brackets or adjustable bar hangers so that they are flush with the face of the wall.
 - b. Locate in ungrouted cell of concrete block with bottom edge of box flush with bottom edge of block and flush with the face of the block.
 - 6. Place barriers between switches in boxes with 277 V switches on opposite phases.

7. Back-to-back are not permitted.
 8. When an outlet box is connected to a PVC coated conduit, the box shall also be PVC coated.
- C. Pull and Junction Boxes:
1. Install pull or junction boxes in conduit runs where indicated or required to facilitate pulling of wires or making connections.
 - a. Make covers of boxes accessible.
 2. Permitted uses of NEMA 1 enclosure:
 - a. Pull or junction box surface mounted above removable ceiling tiles of an architecturally finished area.
 3. Permitted uses of NEMA 4 enclosure:
 - a. Pull or junction box surface mounted in areas designated as wet.
 4. Permitted uses of NEMA 4X metallic enclosure:
 - a. Pull or junction box surface mounted in areas designated as wet and/or corrosive.
 5. Permitted uses of NEMA 7 enclosure:
 - a. Pull or junction box surface mounted in areas designated as Class I hazardous.
 - 1) Provide PVC coating in corrosive and highly corrosive areas when PVC coated conduit is used.
 6. Permitted uses of NEMA 12 enclosure:
 - a. Pull or junction box surface mounted in areas designated as dry.

END OF SECTION

SECTION 26 09 16
CONTROL EQUIPMENT ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Operator control devices (selector switches, pushbuttons, indicator lights, etc.).
 - 2. Control devices (timers, relays, contactors, etc.).
- B. Related Sections include but are not necessarily limited to:
 - 1. Section 26 05 00 - Electrical: Basic Requirements.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. National Electrical Manufacturers Association (NEMA):
 - a. 250, Enclosures for Electrical Equipment (1000 Volts Maximum).
 - b. ICS 2, Industrial Control and System Controllers, Contactors and Overload Relays Rated 600 Volts.
 - 2. Underwriters Laboratories, Inc. (UL):
 - a. 508, Standard for Safety Industrial Control Equipment.
 - b. 508A, Standard for Safety Industrial Control Panels.
- B. Miscellaneous:
 - 1. Supplier of Industrial Control Panels shall build control panel under the provisions of UL 508A.
 - a. Entire assembly shall be affixed with a UL 508A label "Listed Enclosed Industrial Control Panel" prior to shipment to the jobsite.

1.3 SUBMITTALS

- A. Shop Drawings:
 - 1. Product technical data:
 - a. Provide submittal data for all products specified in PART 2 of this Specification:
 - b. Control panel bill of material.
 - c. See Section 26 05 00 for additional requirements.
 - 2. Fabrication and/or layout drawings.
 - a. Control panel interior and exterior layout.
 - b. Control panel wiring diagrams.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Subject to compliance with the Contract Documents, the following manufacturers are acceptable:
 - 1. Contactors:
 - a. Automatic Switch Company (ASCO).
 - b. Eaton.
 - c. General Electric Company.
 - d. Square D Company.
 - e. Siemens.
 - f. Allen Bradley.
 - 2. Photocells and time clocks:
 - a. Grasslin.
 - b. Tork.
 - c. Intermatic.

- d. Paragon.
- 3. Terminal blocks:
 - a. Phoenix Contact.
 - b. Allen-Bradley.
- 4. Enclosures:
 - a. Hoffman Engineering Co.
 - b. Wiegmann.
 - c. Eaton B-Line.
 - d. Adalet.
 - e. Stahlin.

2.2 PILOT DEVICES

- A. General Requirements:
 - 1. Standards: NEMA ICS 2, UL 508.
 - 2. Heavy-duty NEMA 4/13 watertight/oiltight.
 - 3. Heavy-duty NEMA 4/4X corrosion resistant.
 - 4. Heavy-duty factory sealed, explosion-proof and dust ignition-proof (Class I and II).
 - 5. Mounting hole: 30.5 mm.
 - 6. Contact blocks: 10 amp, NEMA A600 rated, number as required to fulfill functions shown or specified.
 - 7. Legend plate marked as indicated on Drawings or specified.
- B. Selector Switches:
 - 1. Two, three- or four-position rotary switch as required to fulfill functions shown or specified.
 - 2. Maintained contact type.
 - 3. Knob or lever type operators.

2.3 CONTACTORS

- A. General Requirements:
 - 1. Standards: NEMA ICS 2, UL 508.
- B. Lighting and Remote Control Switches:
 - 1. Electrically operated, electrically held.
 - 2. Coil voltage: 120 Vac or as required.
 - 3. Contacts: Totally enclosed, double-break silver-cadmium-oxide.
 - 4. Rated for ballasted lighting, tungsten and general use loads.
 - 5. Number of poles, continuous ampere rating and voltage, as indicated on Drawings or as specified.
 - 6. Auxiliary control relays, as indicated on Drawings or as specified.
 - 7. Auxiliary contacts, as indicated on Drawings or as specified.
- C. Definite Purpose:
 - 1. Coil voltage: 120 Vac or as required.
 - 2. Contacts: Totally enclosed, double-break silver-cadmium-oxide.
 - 3. Resistive load and horsepower rated.
 - 4. Number of poles, continuous ampere rating and voltage, as indicated on Drawings or as specified.
 - 5. Auxiliary contacts, as indicated on Drawings or as specified.

2.4 PHOTOCELLS AND TIME CLOCKS

- A. Photocells:
 - 1. Weatherproof enclosure.
 - 2. Adjustable turn-on range, initially set at 1.0 footcandles.
 - a. Turn-off level approximately three times turn-on.
 - 3. Provide time delay device to eliminate nuisance switching.
 - 4. Voltage, amperage and/or wattage ratings as required for the application.

2.5 TERMINATION EQUIPMENT

- A. General Requirements:

1. Modular type with screw compression clamp.
 2. Screws: Stainless steel.
 3. Current bar: Nickel-plated copper alloy.
 4. Thermoplastic insulation rated for -40 to +90 DegC.
 5. Wire insertion area: Funnel-shaped to guide all conductor strands into terminal.
 6. End sections and end stops at each end of terminal strip.
 7. Machine-printed terminal markers on both sides of block.
 8. Spacing: 6 mm.
 9. Wire size: 22-12 AWG.
 10. Rated voltage: 600 V.
 11. DIN rail mounting.
- B. Standard-type block:
1. Rated current: 30 A.
 2. Color: Gray body.
- C. Bladed-type disconnect block:
1. Terminal block with knife blade disconnect which connects or isolated the two sides of the block.
 2. Rated current: 10 A.
 3. Color:
 - a. Panel control voltage leaves enclosure - normal: Gray body, orange switch.
 - b. Foreign voltage entering enclosure: Orange body, orange switch.
- D. Grounded-type block:
1. Electrically grounded to mounting rail.
 2. Terminal ground wires and analog cable shields.
 3. Color: Green and yellow body.
- E. Fuse Holders:
1. Blocks can be ganged for multi-pole operation.
 2. Spacing: 9.1 mm.
 3. Wire size: 30-12 AWG.
 4. Rated voltage: 300 V.
 5. Rated current: 12 A.
 6. Fuse size: 1/4 x 1-1/4.
 7. Blown fuse indication.
 8. DIN rail mounting.

2.6 ENCLOSURES

- A. Control Panels:
1. NEMA 4 rated:
 - a. Seams continuously welded and ground smooth.
 - b. No knockouts.
 - c. External mounting flanges.
 - d. Hinged or non-hinged cover held closed with stainless steel screws and clamps.
 - e. Cover with oil resistant gasket.
 2. NEMA 4X rated:
 - a. Body and cover: 14 GA Type 304 or 316 stainless steel.
 - b. Seams continuously welded and ground smooth.
 - c. No knockouts.
 - d. External mounting flanges.
 - e. Hinged door and stainless steel screws and clamps.
 - f. Door with oil-resistant gasket.
 3. NEMA 7 and 9 rated:
 - a. Cast gray iron alloy or copper-free aluminum.
 - b. Drilled and tapped openings or tapered threaded hub.
 - c. Cover bolted-down with stainless steel bolts or threaded cover with neoprene gasket.
 - d. External mounting flanges.

- e. Grounding lug.
- f. Accessories: 40 mil PVC exterior coating and 2 mil urethane interior coating.
- 4. NEMA 12 enclosure:
 - a. Body and cover: 14 GA steel finished with rust inhibiting primer and manufacturers standard paint inside and out.
 - b. No knockouts.
 - c. External mounting flanges.
 - d. Non-hinged stainless steel cover held closed with captivated cover screws threaded into sealed wells or hinged cover held closed with stainless steel screws and clamps.
 - e. Flat door with oil resistant gasket.
- 5. Control panel miscellaneous accessories:
 - a. Back plane mounting panels: Steel with white enamel finish or Type 304 stainless steel.
 - b. Interiors shall be white or light gray in color.
 - c. Wire management duct:
 - 1) Bodies: PVC with side holes.
 - 2) Cover: PVC snap-on.
 - 3) Size as required.
 - d. Rigid handles for covers larger than 9 SF or heavier than 25 LBS.
 - e. Split covers when heavier than 25 LBS.
 - f. Floor stand kits made of same material as the enclosure.
 - g. Weldnuts for mounting optional panels and terminal kits.
 - h. Ground bonding jumper from door, across hinge, to enclosure body.
- 6. Standards: NEMA 250, UL 508.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install as indicated and in accordance with manufacturer's recommendations and instructions.
- B. Control Panels:
 - 1. Size as required to mount the equipment.
 - 2. Permitted uses of NEMA 4 enclosure:
 - a. Surface mounted in areas designated as wet.
 - 3. Permitted uses of NEMA 4X enclosure:
 - a. Surface mounted in areas designated as wet and/or corrosive or highly corrosive.
 - 4. Permitted uses of NEMA 7 enclosure:
 - a. Surface mounted in areas designated as Class I hazardous.
 - 5. Permitted uses of NEMA 12 enclosure:
 - a. Surface mounted in areas designated as dry and/or dusty architecturally or non-architecturally finished areas.

END OF SECTION

SECTION 26 22 13
DRY-TYPE TRANSFORMERS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Dry-type transformers, 1000 kVA and less.
- B. Related Sections include but are not necessarily limited to:
 - 1. Section 26 05 00 - Electrical: Basic Requirements.
 - 2. Section 26 05 26 - Grounding.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. Institute of Electrical and Electronics Engineers, Inc. (IEEE):
 - a. C57.96, Guide for Loading Dry-Type Distribution and Power Transformers.
 - 2. National Electrical Manufacturers Association (NEMA):
 - a. 250, Enclosures for Electrical Equipment (1000 Volts Maximum).
 - b. ST 20, Dry-Type Transformers for General Applications.
 - c. TP 1, Guide for Determining Energy Efficiency for Distribution Transformers.
 - 3. Underwriters Laboratories, Inc. (UL):
 - a. 506, Standard for Safety Specialty Transformers.
 - b. 1561, Standard for Safety Dry-Type General Purpose and Power Transformers.

1.3 SUBMITTALS

- A. Shop Drawings:
 - 1. Product technical data:
 - a. Provide submittal data for all products specified in PART 2 of this Specification Section.
 - b. See Specification Section 26 05 00 for additional requirements.
 - 2. Fabrication and/or layout drawings.
 - a. Nameplate drawing.
 - 3. Certifications:
 - a. Sound level certifications.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Subject to compliance with the Contract Documents, the following manufacturers are acceptable:
 - 1. Eaton.
 - 2. General Electric Company.
 - 3. Square D Company.
 - 4. Siemens.
 - 5. Sola/Hevi-Duty.

2.2 GENERAL PURPOSE DRY-TYPE TRANSFORMERS

- A. Ventilated or non-ventilated, air cooled, two (2) winding type.
- B. Cores:
 - 1. High grade, non-aging silicon steel with high magnetic permeability, and low hysteresis and eddy current losses.
 - 2. Magnetic flux densities are to be kept well below the saturation point.

- C. Coils: Continuous wound with electrical grade aluminum.
- D. Ventilated Units:
 - 1. Core and coils assembly impregnated with non-hygroscopic, thermosetting varnish and cured to reduce hot spots and seal out moisture and completely isolated from the enclosure by means of vibration dampening pads.
 - 2. Dripproof, NEMA 1, steel enclosure finished with a weather-resistant enamel and ventilation openings protected from falling dirt.
- E. Furnish Taps for Transformers as follows:
 - 1. 1 PH, 2 kVA and below: None.
 - 2. 1 PH, 3 to 25 kVA: Two (2) 5 percent FCBN.
 - 3. 1 PH, 25 kVA and above: Two (2) 2.5 percent FCAN and four (4) 2.5 percent FCBN.
 - 4. 3 PH, 3 to 15 kVA: Two (2) 5 percent FCBN.
 - 5. 3 PH, 15 kVA and above: Two (2) 2.5 percent FCAN and four (4) 2.5 percent FCBN.
- F. Sound Levels:
 - 1. Manufacturer shall guarantee not to exceed the following:
 - a. Up to 9 kVA: 40 dB.
 - b. 10 to 50 kVA: 45 dB.
 - c. 51 to 150 kVA: 50 dB.
 - d. 151 to 300 kVA: 55 dB.
- G. Efficiency:
 - 1. Ventilated, 15 kVA and larger: Energy efficient meeting NEMA TP 1 requirements.
- H. Insulating Material (600 V and below):
 - 1. 3 to 15 kVA units: 185 DegC insulation system with a 115 DegC rise.
 - 2. 15 kVA and above units: 220 DegC insulation system with a 150 DegC rise.
- I. Ratings: 60 Hz, voltage, KVA and phase, as indicated on the Drawings.
- J. Finish: Rust inhibited primer and manufacturers standard paint inside and out.
- K. Standards: IEEE C57.96, NEMA ST 20, NEMA TP 1, UL 506, UL 1561.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Indoor Locations:
 - 1. Provide ventilated type for 15 kVA units and above.
 - 2. Provide non-ventilated type for 9 kVA units and below and were indicated on the Drawings.
 - 3. Mount 9 kVA units and below on wall.
 - 4. Mount 15 kVA units and above on chamfered 4 IN high concrete housekeeping pad or from wall and/or ceiling, at 7 FT above finished floor, using equipment support brackets per Section 26 05 00.
 - 5. Provide rubber vibrations isolation pads.
- C. Enclosures: Painted steel in all areas except stainless steel in highly corrosive areas.
- D. Ground in accordance with Section 26 05 26.

END OF SECTION

SECTION 26 24 16
PANELBOARDS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Lighting and appliance panelboards.
 - 2. Power distribution panelboards.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Section 26 05 00 - Electrical: Basic Requirements.
 - 2. Section 26 28 00 - Overcurrent and Short Circuit Protective Devices.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. National Electrical Manufacturers Association (NEMA):
 - a. 250, Enclosures for Electrical Equipment (1000 Volts Maximum).
 - b. PB 1, Panelboards.
 - 2. National Fire Protection Association (NFPA):
 - a. 70, National Electrical Code (NEC).
 - 3. Underwriters Laboratories, Inc. (UL):
 - a. 50, Enclosures for Electrical Equipment, Non-Environmental Considerations.
 - b. 67, Standard for Panelboards.

1.3 SUBMITTALS

- A. Shop Drawings:
 - 1. Product technical data.
 - a. Provide submittal data for all products specified in PART 2 of this Specification Section.
 - b. See Specification Section 26 05 00 for additional requirements.
 - 2. Fabrication and/or layout drawings:
 - a. Panelboard layout with alphanumeric designation, branch circuit breakers size and type, as indicated in the panelboard schedules.
- B. Operation and Maintenance Manuals:
 - 1. Panelboard schedules with as-built conditions.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Subject to compliance with the Contract Documents, the following manufacturers are acceptable:
 - 1. Eaton.
 - 2. General Electric Company.
 - 3. Square D Company.
 - 4. Siemens.

2.2 MANUFACTURED UNITS

- A. Standards: NEMA PB 1, NFPA 70, UL 50, UL 67.
- B. Ratings:
 - 1. Current, voltage, number of phases, number of wires as indicated on the Drawings.
 - 2. Panelboards rated 240 Vac or less: 10,000 amp minimum short circuit rating or as indicated in the schedule.
 - 3. Panelboards rated 480 Vac: 14,000 amp minimum short circuit rating or as indicated in the schedule.

- C. Construction:
 - 1. Interiors factory assembled and designed such that switching and protective devices can be replaced without disturbing adjacent units and without removing the main bus connectors.
 - 2. Multi-section panelboards: Feed-through or sub-feed lugs.
 - 3. Main lugs: Solderless type approved for copper and aluminum wire.
- D. Bus Bars:
 - 1. Main bus bars:
 - a. Plated aluminum or copper sized to limit temperature rise to a maximum of 65 DegC above an ambient of 40 DegC.
 - b. Drilled and tapped and arranged for sequence phasing of the branch circuit devices.
 - 2. Ground bus and isolated ground bus, when indicated on the Drawings: Solderless mechanical type connectors.
 - 3. Neutral bus bars: Insulated 100 percent rated or 200 percent rated, when indicated on the Drawings and with solderless mechanical type connectors.
- E. Enclosure:
 - 1. Boxes: Code gage galvanized steel, furnish without knockouts.
 - 2. Trim assembly: Code gage steel finished with rust inhibited primer and manufacturers standard paint inside and out.
 - 3. Lighting and appliance panelboard:
 - a. Trims supplied with hinged door over all circuit breaker handles.
 - b. Trims for surface mounted panelboards, same size as box.
 - c. Trims for flush mounted panelboards, overlap the box by 3/4 IN on all sides.
 - d. Doors lockable with corrosion resistant chrome-plated combination lock and catch, all locks keyed alike.
 - e. Nominal 20 IN wide and 5-3/4 IN deep with gutter space in accordance with NFPA 70.
 - f. Clear plastic cover for directory card mounted on the inside of each door.
 - g. NEMA 3R or NEMA 12 rated: Door gasketed.
 - 4. Power distribution panelboard:
 - a. Trims cover all live parts with switching device handles accessible.
 - b. Less than or equal to 12 IN deep with gutter space in accordance with NFPA 70.
 - c. Clear plastic cover for directory card mounted front of enclosure.
 - d. NEMA 3R or NEMA 12 rated: Doors gasketed and lockable with corrosion resistant chrome-plated combination lock and catch, all locks keyed alike.
- F. Overcurrent and Short Circuit Protective Devices:
 - 1. Main overcurrent protective device:
 - a. Molded case circuit breaker.
 - 2. Branch overcurrent protective devices:
 - a. Mounted molded case circuit breaker.
 - 3. See Section 26 28 00 for overcurrent and short circuit protective device requirements.
 - 4. Factory installed.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install as indicated on the Drawings, in accordance with the NFPA 70, and in accordance with manufacturer's instructions.
- B. Support panelboard enclosures from wall studs or modular channels support structure, per Specification Section 26 05 00.
- C. Provide NEMA 1, NEMA 3R or NEMA 12 rated enclosure as indicated on the Drawings.
- D. Provide each panelboard with a typed directory:
 - 1. Identify all circuit locations in each panelboard with the load type and location served.
 - 2. Mechanical equipment shall be identified by Owner-furnished designation if different than designation indicated on the Drawings.
 - 3. Room names and numbers shall be final building room names and numbers as identified by the Owner if different than designation indicated on the Drawings.

END OF SECTION

SECTION 26 27 26
WIRING DEVICES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Material and installation requirements for:
 - a. Light switches.
 - b. Receptacles.
 - c. Device wallplates and coverplates.

B. Related Specification Sections include but are not necessarily limited to:

1. Section 26 05 00 - Electrical: Basic Requirements.
2. Section 26 05 33 - Raceways and Boxes.

1.2 QUALITY ASSURANCE

A. Referenced Standards:

1. National Electrical Manufacturers Association (NEMA):
 - a. 250, Enclosures for Electrical Equipment (1000 Volts Maximum).
 - b. WD 1, General Color Requirements for Wiring Devices.
 - c. WD 6, Wiring Devices - Dimensional Requirements.
2. Underwriters Laboratories, Inc. (UL):
 - a. 20, General-Use Snap Switches.
 - b. 498, Standard for Attachment Plugs and Receptacles.
 - c. 514A, Metallic Outlet Boxes.
 - d. 943, Ground-Fault Circuit-Interrupters.

1.3 SUBMITTALS

A. Shop Drawings:

1. Product technical data:
 - a. Provide submittal data for all products specified in PART 2 of this Specification Section.
 - b. See Specification Section 26 05 00 for additional requirements.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Subject to compliance with the Contract Documents, the following manufacturers are acceptable:

1. Light switches and receptacles:
 - a. Bryant.
 - b. Eaton Cooper Wiring Devices.
 - c. Hubbell.
 - d. Leviton.
 - e. Pass & Seymour.
 - f. Eaton Crouse-Hinds.
 - g. Appleton Electric Co.
 - h. Killark.

2.2 LIGHT SWITCHES

A. General requirements unless modified in specific requirements paragraph of switches per designated areas or types:

1. Toggle type, quiet action, Industrial Specification Grade.
2. Self grounding with grounding terminal.
3. Back and side wired.
4. Solid silver cadmium oxide contacts.

5. Rugged urea housing and one-piece switch arm.
6. Rated 20 A, 120/277 Vac.
7. Switch handle color: Ivory.
8. Types as indicated on the Drawings:
 - a. Single-pole.
 - b. Double-pole.
 - c. 3-way.
 - d. 4-way.
9. Standards: UL 20, UL 514A, NEMA WD 6.

B. Architecturally Finished Areas:

1. Wallplate:
 - a. Ivory colored high impact thermoplastic or nylon.
 - b. Single or multiple gang as required.

C. Dry Non-architecturally Finished Areas:

1. Coverplate:
 - a. Zinc plated malleable iron or galvanized steel.
 - b. Single or multiple gang as required.

D. Wet Non-architecturally Finished Areas:

1. Coverplate:
 - a. Gasketed zinc plated malleable iron or aluminum with stainless steel screws utilizing rocker, front mounted toggle or pull type switch.
 - b. Single or multiple gang as required.

E. Corrosive Areas:

1. Corrosion resistant nickel plated metal parts.
2. Coverplate:
 - a. Gasketed zinc plated malleable iron or copper free aluminum with stainless steel screws utilizing rocker, front mounted toggle or pull type switch.
 - b. Single or multiple gang as required.

F. Highly Corrosive Areas:

1. Corrosion resistant nickel plated metal parts.
2. Coverplate:
 - a. PVC-RGS conduit system:
 - 1) PVC coated zinc plated malleable iron or copper free aluminum with stainless steel screws utilizing rocker, front mounted toggle or pull type switch.
 - 2) Single or multiple gang as required.
 - b. PVC conduit system:
 - 1) Gray colored high impact thermoplastic.
 - 2) Single or multiple gang as required.

G. Hazardous Areas:

1. Rated for Class I, Division 1 and 2, Groups B, C, and D; and Class II, Division 1 and 2 areas, Groups E, F, and G.
2. Switch enclosed in separate sealing chamber.
 - a. Sealing chamber has prewired factory sealed pigtail leads.
3. Coverplate:
 - a. Zinc plated malleable iron or copper free aluminum with stainless steel screws utilizing rocker or front mounted toggle type switch.
 - b. Single or multiple gang as required.
4. Standards: UL 894.

2.3 RECEPTACLES

A. General requirements unless modified in specific requirements paragraph of receptacles per designated areas:

1. Straight blade, Industrial Specification Grade.
2. Brass triple wipe line contacts.
3. One-piece grounding system with double wipe brass grounding contacts and self-grounding strap.
4. Back and side wired.

5. Rated 20 A, 125 Vac.
6. High impact nylon body.
7. Receptacle body color:
 - a. Normal power: Ivory.
 - b. Generator or UPS power: Red.
8. Types as indicated on the Drawings:
 - a. Normal: Self grounding with grounding terminal.
 - b. Ground fault circuit interrupter: Feed-through type with test and reset buttons.
9. Duplex or simplex as indicated on the Drawings.
10. Configuration: NEMA 5-20R.
11. Standards: UL 498, UL 514A, UL 943, NEMA WD 1, NEMA WD 6.

B. Architecturally Finished Areas:

1. Wallplate: Ivory colored high impact thermoplastic or nylon.

C. Dry Non-architecturally Finished Areas:

1. Coverplate:
 - a. Zinc plated malleable iron or galvanized steel.
 - b. Single or multiple gang as required.

D. Wet Non-architecturally Finished Areas:

1. Coverplate: Weatherproof (NEMA 3R) while in use, gasketed, copper-free aluminum, 2.5 IN minimum cover depth.

E. Exterior Locations:

1. Coverplate: Weatherproof (NEMA 3R) while in use, gasketed, copper-free aluminum, 2.5 IN minimum cover depth.

F. Corrosive Areas:

1. Corrosion resistant nickel plated metal parts.
2. Receptacle body color: Yellow.
3. Coverplate:
 - a. Zinc plated malleable iron or galvanized steel.
 - b. Single or multiple gang as required.

G. Highly Corrosive Areas:

1. Corrosion resistant nickel plated metal parts.
2. Receptacle body color: Yellow.
3. Coverplate:
 - a. PVC-RGS conduit system:
 - 1) PVC coated zinc plated malleable iron or copper free aluminum.
 - 2) Single or multiple gang as required.
 - b. PVC conduit system:
 - 1) Gray colored high impact thermoplastic.
 - 2) Single or multiple gang as required.

H. Special Purpose Receptacles:

1. NEMA configuration as indicated on the Drawings.
2. Coverplate: See requirements per area designations herein.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Mount devices where indicated on the Drawings and as scheduled in Specification Section 26 05 00.
- C. See Specification Section 26 05 33 for device outlet box requirements.
- D. Where more than one (1) receptacle is installed in a room, they shall be symmetrically arranged.
- E. Provide blank plates for empty outlets.

END OF SECTION

SECTION 26 28 00
OVERCURRENT AND SHORT CIRCUIT PROTECTIVE DEVICES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Low voltage circuit breakers.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Section 26 05 00 - Electrical: Basic Requirements.

1.2 QUALITY ASSURANCE

- 1. Institute of Electrical and Electronics Engineers, Inc. (IEEE):
 - a. C37.13, Standard for Low-Voltage AC Power Circuit Breakers Used in Enclosures.
 - b. C37.16, Low-Voltage Power Circuit Breakers and AC Power Circuit Protectors - Preferred Ratings, Related Requirements, and Application Recommendations.
 - c. C37.17, Trip Devices for AC and General Purpose DC Low Voltage Power Circuit Breakers.
- 2. National Electrical Manufacturers Association (NEMA):
 - a. AB 1, Molded-Case Circuit Breakers, Molded Case Switches, and Circuit-Breaker Enclosures. (Equivalent to UL 489)
- 3. National Fire Protection Association (NFPA):
 - a. 70, National Electrical Code (NEC).
- 4. Underwriters Laboratories, Inc. (UL):
 - a. 489, Standard for Safety Molded-Case Circuit Breakers, Molded-Case Switches, and Circuit-Breaker Enclosures.
 - b. 943, Standard for Safety for Ground-Fault Circuit-Interrupters.
 - c. 1066, Standard for Low-Voltage AC and DC Power Circuit Breakers Used in Enclosures.

1.3 SUBMITTALS

- A. Shop Drawings:
 - 1. Product technical data including:
 - a. Provide submittal data for all products specified in PART 2 of this Specification Section.
 - b. See Specification Section 26 05 00 for additional requirements.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Subject to compliance with the Contract Documents, the following manufacturers are acceptable:
 - 1. Circuit breakers:
 - a. Eaton.
 - b. General Electric Company.
 - c. Square D Company.
 - d. Siemens.

2.2 CIRCUIT BREAKERS

- A. Molded Case Type:
 - 1. General:
 - a. Standards: NEMA AB 1, UL 489.
 - b. Unit construction.
 - c. Over-center, toggle handle operated.

- d. Quick-make, quick-break, independent of toggle handle operation.
 - e. Manual and automatic operation.
 - f. All poles open and close simultaneously.
 - g. Three (3) position handle: On, off and tripped.
 - h. Molded-in ON and OFF markings on breaker cover.
 - i. One-, two- or three-pole as indicated on the Drawings.
 - j. Current and interrupting ratings as indicated on the Drawings.
 - k. Bolt on type.
2. Thermal magnetic type:
- a. Inverse time overload and instantaneous short circuit protection by means of a thermal magnetic element.
 - b. Frame size 150 amp and below:
 - 1) Non-interchangeable, non-adjustable thermal magnetic trip units.
 - c. Frame sizes 225 to 400 amp (trip settings less than 400A):
 - 1) Interchangeable and adjustable instantaneous thermal magnetic trip units.
 - d. Ground Fault Circuit Interrupter (GFCI) Listed:
 - 1) Standard: UL 943.
 - 2) One- or two-pole as indicated on the Drawings.
 - 3) Class A ground fault circuit.
 - 4) Trip on 5 mA ground fault (4-6 mA range).

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Current and interrupting ratings as indicated on the Drawings.
- B. Series rated systems not acceptable.
- C. Devices shall be ambient temperature compensated.
- D. Circuit Breakers:
 - 1. Molded case circuit breakers shall incorporate the following, unless indicated otherwise on the Drawings:
 - a. Frame sizes 400 amp and less with trip setting less than 400A shall be thermal magnetic type.

END OF SECTION

**SECTION 26 28 16
SAFETY SWITCHES**

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Safety switches.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Section 26 05 00 - Electrical: Basic Requirements.
 - 2. Section 26 28 00 - Overcurrent and Short Circuit Protective Devices.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. National Electrical Manufacturers Association (NEMA):
 - a. 250, Enclosures for Electrical Equipment (1000 Volts Maximum).
 - b. KS 1, Enclosed and Miscellaneous Distribution Equipment Switches (600 Volts Maximum).
 - 2. Underwriters Laboratories, Inc. (UL):
 - a. 98, Enclosed and Dead-Front Switches.

1.3 SUBMITTALS

- A. Shop Drawings:
 - 1. Product technical data:
 - a. Provide submittal data for all products specified in PART 2 of this Specification Section.
 - b. Provide a table that associates safety switch model number with connected equipment tag number.
 - c. See Specification Section 26 05 00 for additional requirements.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Subject to compliance with the Contract Documents, the following safety switch manufacturers are acceptable:
 - 1. Eaton
 - 2. General Electric Company.
 - 3. Square D Company.
 - 4. Siemens.
 - 5. Appleton Electric Company.
 - 6. Crouse-Hinds.
 - 7. Killark.

2.2 SAFETY SWITCHES

- A. General:
 - 1. Non-fusible or fusible as indicated on the Drawings.
 - 2. Suitable for service entrance when required.
 - 3. NEMA Type HD heavy-duty construction.
 - 4. Switch blades will be fully visible in the OFF position with the enclosure door open.
 - 5. Quick-make/quick-break operating mechanism.
 - 6. Deionizing arc chutes.
 - 7. Manufacture double-break rotary action shaft and switchblade as one (1) common component.
 - 8. Clear line shields to prevent accidental contact with line terminals.
 - 9. Operating handle (except NEMA 7 and NEMA 9 rated enclosures):

- a. Red and easily recognizable.
 - b. Padlockable in the OFF position
 - c. Interlocked to prevent door from opening when the switch is in the ON position with a defeater mechanism.
- B. Ratings:
1. Horsepower rated of connected motor.
 2. Voltage and amperage: As indicated on the Drawings.
 3. Short circuit withstand:
 - a. Non-fused: 10,000A.
 - b. Fused: 200,000A.
- C. Accessories, when indicated in PART 3 of this Specification Section or on the Drawings:
1. Neutral kits.
 2. Ground lug kits.
 3. Auxiliary contact kits with 1 N.O. and 1 N.C. contact.
- D. Enclosures:
1. NEMA 1 rated:
 - a. Body and cover: Sheet steel finished with rust inhibiting primer and manufacturers standard paint inside and out.
 - b. With or without knockouts, hinged and lockable door.
 2. NEMA 3R rated:
 - a. Body and cover: Sheet steel finished with rust inhibiting primer and manufacturers standard paint inside and out.
 - b. With or without knockouts, hinged and lockable door.
 3. NEMA 4 rated:
 - a. Body and cover: Sheet steel finished with rust inhibiting primer and manufacturers standard paint inside and out.
 - b. No knockouts, external mounting flanges, hinged, gasketed and lockable door.
 4. NEMA 4X rated (metallic):
 - a. Body and cover: Type 304 or 316 stainless steel.
 - b. No knockouts, external mounting flanges, hinged and gasketed door.
 5. NEMA 4X rated (nonmetallic):
 - a. Body and cover: Ultraviolet light protected fiberglass-reinforced polyester boxes.
 - b. No knockouts, external mounting flanges, hinged, gasketed and lockable door.
 6. NEMA 7 and NEMA 9 rated:
 - a. Cast gray iron alloy or copper-free aluminum with manufacturers standard finish.
 - b. Drilled and tapped openings or tapered threaded hub.
 - c. Gasketed cover bolted-down with stainless steel bolts.
 - d. External mounting flanges.
 - e. Operating handle padlockable in the OFF position.
 7. NEMA 12 rated:
 - a. Body and cover: Sheet steel finished with rust inhibiting primer and manufacturers standard paint inside and out.
 - b. No knockouts, external mounting flanges, hinged and gasketed door.
- E. Overcurrent and short circuit protective devices:
1. Fuses.
 2. See Specification Section 26 28 00 for overcurrent and short circuit protective device requirements.
- F. Standards: NEMA KS 1, UL 98.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install as indicated and in accordance with manufacturer's instructions and recommendations.

- B. Install switches adjacent to the equipment they are intended to serve unless otherwise indicated on the Drawings.
- C. Provide auxiliary contact kit on local safety switches as indicated in the Drawings.
 - 1. The VFD is to be disabled with the switch is in the open position.
- D. Permitted uses of NEMA 1 enclosure:
 - 1. Surface or flush mounted in areas designated dry in architecturally finished areas.
- E. Permitted uses of NEMA 3R enclosure:
 - 1. Surface mounted in exterior location for HVAC equipment only.
- F. Permitted uses of NEMA 4 enclosure:
 - 1. Surface mounted in areas designated as wet.
- G. Permitted uses of NEMA 4X metallic enclosure:
 - 1. Surface mounted in areas designated as wet and/or corrosive.
- H. Permitted uses of NEMA 4X nonmetallic enclosure:
 - 1. Surface mounted in areas designated as corrosive.
 - 2. Surface mounted in areas designated as highly corrosive.
- I. Permitted uses of NEMA 7 enclosure:
 - 1. Surface mounted in areas designated as Class I hazardous.
 - 2. Provide PVC coating in corrosive and highly corrosive areas when PVC coated conduit is used.
- J. Permitted uses of NEMA 9 enclosure:
 - 1. Surface mounted in areas designated as Class II hazardous.
 - 2. Provide PVC coating in corrosive and highly corrosive areas when PVC coated conduit is used.
- K. Permitted uses of NEMA 12 enclosure:
 - 1. Surface mounted in areas designated as dry in non-architecturally finished areas.

END OF SECTION

SECTION 26 50 00
INTERIOR AND EXTERIOR LIGHTING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Material and installation requirements for:
 - a. Interior building lighting fixtures.
 - b. Exterior building and site lighting fixtures.
 - c. Lamps.
 - d. Ballasts.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Section 26 05 00 - Electrical: Basic Requirements.
 - 2. Section 26 05 19 - Wire and Cable - 600 Volt and Below.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. American National Standards Institute (ANSI).
 - 2. Certified Ballast Manufacturers (CBM).
 - 3. Federal Communications Commission (FCC):
 - a. Code of Federal Regulations (CFR), 47 CFR 18, Industrial, Scientific and Medical Equipment.
 - 4. Institute of Electrical and Electronics Engineers, Inc. (IEEE):
 - a. C62.41, Recommended Practice on Surge Voltages in Low-Voltage AC Power Circuits.
 - 5. National Electrical Manufacturers Association (NEMA):
 - a. 250, Enclosures for Electrical Equipment (1000Volts Maximum).
 - b. LE 4, Recessed Luminaires, Ceiling Compatibility.
 - 6. National Electrical Manufacturers Association/American National Standards Institute (NEMA/ANSI):
 - a. C82.1, Lamp Ballasts - Line Frequency Fluorescent Lamp Ballast.
 - b. C82.4, Ballasts for High-Intensity Discharge and Low-Pressure Sodium (LPS) Lamps (Multiple-Supply Type).
 - c. C82.11, High-Frequency Fluorescent Lamp Ballasts - Supplements.
 - 7. National Fire Protection Association (NFPA):
 - a. 70, National Electrical Code (NEC).
 - b. 101, Life Safety Code.
 - 8. Underwriters Laboratories, Inc. (UL):
 - a. 248-4, Low-Voltage Fuses - Part 4: Class CC Fuses.
 - b. 924, Standard for Emergency Lighting and Power Equipment.
 - c. 935, Standard for Fluorescent-Lamp Ballasts.
 - d. 1029, Standard for High-Intensity-Discharge Lamp Ballasts.
 - e. 1598, Luminaires.
 - 9. United States Department of Energy (USDOE):
 - a. EPAct, the National Energy Policy Act.

1.3 SUBMITTALS

- A. Shop Drawings:
 - 1. Product technical data:
 - a. Provide submittal data for all products specified in PART 2 of this Specification Section.
 - b. Identify fixtures by Fixture Schedule number.
 - c. Fixture data sheet including:
 - 1) Photometric performance data including candlepower distribution and coefficient of utilization (CU) table.
 - 2) Fixture effective projected areas for pole mounted fixtures.
 - d. See Specification Section 26 05 00 for additional requirements.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Subject to compliance with the Contract Documents, the following manufacturers are acceptable:
 - 1. Lighting fixtures: See Fixture Schedule.
 - 2. Lamps:
 - a. Osram/Sylvania.
 - b. General Electric.
 - c. Philips.
 - d. Venture.
 - 3. Ballasts: Fixture manufacturer's standard.
 - 4. Emergency ballasts: Bodine.
 - 5. Emergency transfer devices: Bodine.

2.2 GENERAL REQUIREMENTS

- A. All lighting fixtures and electrical components:
 - 1. UL labeled.
 - 2. Fixtures complete with lamps and ballasts.
- B. Provide standard plaster frame for all recessed lighting fixtures installed in plaster walls or ceilings.
 - 1. Design, finish and fabricate material to preclude possibility of rust stain in plaster.
- C. No live parts normally exposed to contact.
- D. When intended for use in wet areas: Mark fixtures "Suitable for wet locations."
- E. When intended for use in damp areas: Mark fixtures "Suitable for damp locations" or "Suitable for wet locations."

2.3 LIGHT FIXTURES

- A. Incandescent:
 - 1. UL 1598.
 - 2. Lamp base.
 - a. Less than or equal to 300W: Medium base.
 - b. Greater than 300W: Mogul base.
 - 3. Visibly marked to indicate maximum lamp wattage that can be used with the fixture.
- B. Fluorescent:
 - 1. UL 1598.
 - 2. NEMA LE 4 for recessed locations.
 - 3. Lenses: As indicated in Fixture Schedule, with the following minimums:
 - a. Troffer: 100 percent virgin acrylic, conical shaped, female 0.1875 IN, square based prisms, aligned 45 degrees to the length and width, 0.125 IN nominal thickness.
 - 4. Finish:
 - a. Manufacturer's standard polyester, acrylic enamel or epoxy powder coating applied after fabrication.
 - b. Manufacturer's standard color or special color specified in Fixture Schedule.
 - 5. Prewired and provided with lamps that are properly mated to the ballast operating characteristics.

2.4 LAMPS

- A. Fluorescent:
 - 1. T12 (430 mA) instant or rapid-start medium bipin lamps.
 - a. Correlated color temperature of 3500 degrees Kelvin.
 - b. Minimum color rendering index (CRI) of 70.
 - c. Minimum initial lumen ratings for each lamp type shall be:
 - 1) 2025 lumens for 36 IN, 25 or 30 watt F30T12 lamp.
 - 2) 2750 lumens for 48 IN, 34 watt F40T12 lamp.
 - 3) 2730 lumens for 22.5 IN, 34 or 40 watt F40T12/U/6 lamp (U-shaped 6 IN leg spacing).
 - 2. T8 (265 mA) instant or rapid-start medium bipin lamps.

- a. Correlated color temperature of 3500 degrees Kelvin.
- b. Minimum color rendering index (CRI) of 70.
- c. Minimum initial lumen ratings for each lamp type shall be:
 - 1) 1300 lumens for 24 IN, 17 watt F17T8 lamp.
 - 2) 2025 lumens for 36 IN, 25 watt F25T8 lamp.
 - 3) 2800 lumens for 48 IN, 32 watt F32T8 lamp.
 - 4) 5700 lumens for 96 IN, 59 watt F96T8 lamp.
 - 5) 2725 lumens for 22.5 IN, 32 watt F32T8/U/6 lamp (U-shaped 6 IN leg spacing).
3. T5 instant or rapid-start 4 pin (2G11 base) compact fluorescent lamps.
 - a. Correlated color temperature of 3500 degrees Kelvin.
 - b. Minimum color rendering index (CRI) of 80.
 - c. Minimum initial lumen ratings for each lamp type shall be:
 - 1) 1250 lumens for 10.5 IN, 18 watt F18BX lamp.
 - 2) 1800 lumens for 12.8 IN, 24 or 27 watt F27BX lamp.
 - 3) 2850 lumens for 16.5 IN, 36 or 39 watt F39BX lamp.
 - 4) 3150 lumens for 22.5 IN, 39 watt F39BX lamp.
4. T4 twin-tube, quad-tube, and/or triple twin-tube compact fluorescent lamps.
 - a. Correlated color temperature of 3500 degrees Kelvin.
 - b. Minimum color rendering index (CRI) of 80.
 - c. Minimum initial lumen ratings for preheat 2-pin twin-tube lamps with a G23 or GX23 base shall be:
 - 1) 580 lumens for 6.5 IN, 9 watt CF9TT lamp.
 - 2) 800 lumens for 7.1 IN, 13 watt CF13TT lamp.
 - d. Minimum initial lumen ratings for rapid-start 4-pin quad-tube lamps with a G24q-1, G24q-2 or G24q-3 base shall be:
 - 1) 900 lumens for 5.2 IN, 13 watt CF13QT lamp.
 - 2) 1160 lumens for 5.8 IN, 18 watt CF18QT lamp.
 - 3) 1700 lumens for 6.5 IN, 26 watt CF26QT lamp.
 - e. Minimum initial lumen ratings for rapid-start 4-pin triple twin-tube lamps with a GX24q-2 or GX24q-3 base shall be:
 - 1) 1120 lumens for 4.6 IN, 18 watt CF18TTT lamp.
 - 2) 1610 lumens for 5.2 IN, 26 watt CF26TTT lamp.
 - 3) 2200 lumens for 5.8 IN, 32 watt CF32TTT lamp.
 - 4) 3200 lumens for 6.3 IN, 42 watt CF42TTT lamp.

2.5 BALLASTS

- A. Fluorescent Electromagnetic Ballasts:
 1. UL 935.
 2. High-efficiency energy saving electromagnetic core and coil design.
 3. CBM certification for full light output.
 4. Operate lamps at a frequency of 60 Hz.
 5. Power factor: Greater than 90 percent.
 6. Input current with Total Harmonic Distortion (THD) of less than 32 percent.
 7. Lamp current crest factor: Less than 1.7, in accordance with lamp manufacturer's recommendations and NEMA/ANSI C82.1.
 8. Ballast factor: Greater than the following per NEMA/ANSI C82.1:
 - a. 0.925 for rapid start 265 mA (T8) and 430 mA (T12) ballasts.
 9. Audible noise rating: Greater than or equal to the following:
 - a. Class A for rapid start 265 mA (T8) and 430 mA (T12) ballasts.
 10. Coil temperature not to exceed 65 DegC (150 DegF) temperature rise over 40 DegC (105 DegF) ambient.
 - a. Maximum case temperature not to exceed 90 DegC (195 DegF).
 11. Meet the requirements of the FCC 47 CFR 18, for non-consumer equipment for EMI and RFI.
 12. Meet all applicable ANSI and IEEE standards regarding harmonic distortion and transient protection such as IEEE C62.41, Cat. A, for transient protection.
 13. UL listed, Class P.
 14. Fully encapsulated (potted) to ensure maximum thermal and structural integrity.
 15. Contain no polychlorinated biphenyls (PCB's).

- B. Fluorescent High Frequency Electronic Ballasts:
 - 1. UL 935.
 - 2. "High Frequency" electronic operating lamps at a frequency of 20 KHz or higher without visible flicker.
 - 3. Power factor: Greater than 90 percent.
 - 4. Input current total harmonic distortion (THD) of less than 20 percent.
 - 5. Lamp current crest factor: Less than 1.7, in accordance with lamp manufacturer's recommendations and NEMA/ANSI C82.11.
 - 6. Instant start with lamps wired in parallel.
 - 7. Support a sustained short to ground or open circuit of any output leads without damage to the ballast.
 - 8. Ballast Factor: Greater than 0.85 per NEMA/ANSI C82.11.
 - 9. Audible noise rating: Class A or better.
 - 10. Operation in ambient temperatures up to 40 DegC (105 DegF) without damage.
 - 11. Light output to remain constant for a line voltage fluctuation of +5 percent.
 - 12. Meet the requirements of the FCC 47 CFR 18, for non-consumer equipment for EMI and RFI.
 - 13. Meet NEMA/ANSI C82.11 standards regarding harmonic distortion.
 - 14. Meet IEEE C62.41 Cat. A for transient protection.
 - 15. Comply with all applicable state and federal efficiency standards.
 - 16. UL listed, Class P.
 - 17. Contain no Polychlorinated Biphenyls (PCB's).
- C. Fluorescent Emergency Ballasts:
 - 1. UL 924, NFPA 101.
 - 2. High temperature, 24 Watt-hour, maintenance-free nickel cadmium battery with charger.
 - 3. Charging indicator light (LED) to monitor the charger and battery.
 - 4. Double-pole test switch.
 - 5. Light one (1) lamp for 90 minutes in 1, 2 and 3-lamp fixtures.
 - a. Light two (2) lamps for 90 minutes in 4-lamp fixtures.
 - 6. Dual input voltage (120/277V), 4 Watts input.
 - 7. Compatible with the install lamp type.
 - 8. Initial lumen output: 975 to 1400.
 - 9. Contain no Polychlorinated Biphenyls (PCB's).

2.6 MAINTENANCE MATERIALS

- A. Furnish a minimum of 2 or 10 percent of total of each type and wattage of lamps, whichever is greater.
- B. Furnish a minimum of 10 percent of total of each type and amperage of fuses for fixtures indicated to be fused.
- C. Spare parts are to be stored in a box clearly labeled as to its contents.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Coordinate fixture types with ceiling construction.
 - 1. Provide mounting hardware for the ceiling system in which the fixture is to be installed.
- B. Fasten lighting fixtures supported by suspended ceiling systems to ceiling framing system with hold down clips.
- C. Provide mounting brackets and/or structural mounting support for wall-mounted fixtures.
 - 1. Do not support fixture from conduit system.
 - 2. When fixtures are supported from outlet boxes, install per NFPA 70.
 - 3. Supports for fixtures mounted on exterior walls shall not be attached to exterior face of the wall.
- D. Provide pendant incandescent, compact fluorescent, and/or HID fixtures with swivel hangers which will allow fixture to swing in any direction but will not permit stem to rotate.
 - 1. Provide hangers with enclosure rating (NEMA 1, 4, or 7) equal to enclosure requirements of area in which they are installed.
 - 2. Swivel hangers for fixtures in mechanical equipment areas: Shock absorbing type.
 - 3. Secure HID fixtures with safety chain.

- E. Pendant mounted, open, industrial fluorescent fixtures:
 - 1. Not in continuous rows, shall be supported by conduit or by approved chains:
 - a. Hardwired to ceiling mounted junction box.
 - 2. In continuous rows, shall be rigidly supported with conduit and fasten fixtures to each other or mount on continuous metal channel per Specification Section 26 05 00.
 - a. Hardwired to ceiling mounted junction box.
 - b. Provide reflector alignment clips.
- F. Locate fixtures in accordance with reflected ceiling plans.
- G. Locate in exact center of tile when indicated.
 - 1. Relocate misplaced fixtures and replace damaged ceiling materials.
- H. Mount lighting fixtures at heights indicated in Specification Section 26 05 00 or per fixture schedule or as indicated on the Drawings.
- I. Install exterior fixtures so that water cannot enter or accumulate in the wiring compartment.
- J. Ground fixtures and ballasts.

3.2 LIGHTING CONTROL

- A. See Specification Section 26 09 16 for lighting control equipment.
- B. Exterior wall mounted and pole mounted fixtures controlled as detailed on the Drawings.

3.3 ADJUST AND CLEAN

- A. Replace all inoperable lamps with new lamps prior to final acceptance.

END OF SECTION