INVITATION TO BID (ITB)
Contract #: O-5725
East Toll Plaza Remediation

ITB Issue Date & Cone of Silence Effective Date: 11/7/2025

ITB Response Due Date: 12/19/2025

RESPONSIBLE DEPARTMENT
Operations:
PM: Brian McElroy

PROCUREMENT DEPARTMENT
Toni-Catherine Atkinson, Procurement Manager
1104 East Twiggs Street, Suite 300
Tampa, Florida 33602
Telephone Number: (813) 272-6740
Email: Procurement@tampa-xway.com

THE RESPONSIBILITY OF SUBMITTING A BID PROPOSAL PACKAGE IN RESPONSE TO THIS SOLICITATION DOCUMENT TO THEA ON OR BEFORE THE STATED DEADLINE SHALL BE SOLELY AND STRICTLY OF THE BIDDER. THEA SHALL IN NO WAY BE RESPONSIBLE FOR DELAYS CAUSED BY THE UNITED STATES MAIL, OR ANY OTHER DELIVERY SERVICE, OR CAUSED BY ANY OTHER OCCURRENCE.

BIDDERS SHALL READ THE SOLICITATION IN ITS ENTIRETY PRIOR TO SUBMITTING A BID PACKAGE.

BY SUBMITTING A BID PROPOSAL PACKAGE, THE BIDDER ACKNOWLEDGES THEY HAVE READ, UNDERSTAND, AND ACCEPT THE TERMS AND CONDITIONS TO BE MET AND THE CHARACTER AND QUALITY OF THE SCOPE OF WORK TO BE PROVIDED

Legal Entity Name (Bidder): _____
Address of Bidder: _____
FEIN: _____ _____
Name of Authorized Officer: _____ Title: _____
E-mail: _____ Phone Number: _____

Attachments and/or References not attached hereto will be supplied upon request and shared via a OneDrive File Share. Please contact the Procurement Office

Exhibits -

- Scope of Work
- Public Entity Crime
- Drug-Free Workplace
- Bid Proposal Form
- Bid Tabulation Sheet
- Conflict of Interest Form
- Experience and References
- Insurance Requirements, Coverage and Limits
- Bid Bond
- Certification Regarding Scrutinized Companies List

References/Construction Drawings/Specification Attachment(s) -

1. East Toll Plaza As Built Plans

I. INTRODUCTION

The Tampa-Hillsborough County Expressway Authority (THEA) is soliciting sealed bids from qualified firms to provide all the permits, labor, equipment, materials, tools, transportation, supplies, insurance, incidentals, mobilization and demobilization necessary to perform remediation of the current THEA – East Toll Plaza buildings. The project consists of two buildings, an Administration Building and a Shop Building. The title of the project is as follows:

- O-5725 East Toll Plaza Remediation

INSTRUCTIONS TO BIDDERS

1. THEA must receive all submittals at the location, date, and time identified in **Section VI, Schedule of Events**. Any submittal received after the stated time and date shall not be considered. It shall be the sole responsibility of the firm to have its package delivered to THEA. Delay in delivery shall not be the responsibility of THEA. Submittals received after the deadline shall not be considered and may be returned only at the firm's expense.

2. Each bidder shall examine all documents and shall determine all matters relating to the interpretation of such documents.

3. The following exhibits are required by THEA to be completed by the bidder and submitted as part of the bid proposal package:

   - Public Entity Crime
   - Drug-Free Workplace
   - Bid Proposal Form
   - Bid Tabulation Sheet
   - Conflict of Interest Form
   - Experience and References
   - Insurance Requirements, Coverage and Limits
   - Bid Bond Form
   - Certification Regarding Scrutinized Companies List

4. A surety commitment letter is required to be submitted as part of the bid proposal package. The bidder is required to provide proof of bonding capacity and provide acknowledgment by the bidder's surety of the ability to provide the required Bid Bonds.

5. Proof of insurance is required to be submitted as part of the bid proposal package. The bidder must provide evidence of the bidder's ability to provide the insurance coverage required in the Insurance Requirements, Coverages, and Limits exhibit either by means of an existing policy or other verifiable proof (such as an agent/broker commitment letter).

6. The Authority requires electronic submission of bids and proposals. One (1) original, combined pdf bid proposal package including the required forms above must be e-mailed to THEA's Procurement Department, clearly labeled, **"O-5725 East Toll Plaza Remediation"** sent to:

Procurement Office
Procurement@tampa-xway.com
Or:
Please submit electronic responses via the Authority's eProcurement Portal:
https://procurement.opengov.com/portal/tampaxway.

By way of the eProcurement Portal, responses will be locked and digitally encrypted until the submission deadline passes.

7. THEA shall not be liable for any expenses incurred in the preparation of the bid proposal package.

8. THEA reserves the right to accept or reject any or all bid proposal packages, to waive irregularities and technicalities, and to request resubmission or to re-advertise for all or any part of the work. THEA shall be the sole judge of the submittals and the resulting negotiated agreement that is in THEA's best interest, and THEA's decision shall be final.

9. The successful bidder shall be required to execute a contract, in form and content acceptable to THEA, indemnifying and holding harmless THEA, its officials, officers, employees, and agents from all claims.

10. **CONE OF SILENCE**

Firms, their agents, or associates shall refrain from contacting or soliciting any THEA staff, the consultants representing THEA regarding this ITB or members of the Board of Directors directly or indirectly regarding this ITB and this solicitation once the ITB is published and until the Board of Directors has made a final decision to award the contract. Failure to comply with this provision may result in the disqualification of the firm.

AT THE DISCRETION OF THEA, ANY VIOLATION OF THE REQUIREMENTS SET FORTH IN THIS SECTION SHALL CONSTITUTE GROUNDS FOR IMMEDIATE REJECTION OF THE BID PROPOSAL PACKAGE AND THE BIDDER SHALL BE DEEMED NON-RESPONSIVE.

11. Questions about this ITB for interpretation, clarification or about the project must be in writing addressed to THEA Procurement Department at Procurement@tampa-xway.com. To be considered, such requests must be received no later than the date and time stated for the deadline for respondent's submission of questions to THEA referenced in Section VI., Schedule of Events. Questions received after the date will not be considered.

II. QUALIFICATIONS:

The bidder must include with its bid proposal package all completed required forms as indicated in Section II Instructions to Bidders. Failure to submit all completed forms may be cause for rejection at the sole discretion of THEA. Only bidders with FDOT pre-qualification listed below at the time of submittal are eligible for selection. Contractors must have a current certificate of qualification in accordance with Florida Statute 337.14(1) and Rule Chapter 14-22, Florida Administrative Code, on the date of the letting to bid on construction projects over $250,000.00.

III. DOING BUSINESS IN THE STATE OF FLORIDA

All bidders shall be in good standing with and authorized to do business in the State of Florida. Furthermore, it is the responsibility of the bidder to confirm that all of its subcontractors are also in good standing and authorized to do business in the State of Florida as may be required pursuant to §607.1501, §605.0902, and §605.0905 Florida Statutes.

If a bidder is not required to register pursuant to Florida Statutes, the successful bidder must be able to submit documentation demonstrating non-applicability of the statute.

THEA shall not execute an agreement if the successful bidder and subcontractors are not registered and in good standing to do business in the State of Florida as required by the referenced Florida Statutes.

IV. SELECTION PROCESS

THEA intends to purchase the services from the responsible and responsive bidder. The selection process for this ITB will consist of the following.

- Bid proposal packages will be evaluated on whether the bidder is responsible and responsive to this solicitation, with the objective to evaluate those bids and responses and to award a contract for the work to the firm with the **lowest total bid price**.

- THEA will determine if the bid is responsive and is a responsible bidder, in its sole and absolute discretion, considering all relevant facts and information. THEA reserves the right at its sole discretion to reject any and all bids if it is determined the total bid price is excessive, best offers are determined to be unreasonable, or it is in THEA's best interest to do so.

- The required bond forms are to be submitted to the THEA Procurement Office with the responsive bid proposal package, after Board approval of Final Ranking and Award of Contract.

FINAL SELECTION:

The bidder with the **lowest total bid price** will be presented to THEA's Board of Directors for consideration and approval with a recommendation that the bidder be selected per the Schedule of Events below.

V. SCHEDULE OF EVENTS

DATE	DESCRIPTION	LOCATION
November 7th, 2025, by 5:00 PM	Advertisement Published	THEA Website & Demandstar & OpenGov ePortal
November 18th, 2025, between 9:00 AM – 12:00 PM	Mandatory Site Visit	FL-618 Toll, Tampa, FL 33619
November 24th, 2025, by 9:00 AM	Deadline for Respondent's submission of questions to THEA	Email to Procurement@tampa-xway.com or upload to OpenGov ePortal
December 5th, 2025, by 5:00 PM	Deadline for THEA to respond to Respondent's questions	THEA Website, Demandstar & OpenGov ePortal
December 19th, 2025, by 9:00 AM	Deadline for Submitting Bid Proposal Package	Email to Procurement@tampa-xway.com or upload to OpenGov ePortal
January 5th, 2026, 10:30 AM	Public Opening of Bid Proposal Packages	THEA Office 1101 E. Twiggs Street, Suite 300 Tampa, FL 33602
January 6th, 2026, by 5:00 PM	Post Notice of Intended Ranking	THEA Website, Demandstar & OpenGov ePortal
January 12th, 2026, 1:30 PM	Board Approval of Final Ranking & Award of Contract	THEA Office 1101 E. Twiggs Street, Suite 300 Tampa, FL 33602

January 13th, 2026, by 5:00 PM	Posting of Award of Contract	THEA Website, Demandstar & OpenGov ePortal

VI. TERMS AND CONDITIONS

THEA reserves the right to reject all bid proposal packages, any bid proposal packages not conforming to this Invitation to Bid, and to waive any irregularity or informality with respect to any proposal. THEA further, reserves the right to request clarification of information submitted and to request additional information from one or more firms.

THEA requires that the bidder selected will not discriminate against any person in accordance with federal, state, and local governments' regulations. THEA requires the bidder selected make an affirmative statement to the effect that their retention shall not result in conflict of interests with respect to THEA.

THEA requires that the bidder make an affirmative statement to the effect that they have not contacted, or attempted to contact, any member of the Board of Directors, or THEA staff, except as expressly permitted in the ITB.

TABLE OF CONTENTS

DIVISION 27
THROUGH 34 NOT USED

END OF SECTION 000110

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Work under Owner's separate contracts.
4. Contractor's use of site and premises.
5. Coordination with occupants.
6. Work restrictions.
7. Specification conventions.

1.3 DEFINITIONS

A. Work Package: A group of specifications and schedules prepared by the design team to describe a portion of the Project Work for pricing, permitting, and construction.

1.4 PROJECT INFORMATION

A. Project Identification: This is a remediation of the current THEA – East Toll Plaza buildings. The project consists of two buildings, an Administration Building and a Shop Building. The scope includes:

1. Exterior of the buildings:

a. Patch/repair damage to the Exterior Insulation and Finish System (EFIS) on both buildings. Remove only damaged portions of the EFIS system in its entirety to concrete masonry unit substrate and patch/repair EFIS in-kind to match adjacent surfaces to remain.
b. Inspect and investigate cause of through wall water intrusion at aluminum windows. Repair or replace aluminum windows, as required, to eliminate water intrusion into buildings. Provide and install metal flashing at exterior sills of aluminum windows to slope provide positive slope over the face of the building.
c. Remove and replace exterior sealant at the perimeter of windows and doors.
d. Trim trees that prohibit access to the exterior faces of the buildings to allow for surface preparation and painting.
e. Prepare all exterior EFIS surfaces and paint.
f. Prepare all exterior door and frame surfaces and paint.
g. Clean exterior wall tile, replace broken exterior wall tile to match existing and fill holidays in grout.
h. Treat rust and paint all exterior steel railings.
i. Power wash all concrete sidewalks.

j. Provide and install protective metal trim on the south jamb of the rolling overhead door opening at Shop Building. Match existing metal trim on the north door jamb.

2. Interior of buildings:

a. Replace water damaged gypsum board at aluminum windows. Tape, float and finish to match adjacent surfaces. Paint entire affected wall (from corner to corner and from top of base to bottom of suspended acoustical ceiling) to match adjacent wall surfaces.
b. Replace damaged components of sink base cabinet in break room and finish to match adjacent surfaces.
c. Remove resilient coved base, provide and install resilient floor tile in Room 113 in the Administration Building, and install new coved resilient base.
d. Replace all vertical blinds at all building windows. Vertical blind assemblies to fit within the window opening.
e. Cut posts/standards for steel storage shelving to terminate below the finished ceiling.
f. Replace missing and damaged acoustical ceiling panels in suspended ceiling to match existing.
g. Clean and sanitize four restrooms, two in each building.
h. Replace deteriorated two vanity counters with splashes in two Administration Building restrooms and reinstall existing top mounted lavatory sinks.
i. Replace all soap dispensers in all restrooms.
j. Replace missing mirror in restroom.

3. Mechanical/Electrical/Plumbing (MEP):

a. Clean HVAC ductwork, diffusers and grilles in the Administration Building.
b. Test and balance HVAC system in the Administration Building to comply with original design requirements.
c. Replace PVC condensate piping in the Administration Building with return air plenum approved CPVC piping.
d. Replace two inoperable exhaust fans and one inoperable supply fan in the Administration Building.
e. Remove abandoned ductless mini-split system in the Administration Building in its entirety including electrical distribution to its source. Patch/repair all through wall penetrations to match adjacent surfaces and finishes.
f. Clean HVAC ductwork, diffusers and grilles in the Shop Building.
g. Test and balance HVAC system in the Shop Building to comply with original design requirements.
h. Repair or replace leaking AHU condensate piping and underground drywell for the Shop Building.
i. Replace inoperable exhaust fan in the Shop Building.
j. Provide and install inoperable water heater in Shop Building in-kind.
k. Clean sanitary piping throughout both buildings.
l. Replace faucets and flush valves throughout both buildings.
m. Insulate hot water piping throughout both buildings.
n. Replace interior fluorescent light fixtures throughout both buildings with LED type light fixtures.
o. Replace exterior wall mounted wall pack light fixtures on both buildings with LED type light fixtures.

4. Project Location: FL-618 Toll, Tampa, FL 33619.

B. Owner: Tampa Hillsborough Expressway Authority.

1. Owner's Representative: TBD.

C. Architect: HNTB One Tampa City Center, 201 N. Franklin St., Suite 1200 Tampa, FL 33602.

1. Architect's Representative:

a. Andrés Chacón
b. AIA | NCARB | LEED® AP
c. Aviation Project Manager
d. ajchacon@hntb.com
e. Cell (813) 399-2453

D. Architect's Consultants: Architect has retained the following design professionals, who have prepared designated portions of the Contract Documents:

1. Mechanical/Electrical/Fire Protection: Emerald Engineering Inc.

a. Representative:
b. Michael A. Costello, PE | LEED AP
c. Office 813.995.0300|mobile 813.758.9808
d. 9942 Currie Davis Dr., Ste. H, Tampa, FL 33619
e. Emeraldmep.com

1.5 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and includes, but is not limited to, the following:

1. Project includes the remediation of exterior and interior portions of existing Administration Building and Shop Building. Remediation does not include any structural modifications to or reconfiguration of the buildings. Replacement of exterior aluminum windows, if required, will require a building permit.

B. Type of Contract:

1. Project will be constructed under a single prime contract.

C. Restricted Use of Site: The Contractor shall have limited use of Project site for construction operations as indicated by requirements of this Section.

D. Limits on Use of Site: Limit use of Project site to areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Driveways, Walkways and Entrances: Keep driveways, loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or for storage of materials.

a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
c. On-site Contractor staging area will be defined during the pre-construction meeting.

E. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

F. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

1.6 WORK PERFORMED BY OWNER

A. The Owner reserves the right to have other contractors perform other work on the Project Site during execution of the Work of this Contract.

1.7 COORDINATION WITH OCCUPANTS

A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

B. Owner Limited Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed portions of the Work, prior to Substantial Completion of the Work, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and limited occupancy shall not constitute acceptance of the total Work.

1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied prior to Owner acceptance of the completed Work.
2. Obtain a Certificate of Occupancy from authorities having jurisdiction before limited Owner occupancy.
3. Before limited Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving occupied portions of Work.
4. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of Work.

1.8 WORK RESTRICTIONS

A. Comply with restrictions on construction operations.

1. Comply with limitations on use of public streets, work on public streets, rights of way, and other requirements of authorities having jurisdiction.

B. On-Site Work Hours: Limit work to between 8:00 a.m. to 5:00 p.m., Monday through Friday, unless otherwise indicated. Work hours may be modified to meet Project requirements if approved in advance by Owner and authorities having jurisdiction.

1. Weekend Hours: Weekend work requires advance approval by the Owner.

C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging for temporary utility services according to requirements indicated:

1. Notify Owner 72 hours in advance of proposed utility interruptions.
2. Obtain Owner's written permission before proceeding with utility interruptions.

D. Noise, Vibration, Dust, and Odors: Coordinate operations that may result in high levels of noise and vibration, dust, odors, or other disruption to Owner occupancy with Owner.

1. Notify Owner not less than two days in advance of proposed disruptive operations.
2. Obtain Owner's written permission before proceeding with disruptive operations.

E. Smoking and Controlled Substance Restrictions: Use of tobacco products, alcoholic beverages, and other controlled substances within the existing building is not permitted.

F. Employee Identification: Provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.

1.9 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

B. Division 00 Contracting Requirements: General provisions of the Contract, including General and Supplementary Conditions, apply to all Sections of the Specifications.

C. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

D. Drawing Coordination: Record documents, dated 04/01/2002, will be provided for reference during bidding and construction.

END OF SECTION 011000

SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements governing allowances.

B. Types of allowances include the following:

1. Contingency allowances.
2. Contractor shall include a Contingency Allowance in the amount of 15% of the total bid amount.

1.3 CONTINGENCY ALLOWANCES

A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.

B. Contractor's overhead, profit, and related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.

C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit.

D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012100

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

1.1 SUMMARY

A. Minor Changes in the Work: Issued by Architect.

B. Owner-Initiated Work Changes Proposal Requests: Issued by Architect.

1. Respond within time specified in Proposal Request.

C. Contractor-Initiated Work Changes Proposals: Submit to Architect.

D. Change Orders: Issued by Architect for signatures of Owner and Contractor.

E. Work Change Directives: issued by Architect.

END OF SECTION 012600

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

1.1 REQUESTS FOR INFORMATION (RFIs)

A. RFI Forms: Software-generated form acceptable to Architect.

B. Architect's Action: Allow seven working days for Architect's response for each RFI.

C. RFI Log: Maintain a tabular log of RFIs. Submit log weekly.

1.2 PROJECT MEETINGS

A. Schedule and conduct meetings.

B. Preconstruction conference.

C. Preinstallation Conferences: Before each construction activity that requires coordination.

D. Coordination Meetings: At biweekly intervals, in addition to specific meetings held for other purposes.

END OF SECTION 013100

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

1.1 INFORMATIONAL SUBMITTALS

A. Format for Submittals: PDF electronic file.

B. Startup construction schedule.

C. Contractor's construction schedule, including working digital copy.

D. Daily Construction Reports: Submit at weekly intervals.

E. Material Location Reports: Submit at weekly intervals.

F. Site condition reports.

G. Unusual event reports.

1.2 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Schedule Type: Gantt chart.

B. Software: Scheduling component of web-based project software for current Windows operating system.

C. Milestones: Notice to Proceed, Substantial Completion, and final completion.

D. Updating: At monthly intervals, issued one week before each progress meeting.

END OF SECTION 013200

SECTION 013233 - PHOTOGRAPHIC DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for the following:

1. Preconstruction photographs.
2. Preconstruction video recordings.

B. Related Requirements:

1. Section 024119 "Selective Demolition" for photographic documentation before selective demolition operations commence.

1.3 INFORMATIONAL SUBMITTALS

A. Key Plan: Submit key plan of Project site and building with notation of vantage points marked for location and direction of each photograph and video recording. Indicate elevation. Include same information as corresponding photographic documentation.

B. Digital Photographs: Submit image files within seven days of taking photographs.

1. Submit photos on thumb-drive. Include copy of key plan indicating each photograph's location and direction.
2. Identification: Provide the following information with each image description in file metadata tag:

a. Name of Project.
b. Name and contact information for photographer.
c. Name of Architect.
d. Name of Contractor.
e. Date photograph was taken.
f. Description of location, vantage point, and direction.
g. Unique sequential identifier keyed to accompanying key plan.

C. Video Recordings: Submit video recordings within seven days of recording.

1. Submit video recordings on thumb drive. Include copy of key plan indicating each video's location and direction.
2. Identification: With each submittal, provide the following information in file metadata tag.

a. Name of Project.
b. Name and address of photographer.

c. Name of Architect.
d. Name of Contractor.
e. Date video recording was recorded.
f. Description of vantage point, indicating location, direction (by compass point), and elevation.

3. Transcript: Prepared on 8-1/2-by-11-inch paper, punched and bound in three-ring binders. Provide label on front and spine. Include a cover sheet with label information. Include name of Project and date of video recording on each page.

1.4 FORMATS AND MEDIA

A. Digital Photographs: Provide color images in JPG format, produced by a digital camera and with vibration-reduction technology. Use flash in low light levels or backlit conditions.

B. Digital Video Recordings: Provide high-resolution, digital video in MPEG format, produced by a digital camera capable of recording in full high-definition mode with vibration-reduction technology. Provide supplemental lighting in low light levels or backlit conditions.

C. Digital Images: Submit digital media as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.

D. Metadata: Record accurate date and time from camera.

E. File Names: Name media files with date, Project area, and sequential numbering suffix.

1.5 CONSTRUCTION PHOTOGRAPHS

A. Photographer: Engage a qualified photographer to take preconstruction photographs.

B. General: Take photographs with maximum depth of field and in focus.

1. Maintain key plan with each set of construction photographs that identifies each photographic location.

C. Preconstruction Photographs: Before commencement of selective demolition take photographs of Project site, including existing items to remain during construction, from different vantage points, as directed by Architect.

1. Take a minimum of ten (10) photographs to show existing conditions adjacent to buildings before starting the Work.
2. Take photographs and or video recording as required to document existing conditions in and around scheduled work areas.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013233

SECTION 013300 - SUBMITTAL PROCEDURES

1.1 SUBMITTALS

A. Submit submittal schedule.

1.2 PROCEDURES

A. Prepare and submit submittals as PDF sent via email.

B. Processing Time:

1. Initial Review: 15 days.
2. Resubmittal Review: 15 days.

C. Certificates and Certifications Submittals: Includes signature of entity responsible for preparing certification. Provide a digital signature on electronically submitted certificates and certifications where indicated.

D. Delegated-Design Services Certification: In addition to other required submittals, submit digitally signed PDF electronic file of certificate, signed and sealed by the responsible design professional registered in the State of Florida.

E. Contractor's Submittal Review: Mark with approval stamp before submitting to Architect.

END OF SECTION 013300

SECTION 013516 - ALTERATION PROJECT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes special procedures for alteration work.

1.3 DEFINITIONS

A. Alteration Work: This term includes remodeling, renovation, repair, and maintenance work performed within existing spaces or on existing surfaces as part of the Project.

B. Consolidate: To strengthen loose or deteriorated materials in place.

C. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

D. Match: To blend with adjacent construction and manifest no apparent difference in material type, species, cut, form, detail, color, grain, texture, or finish; as approved by Architect.

E. Refinish: To remove existing finishes to base material and apply new finish to match original, or as otherwise indicated.

F. Repair: To correct damage and defects, retaining existing materials, features, and finishes. This includes patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading materials.

G. Replace: To remove, duplicate, and reinstall entire item with new material. The original item is the pattern for creating duplicates unless otherwise indicated.

H. Replicate: To reproduce in exact detail, materials, and finish unless otherwise indicated.

I. Reproduce: To fabricate a new item, accurate in detail to the original, and from either the same or a similar material as the original, unless otherwise indicated.

J. Retain: To keep existing items that are not to be removed or dismantled.

1.4 COORDINATION

A. Alteration Work Subschedule: A construction schedule coordinating the sequencing and scheduling of alteration work for entire Project, including each activity to be performed, and

based on Contractor's Construction Schedule. Secure time commitments for performing critical construction activities from separate entities responsible for alteration work.

1. Schedule construction operations in sequence required to obtain best Work results.
2. Coordinate sequence of alteration work activities to accommodate the following:

    a. Owner's continuing occupancy of portions of existing building.
    b. Owner's partial occupancy of completed Work.
    c. Other known work in progress.
    d. Tests and inspections.

3. Detail sequence of alteration work, with start and end dates.
4. Utility Services: Indicate how long utility services will be interrupted. Coordinate shutoff, capping, and continuation of utility services.
5. Use of elevator and stairs.
6. Equipment Data: List gross loaded weight, axle-load distribution, and wheel-base dimension data for mobile and heavy equipment proposed for use in existing structure. Do not use such equipment without certification from Contractor's professional engineer that the structure can support the imposed loadings without damage.

B. Pedestrian and Vehicular Circulation: Coordinate alteration work with circulation patterns within Project buildings and site. Some work is near circulation patterns. Circulation patterns cannot be closed off entirely and in places can be only temporarily redirected around small areas of work. Plan and execute the Work accordingly.

1.5 PROJECT MEETINGS FOR ALTERATION WORK

A. Preliminary Conference for Alteration Work: Before starting alteration work, Architect will conduct a conference at Project site.

1. Attendees: Representatives of Owner, Architect, and Contractor shall be represented at the meeting.
2. Agenda: Discuss items of significance that could affect progress of alteration work, including review of the following:

    a. Alteration Work Subschedule: Discuss and finalize; verify availability of materials, equipment, and facilities needed to make progress and avoid delays.
    b. Fire-prevention plan.
    c. Governing regulations.
    d. Areas where existing construction is to remain and the required protection.
    e. Hauling routes.
    f. Sequence of alteration work operations.
    g. Storage, protection, and accounting for salvaged for reuse.
    h. Existing conditions, staging, and structural loading limitations of areas where materials are stored.
    i. Qualifications of personnel assigned to alteration work and assigned duties.
    j. Requirements for extent and quality of work, tolerances, and required clearances.
    k. Embedded work such as flashings, special details, collection of waste, protection of occupants and the public, and condition of other construction that affects the Work or will affect the work.

3. Reporting: Architect will record conference results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from conference.

B. Coordination Meetings: Conduct coordination meetings specifically for alteration work at monthly intervals. Coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.

1. Attendees: In addition to representatives of Owner, Architect, and Contractor, each specialist, supplier, installer, and other entity concerned with progress or involved in planning, coordination, or performance of alteration work activities shall be represented at these meetings. All participants at conference shall be familiar with Project and authorized to conclude matters relating to alteration work.
2. Agenda: Review and correct or approve minutes of previous coordination meeting. Review other items of significance that could affect progress of alteration work. Include topics for discussion as appropriate to status of Project.

a. Alteration Work Subschedule: Review progress since last coordination meeting. Determine whether each schedule item is on time, ahead of schedule, or behind schedule. Determine how construction behind schedule will be expedited with retention of quality; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities are completed within the Contract Time.
b. Schedule Updating: Revise Contractor's Alteration Work Subschedule after each coordination meeting where revisions to schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
c. Review present and future needs of each entity present, including review items listed in the "Preliminary Conference for Alteration Work" Paragraph in this article and the following:

1) Interface requirements of alteration work with other Project Work.
2) Status of submittals for alteration work.
3) Access to alteration work locations.
4) Effectiveness of fire-prevention plan.
5) Quality and work standards of alteration work.
6) Change Orders for alteration work.

3. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

1.6 INFORMATIONAL SUBMITTALS

A. Alteration Work Subschedule:

1. Submit alteration work subschedule within **seven** days of date established for commencement of alteration work.

B. Preconstruction Documentation: Show preexisting conditions of adjoining construction and site improvements that are to remain, including finish surfaces, that might be misconstrued as damage caused by Contractor's alteration work operations.

C. Alteration Work Program: Submit 30 days before work begins.

D. Fire-Prevention Plan: Submit 30 days before work begins.

1.7 QUALITY ASSURANCE

A. Specialist Qualifications: An experienced firm regularly engaged in specialty work similar in nature, materials, design, and extent to alteration work as specified in each Section and that has completed a minimum of five recent projects with a record of successful in-service performance that demonstrates the firm's qualifications to perform this work.

1. Field Supervisor Qualifications: Full-time supervisors experienced in specialty work similar in nature, material, design, and extent to that indicated for this Project. Supervisors shall be on-site when specialty work begins and during its progress. Supervisors shall not be changed during Project except for causes beyond the control of the specialist firm.

B. Title X Requirement: Each firm conducting activities that disturb painted surfaces shall be a "Lead-Safe Certified Firm" according to 40 CFR 745, Subpart E, and use only workers that are trained in lead-safe work practices.

C. Alteration Work Program: Prepare a written plan for alteration work for whole Project, including each phase or process and protection of surrounding materials during operations. Show compliance with indicated methods and procedures specified in this and other Sections. Coordinate this whole-Project alteration work program with specific requirements of programs required in other alteration work Sections.

1. Dust and Noise Control: Include locations of proposed temporary dust- and noise-control partitions and means of egress from occupied areas coordinated with continuing on-site operations and other known work in progress.
2. Debris Hauling: Include plans clearly marked to show debris hauling routes, turning radii, and locations and details of temporary protective barriers.

D. Fire-Prevention Plan: Prepare a written plan for preventing fires during the Work, including placement of fire extinguishers, fire blankets, rag buckets, and other fire-control devices during each phase or process. Coordinate plan with Owner's fire-protection equipment and requirements. Include fire-watch personnel's training, duties, and authority to enforce fire safety.

E. Safety and Health Standard: Comply with ANSI/ASSE A10.6.

1.8 STORAGE AND HANDLING OF SALVAGED MATERIALS

A. Salvaged Materials for Reinstallation:

1. Repair and clean items for reuse as indicated.
2. Pack or crate items after cleaning and repairing; cushion against damage during handling. Label contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment unless otherwise indicated. Provide connections, supports, and miscellaneous materials to make items functional for use indicated.

B. Existing Materials to Remain: Protect construction indicated to remain against damage and soiling from construction work.

C. Storage: Catalog and store items within a weathertight enclosure where they are protected from moisture, weather, condensation, and freezing temperatures.

1. Identify each item for reinstallation with a nonpermanent mark to document its original location. Indicate original locations on plans, elevations, sections, or photographs by annotating the identifying marks.
2. Secure stored materials to protect from theft.
3. Control humidity so that it does not exceed 85 percent. Maintain temperatures 5 deg F or more above the dew point.

D. Storage Space:

1. Owner will arrange for limited on-site location(s) for free storage of salvaged material. This storage space includes security and climate control for stored material.

1.9 FIELD CONDITIONS

A. Survey of Existing Conditions: Record existing conditions that affect the Work by use of preconstruction photographs and/or preconstruction video recording.

1. Comply with requirements specified in Section 013233 "Photographic Documentation."

B. Size Limitations in Existing Spaces: Materials, products, and equipment used for performing the Work and for transporting debris, materials, and products shall be of sizes that clear surfaces within existing spaces, areas, rooms, and openings, including temporary protection, by 12 inches or more.

PART 2 - PRODUCTS - (Not Used)

PART 3 - EXECUTION

3.1 PROTECTION

A. Protect persons, motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm resulting from alteration work.

1. Use only proven protection methods, appropriate to each area and surface being protected.
2. Provide temporary barricades, barriers, and directional signage to exclude the public from areas where alteration work is being performed.
3. Erect temporary barriers to form and maintain fire-egress routes.
4. Contain dust and debris generated by alteration work and prevent it from reaching the public or adjacent surfaces.
5. Protect floors and other surfaces along hauling routes from damage, wear, and staining.
6. Provide supplemental sound-control treatment to isolate demolition work from other areas of the building.

B. Temporary Protection of Materials to Remain:

1. Protect existing materials with temporary protections and construction. Do not remove existing materials unless otherwise indicated.

C. Comply with each product manufacturer's written instructions for protections and precautions. Protect against adverse effects of products and procedures on people and adjacent materials, components, and vegetation.

D. Utility and Communications Services:

1. Notify Owner, Architect, authorities having jurisdiction, and entities owning or controlling wires, conduits, pipes, and other services affected by alteration work before commencing operations.
2. Disconnect and cap pipes and services as required by authorities having jurisdiction, as required for alteration work.
3. Maintain existing services unless otherwise indicated; keep in service and protect against damage during operations. Provide temporary services during interruptions to existing utilities.

E. Existing Drains: Prior to the start of work in an area, test drainage system to ensure that it is functioning properly. Notify Architect immediately of inadequate drainage or blockage. Do not begin work in an area until the drainage system is functioning properly.

1. Prevent solids such as adhesive or mortar residue or other debris from entering the drainage system. Clean out drains and drain lines that become sluggish or blocked by sand or other materials resulting from alteration work.
2. Protect drains from pollutants. Block drains or filter out sediments, allowing only clean water to pass.

F. Existing Roofing: Prior to the start of work in an area, install roofing protection.

3.2 PROTECTION FROM FIRE

A. General: Follow fire-prevention plan and the following:

1. Comply with NFPA 241 requirements unless otherwise indicated.
2. Remove and keep area free of combustibles, including rubbish, paper, waste, and chemicals, unless necessary for the immediate work.

a. If combustible material cannot be removed, provide fire blankets to cover such materials.

B. Heat-Generating Equipment and Combustible Materials:

1. Use of open-flame equipment is not permitted.

C. Fire-Control Devices: Provide and maintain fire extinguishers, fire blankets, and rag buckets for disposal of rags with combustible liquids. Maintain each as suitable for the type of fire risk in each work area. Ensure that nearby personnel and the fire-watch personnel are trained in fire-extinguisher and blanket use.

3.3 PROTECTION DURING APPLICATION OF CHEMICALS

A. Protect motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm or spillage resulting from applications of chemicals and adhesives.

B. Cover adjacent surfaces with protective materials that are proven to resist chemicals selected for Project unless chemicals being used will not damage adjacent surfaces as indicated in alteration work program. Use covering materials and masking agents that are waterproof and UV resistant and that will not stain or leave residue on surfaces to which they are applied. Apply protective materials according to manufacturer's written instructions. Do not apply liquid masking agents or adhesives to painted or porous surfaces. When no longer needed, promptly remove protective materials.

C. Do not apply chemicals during winds of sufficient force to spread them to unprotected surfaces.

D. Neutralize alkaline and acid wastes and legally dispose of off Owner's property.

E. Collect and dispose of runoff from chemical operations by legal means and in a manner that prevents soil contamination, soil erosion, undermining of paving and foundations, damage to landscaping, or water penetration into building interior.

3.4 GENERAL ALTERATION WORK

A. Have specialty work performed only by qualified specialists.

B. Ensure that supervisory personnel are present when work begins and during its progress.

C. Record existing work before each procedure (preconstruction). Use digital preconstruction documentation photographs or video recordings. Comply with requirements in Section 013233 "Photographic Documentation."

D. Perform surveys of Project site as the Work progresses to detect hazards resulting from alterations.

E. Notify Architect of visible changes in the integrity of material or components whether from environmental causes or from structural defects including cracks, movement, or distortion.

1. Do not proceed with the work in question until directed by Architect.

END OF SECTION 013516

SECTION 014000 - QUALITY REQUIREMENTS

1.1 DEFINITIONS

A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements.

1.2 QUALITY ASSURANCE

A. Delegated-Design Services: For products and systems assigned to Contractor to be designed and certified by Contractor's design professional to be in compliance with performance and design criteria.

B. Qualifications:

1. Contractor's quality-control personnel.
2. Manufacturer.
3. Fabricator.
4. Installer.
5. Professional engineer.
6. Specialists.
7. Testing agency.
8. Manufacturer's technical representative.
9. Factory-authorized service representative.

C. Preconstruction testing.

1.3 QUALITY CONTROL

A. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility.

B. Manufacturer's field services.

C. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

D. Special Tests and Inspections: Conducted by a qualified testing agency as required by authorities having jurisdiction, as indicated in individual Specification Sections.

E. Test and inspection log.

F. Repair and Protection: Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 014200 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DEFINITIONS

A. General: Basic Contract definitions are included in the Conditions of the Contract.

B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.

C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."

D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."

E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.

F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

G. "Install": Unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean, and similar operations at Project site.

H. "Provide": Furnish and install, complete and ready for the intended use.

I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

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

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

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

1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.4 ABBREVIATIONS AND ACRONYMS

A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale's "Encyclopedia of Associations: National Organizations of the U.S." or in Columbia Books' "National Trade & Professional Associations of the United States."

B. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.

1. AABC - Associated Air Balance Council; www.aabc.com.
2. AAMA - American Architectural Manufacturers Association; www.aamanet.org.
3. AASHTO - American Association of State Highway and Transportation Officials; www.transportation.org.
4. ABMA - American Bearing Manufacturers Association; www.americanbearings.org.
5. ACI - American Concrete Institute; (Formerly: ACI International); www.abma.com.
6. AEIC - Association of Edison Illuminating Companies, Inc. (The); www.aeic.org.
7. AGA - American Gas Association; www.aga.org.
8. AHRI - Air-Conditioning, Heating, and Refrigeration Institute (The); www.ahrinet.org.
9. AIA - American Institute of Architects (The); www.aia.org.
10. AMCA - Air Movement and Control Association International, Inc.; www.amca.org.
11. ANSI - American National Standards Institute; www.ansi.org.
12. ARI - Air-Conditioning & Refrigeration Institute; (See AHRI).
13. ARI - American Refrigeration Institute; (See AHRI).
14. ASCE - American Society of Civil Engineers; www.asce.org.
15. ASCE/SEI - American Society of Civil Engineers/Structural Engineering Institute; (See ASCE).
16. ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers; www.ashrae.org.
17. ASME - ASME International; (American Society of Mechanical Engineers); www.asme.org.
18. ASSE - American Society of Safety Engineers (The); www.asse.org.
19. ASSE - American Society of Sanitary Engineering; www.asse-plumbing.org.
20. ASTM - ASTM International; www.astm.org.
21. AWI - Architectural Woodwork Institute; www.awinet.org.
22. BHMA - Builders Hardware Manufacturers Association; www.buildershardware.com.
23. BICSI - BICSI, Inc.; www.bicsi.org.
24. CDA - Copper Development Association; www.copper.org.
25. CGA - Compressed Gas Association; www.cganet.com.
26. CIMA - Cellulose Insulation Manufacturers Association; www.cellulose.org.
27. CISCA - Ceilings & Interior Systems Construction Association; www.cisca.org.
28. CSA - CSA International; (Formerly: IAS - International Approval Services); www.csa-international.org.
29. CSI - Construction Specifications Institute (The); www.csinet.org.
30. CTI - Cooling Technology Institute; (Formerly: Cooling Tower Institute); www.cti.org.
31. CWC - Composite Wood Council; (See CPA).

32. DHI - Door and Hardware Institute; www.dhi.org.
33. ECA - Electronic Components Association; (See ECIA).
34. ECAMA - Electronic Components Assemblies & Materials Association; (See ECIA).
35. ECIA - Electronic Components Industry Association; www.eciaonline.org.
36. EIA - Electronic Industries Alliance; (See TIA).
37. EIMA - EIFS Industry Members Association; www.eima.com.
38. EJMA - Expansion Joint Manufacturers Association, Inc.; www.ejma.org.
39. ESD - ESD Association; (Electrostatic Discharge Association); www.esda.org.
40. EVO - Efficiency Valuation Organization; www.evo-world.org.
41. FCI - Fluid Controls Institute; www.fluidcontrolsinstitute.org.
42. FM Approvals - FM Approvals LLC; www.fmglobal.com.
43. FM Global - FM Global; (Formerly: FMG - FM Global); www.fmglobal.com.
44. FRSA - Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc.; www.floridaroof.com.
45. FSA - Fluid Sealing Association; www.fluidsealing.com.
46. GA - Gypsum Association; www.gypsum.org.
47. GANA - Glass Association of North America; www.glasswebsite.com.
48. HI - Hydraulic Institute; www.pumps.org.
49. HI/GAMA - Hydronics Institute/Gas Appliance Manufacturers Association; (See AHRI).
50. HMMA - Hollow Metal Manufacturers Association; (See NAAMM).
51. HPVA - Hardwood Plywood & Veneer Association; www.hpva.org.
52. HPW - H. P. White Laboratory, Inc.; www.hpwhite.com.
53. IAPSC - International Association of Professional Security Consultants; www.iapsc.org.
54. IAS - International Accreditation Service; www.iasonline.org.
55. IAS - International Approval Services; (See CSA).
56. ICBO - International Conference of Building Officials; (See ICC).
57. ICC - International Code Council; www.iccsafe.org.
58. ICEA - Insulated Cable Engineers Association, Inc.; www.icea.net.
59. ICPA - International Cast Polymer Alliance; www.icpa-hq.org.
60. ICRI - International Concrete Repair Institute, Inc.; www.icri.org.
61. IEC - International Electrotechnical Commission; http://www.iec.ch.
62. IEEE - Institute of Electrical and Electronics Engineers, Inc. (The); www.ieee.org.
63. IES - Illuminating Engineering Society; (Formerly: Illuminating Engineering Society of North America); www.ies.org.
64. IESNA - Illuminating Engineering Society of North America; (See IES).
65. IEST - Institute of Environmental Sciences and Technology; www.iest.org.
66. IGMA - Insulating Glass Manufacturers Alliance; www.igmaonline.org.
67. Intertek - Intertek Group; (Formerly: ETL SEMCO; Intertek Testing Service NA); www.intertek.com.
68. ISA - International Society of Automation (The); (Formerly: Instrumentation, Systems, and Automation Society); www.isa.org.
69. ISAS - Instrumentation, Systems, and Automation Society (The); (See ISA).
70. ISFA - International Surface Fabricators Association; (Formerly: International Solid Surface Fabricators Association); www.isfanow.org.
71. ISO - International Organization for Standardization; www.iso.org.
72. ISSFA - International Solid Surface Fabricators Association; (See ISFA).
73. KCMA - Kitchen Cabinet Manufacturers Association; www.kcma.org.
74. LMA - Laminating Materials Association; (See CPA).
75. MHIA - Material Handling Industry of America; www.mhia.org.
76. MPI - Master Painters Institute; www.paintinfo.com.
77. MSS - Manufacturers Standardization Society of The Valve and Fittings Industry Inc.; www.mss-hq.org.
78. NAAMM - National Association of Architectural Metal Manufacturers; www.naamm.org.
79. NACE - NACE International; (National Association of Corrosion Engineers International); www.nace.org.
80. NADCA - National Air Duct Cleaners Association; www.nadca.com.

81. NAIMA - North American Insulation Manufacturers Association; www.naima.org.
82. NCMA - National Concrete Masonry Association; www.ncma.org.
83. NEBB - National Environmental Balancing Bureau; www.nebb.org.
84. NECA - National Electrical Contractors Association; www.necanet.org.
85. NEMA - National Electrical Manufacturers Association; www.nema.org.
86. NETA - InterNational Electrical Testing Association; www.netaworld.org.
87. NFPA - National Fire Protection Association; www.nfpa.org.
88. NFPA - NFPA International; (See NFPA).
89. NFRC - National Fenestration Rating Council; www.nfrc.org.
90. NOMMA - National Ornamental & Miscellaneous Metals Association; www.nomma.org.
91. NRMCA - National Ready Mixed Concrete Association; www.nrmca.org.
92. NSF - NSF International; www.nsf.org.
93. NSPE - National Society of Professional Engineers; www.nspe.org.
94. RFCI - Resilient Floor Covering Institute; www.rfci.com.
95. SAE - SAE International; www.sae.org.
96. SMACNA - Sheet Metal and Air Conditioning Contractors' National Association; www.smacna.org.
97. SPIB - Southern Pine Inspection Bureau; www.spib.org.
98. SSPC - SSPC: The Society for Protective Coatings; www.sspc.org.
99. TCNA - Tile Council of North America, Inc.; www.tileusa.com.
100. TMS - The Masonry Society; www.masonrysociety.org.
101. UL - Underwriters Laboratories Inc.; www.ul.com.
102. UNI - Uni-Bell PVC Pipe Association; www.uni-bell.org.
103. WASTEC - Waste Equipment Technology Association; www.wastec.org.
104. WCMA - Window Covering Manufacturers Association; www.wcmanet.org.
105. WDMA - Window & Door Manufacturers Association; www.wdma.com.

C. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is believed to be accurate as of the date of the Contract Documents.

1. IAPMO - International Association of Plumbing and Mechanical Officials; www.iapmo.org.
2. ICC - International Code Council; www.iccsafe.org.
3. ICC-ES - ICC Evaluation Service, LLC; www.icc-es.org.

D. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Information is subject to change and is up to date as of the date of the Contract Documents.

1. CPSC - Consumer Product Safety Commission; www.cpsc.gov.
2. DOC - Department of Commerce; National Institute of Standards and Technology; www.nist.gov.
3. DOE - Department of Energy; www.energy.gov.
4. EPA - Environmental Protection Agency; www.epa.gov.
5. FG - Federal Government Publications; www.gpo.gov/fdsys.
6. GSA - General Services Administration; www.gsa.gov.
7. LBL - Lawrence Berkeley National Laboratory; Environmental Energy Technologies Division; www.eetd.lbl.gov.
8. OSHA - Occupational Safety & Health Administration; www.osha.gov.
9. SD - Department of State; www.state.gov.
10. TRB - Transportation Research Board; National Cooperative Highway Research Program; The National Academies; www.trb.org.

E. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and

regulations in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.

1. CFR - Code of Federal Regulations; Available from Government Printing Office; www.gpo.gov/fdsys.
2. FED-STD - Federal Standard; (See FS).
3. USAB - United States Access Board; www.access-board.gov.
4. USATBCB - U.S. Architectural & Transportation Barriers Compliance Board; (See USAB).

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes requirements for temporary support facilities, and security and protection facilities.

B. Related Requirements:

1. Section 011000 "Summary" for work restrictions and limitations on utility interruptions.

1.3 USE CHARGES

A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities engaged in the Project to use temporary services and facilities without cost, including, but not limited to Architect, testing agencies, and authorities having jurisdiction.

B. Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

C. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

1.4 INFORMATIONAL SUBMITTALS

A. Site Utilization Plan: Show temporary facilities, staging areas, construction site entrances, vehicle circulation, and parking areas for construction personnel.

B. Implementation and Termination Schedule: Within 15 days of date established for commencement of the Work, submit schedule indicating implementation and termination dates of each temporary utility.

C. Project Identification and Temporary Signs: Project identification and temporary signs are not allowed.

D. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.

E. Moisture- and Mold-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage and mold.

F. Dust- and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Include the following:

1. Locations of dust-control partitions at each phase of work.
2. HVAC system isolation schematic drawing.
3. Location of proposed air-filtration system discharge.
4. Waste-handling procedures.
5. Other dust-control measures.

1.5 QUALITY ASSURANCE

A. Accessible Temporary Egress: Comply with applicable provisions in the United States Access Board's ADA-ABA Accessibility Guidelines.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Portable Chain-Link Fencing: Minimum 2-inch, 0.148-inch-thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet high with galvanized-steel pipe posts; minimum 2-3/8-inch-OD line posts and 2-7/8-inch-OD corner and pull posts, with 1-5/8-inch-OD top and bottom rails. Provide galvanized-steel bases for supporting posts.

B. Fencing Windscreen Privacy Screen: Polyester fabric scrim with grommets for attachment to chain link fence, sized to height of fence, in color selected by Architect from manufacturer's standard colors.

C. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10-mil minimum thickness, with flame-spread rating of 15 or less per ASTM E 84 and passing NFPA 701 Test Method 2.

D. Dust-Control Adhesive-Surface Walk-Off Mats: Provide mats minimum 36 by 60 inches.

2.2 TEMPORARY FACILITIES

A. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.

1. Store combustible materials apart from building.

2.3 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

B. Air-Filtration Units: Primary and secondary HEPA-filter-equipped portable units with four-stage filtration. Provide single switch for emergency shutoff. Configure to run continuously.

PART 3 - EXECUTION

3.1 TEMPORARY FACILITIES, GENERAL

A. Conservation: Coordinate construction and use of temporary facilities with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

3.2 INSTALLATION, GENERAL

A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.

1. Locate facilities to limit site disturbance as specified in Section 011000 "Summary."

B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.3 TEMPORARY UTILITY INSTALLATION

A. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.

B. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.

1. Prior to commencing work, isolate the HVAC system in area where work is to be performed.

a. Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
b. Maintain negative air pressure within work area using HEPA-equipped air-filtration units, starting with commencement of temporary partition construction, and continuing until removal of temporary partitions is complete.

2. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.
3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.

C. Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.

D. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

3.4 SUPPORT FACILITIES INSTALLATION

A. General: Comply with the following:

1. Provide construction for temporary sheds located within construction area or within 30 feet of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241.
2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

B. Traffic Controls: Comply with requirements of authorities having jurisdiction.

1. Protect existing site improvements to remain including curbs, pavement, and utilities.
2. Maintain access for fire-fighting equipment and access to fire hydrants.

C. Parking: Use designated areas of Owner's existing parking areas for construction personnel.

D. Project Signs: Project signs are not permitted.

E. Waste Disposal Facilities: Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."

F. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction.

G. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.

1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

3.5 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties. Repair damage to existing facilities.

B. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner from fumes and noise.

1. Construct dustproof partitions with two layers of 6-mil polyethylene sheet on each side. Cover floor with two layers of 6-mil polyethylene sheet, extending sheets 18 inches up the sidewalls. Overlap and tape full length of joints. Cover floor with fire-retardant-treated plywood.
2. Provide walk-off mats at each entrance through temporary partition.

C. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.

1. Prohibit smoking in construction areas or on the project site.

2. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

3.6 MOISTURE AND MOLD CONTROL

A. Contractor's Moisture-Protection Plan: Describe delivery, handling, storage, installation, and protection provisions for materials subject to water absorption or water damage.

1. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water-damaged Work.

B. Exposed Construction Period: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:

1. Protect porous materials from water damage.
2. Protect stored and installed material from flowing or standing water.
3. Keep porous and organic materials from coming into prolonged contact with concrete.

3.7 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance: Maintain facilities in good operating condition until removal.

C. Termination and Removal: Remove each temporary facility when need for its service has ended or no later than Substantial Completion. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of Contractor.
2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements.

END OF SECTION 015000

SECTION 016000 - PRODUCT REQUIREMENTS

1.1 ACTION SUBMITTALS

A. Comparable Product Requests: Architect will notify Contractor of approval or rejection within 15 days of receipt of request, or seven days of receipt of additional information.

1.2 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Use means and methods that will prevent damage, deterioration, and loss, including theft.

B. Store products to allow for inspection and measurement or counting of units.

1.3 PRODUCT WARRANTIES

A. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.

1.4 PRODUCT SELECTION PROCEDURES

A. Product Selection Procedures:

1. Sole Product: Product named that complies with requirements.
2. Sole Manufacturer/Source: Product by manufacturer or from source named that complies with requirements.
3. Limited List of Products: One of the products listed that complies with requirements. Comparable products will be considered unless otherwise indicated.
4. Limited List of Manufacturers: Product by one of the manufacturers listed that complies with requirements. Comparable products will be considered unless otherwise indicated.
5. Basis-of-Design Product: Either the specified product or a comparable product by one of the other named manufacturers, approved by Architect prior to normal Project submittal.

1.5 COMPARABLE PRODUCTS

A. Conditions for Consideration:

1. Product does not require revisions to the Contract Documents, is consistent with the Contract Documents and will produce the indicated results and is compatible with other portions of the Work.
2. Comparison of proposed product with those named in the Specifications.
3. Product provides specified warranty.
4. Similar installations, if requested.
5. Samples, if requested.

END OF SECTION 016000

SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:

1. Installation of the Work.
2. Cutting and patching.
3. Progress cleaning.
4. Starting and adjusting.
5. Protection of installed construction.

B. Related Requirements:

1. Section 011000 "Summary" for limits on use of Project site.
2. Section 017700 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, replacing defective work, and final cleaning.
3. Section 024119 "Selective Demolition" for demolition and removal of selected portions of the building.

1.3 DEFINITIONS

A. Cutting: Removal of in-place construction necessary to permit installation or performance of subsequent work.

B. Patching: Fitting and repair work required to restore construction to original conditions after installation of subsequent work.

1.4 PREINSTALLATION MEETINGS

A. Cutting and Patching Conference: Conduct conference at Project site.

1. Prior to commencing work requiring cutting and patching, review extent of cutting and patching anticipated and examine procedures for ensuring satisfactory result from cutting and patching work. Require representatives of each entity directly concerned with cutting and patching to attend, including the following:

a. Contractor's superintendent.
b. Trade supervisor responsible for cutting operations.
c. Trade supervisor(s) responsible for patching of each type of substrate.

d. Mechanical, electrical, and utilities subcontractors' supervisors, to the extent each trade is affecting by cutting and patching operations.

2. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

1.5 INFORMATIONAL SUBMITTALS

A. Cutting and Patching Plan: Submit plan describing procedures at least 10 days prior to the time cutting and patching will be performed. Include the following information:

1. Extent: Describe reason for and extent of each occurrence of cutting and patching.
2. Changes to In-Place Construction: Describe anticipated results. Include changes to operating components as well as changes in building appearance and other significant visual elements.
3. Products: List products to be used for patching and firms or entities that will perform patching work.
4. Dates: Indicate when cutting and patching will be performed.
5. Utilities and Mechanical and Electrical Systems: List services and systems that cutting and patching procedures will disturb or affect. List services and systems that will be relocated and those that will be temporarily out of service. Indicate length of time permanent services and systems will be disrupted.

a. Include description of provisions for temporary services and systems during interruption of permanent services and systems.

B. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

1.6 QUALITY ASSURANCE

A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.

1. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operational elements include the following:

a. Primary operational systems and equipment.
b. Plumbing piping systems.
c. Mechanical systems piping and ducts.
d. Control systems.
e. Electrical wiring systems.

2. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

B. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Comply with requirements specified in other Sections.

B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Examine walls, floors, and ceilings for suitable conditions where products and systems are to be installed.
2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

B. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

B. Review Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Architect according to requirements in Section 013100 "Project Management and Coordination."

3.3 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.

2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.

B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.

F. Tools and Equipment: Where possible, select tools or equipment that minimize production of excessive noise levels.

G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other portions of the Work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
2. Allow for building movement, including thermal expansion and contraction.
3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

J. Repair or remove and replace damaged, defective, or nonconforming Work.

1. Comply with Section 017700 "Closeout Procedures" for repairing or removing and replacing defective Work.

3.4 CUTTING AND PATCHING

A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

1. Cut in-place construction to provide for installation of other components or performance of other construction and subsequently patch as required to restore surfaces to their original condition.

B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.

C. Temporary Support: Provide temporary support of work to be cut.

D. Protection: Protect in-place 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.

E. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching according to requirements in Section 011000 "Summary."

F. 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 minimize interruption to occupied areas.

G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction.

1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
3. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
4. Proceed with patching after construction operations requiring cutting are complete.

H. Patching: Patch construction by filling, repairing, refinishing, closing, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.

    a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
    b. Restore damaged pipe covering to its original condition.

3. Walls: Where wall finishes are removed, patch and repair wall surfaces to provide an even surface of uniform finish, color, texture, and appearance.

    a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.

4. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.

I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.5 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.
3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

a. Use containers intended for holding waste materials of type to be stored.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 017419 "Construction Waste Management and Disposal."

H. During handling and installation, clean and protect construction in progress and adjoining materials. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

J. Limiting Exposures: Supervise construction operations 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.

3.6 STARTING AND ADJUSTING

A. Coordinate startup and adjusting of equipment and operating components with requirements in Section 019113 "General Commissioning Requirements."

B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.

D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

E. Manufacturer's Field Service: Comply with qualification requirements in Section 014000 "Quality Requirements."

3.7 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

B. Protection of Existing Items: Provide protection and ensure that existing items to remain undisturbed by construction are maintained in condition that existed at commencement of the Work.

C. Comply with manufacturer's written instructions for temperature and relative humidity.

END OF SECTION 017300

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

1.1 SUMMARY

A. Recycling nonhazardous demolition and construction waste.

B. Disposing of nonhazardous demolition and construction waste.

1.2 WASTE MANAGEMENT PLAN

A. Types and quantities of demolition and construction waste.

B. Type of waste and whether it will be recycled or disposed of in landfill or incinerator.

1.3 PLAN IMPLEMENTATION

A. Train workers, subcontractors, and suppliers on proper waste management procedures.

END OF SECTION 017419

SECTION 017700 - CLOSEOUT PROCEDURES

1.1 CLOSEOUT PROCEDURES

A. Prepare and submit Contractor's list of incomplete items (punch list) in the form of PDF electronic file.

B. Submit closeout items required in other Sections.

C. Submit project warranties.

D. Complete final cleaning.

E. Touch up or repair finishes.

END OF SECTION 017700

SECTION 017839 - PROJECT RECORD DOCUMENTS

1.1 RECORD DOCUMENTS

A. Record Drawings:

1. Initial Submittal: PDF electronic files.
2. Final Submittal: PDF electronic file.

B. Record Specifications: Annotated PDF electronic files.

C. Record Product Data: [Annotated PDF electronic files and directories.

D. Miscellaneous Record Submittals: PDF electronic files and directories.

E. Record Digital Data Files: Corrected digital data files of the Project Manual, as follows:

1. Format: Annotated PDF electronic file.

END OF SECTION 017839

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building.
2. Salvage of existing items to be reused.

B. Related Requirements:

1. Section 011000 "Summary" for restrictions on use of the premises, Owner-occupancy requirements, and phasing requirements.
2. Section 017300 "Execution" for cutting and patching procedures.
3. Section 013516 "Alteration Project Procedures" for general protection and work procedures for alteration projects.

1.3 DEFINITIONS

A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.

B. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.

C. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.

D. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

1.4 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes property of Contractor.

1.5 PREINSTALLATION MEETINGS

A. Predemolition Conference: Conduct conference at Project site.

1. Inspect and discuss condition of construction to be selectively demolished.

2. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
3. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
4. Review areas where existing construction is to remain and requires protection.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For refrigerant recovery technician.

B. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for dust control and, for noise control. Indicate proposed locations and construction of barriers.

C. Schedule of Selective Demolition Activities: Indicate the following:

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
2. Interruption of utility services. Indicate how long utility services will be interrupted.
3. Coordination for shutoff, capping, and continuation of utility services.
4. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.

D. Predemolition Photographs or Video Recording: Show existing conditions of adjoining construction, including finish surfaces, that might be misconstrued as damage caused by demolition operations. Comply with Section 013233 "Photographic Documentation." Submit before Work begins.

E. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all present refrigerant was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

F. Warranties: Documentation indicating that existing warranties are still in effect after completion of selective demolition.

1.7 QUALITY ASSURANCE

A. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

1.8 FIELD CONDITIONS

A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

C. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.

1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.

D. Storage or sale of removed items or materials on-site is not permitted.

E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1.9 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials and using approved contractors so as not to void existing warranties. Notify warrantor before proceeding. Existing warranties include the following:

1. Roof system.

B. Notify warrantor on completion of selective demolition and obtain documentation verifying that existing system has been inspected and warranty remains in effect. Submit documentation at Project closeout.

1.10 COORDINATION

A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped, where specifically required, before starting selective demolition operations.

B. Review Project Record Documents of existing construction or other existing condition provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.

C. Survey of Existing Conditions: Record existing conditions by use of measured drawings and preconstruction photographs or video recording.

1. Comply with requirements specified in Section 013233 "Photographic Documentation."
2. Inventory and record the condition of items to be removed and reused. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.
3. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

3.2 PREPARATION

A. Refrigerant: Before starting demolition, remove refrigerant from mechanical equipment according to 40 CFR 82 and regulations of authorities having jurisdiction.

3.3 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

B. Existing Services/Systems to Be Removed or Relocated: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.

1. Arrange to shut off utilities with utility companies.
2. Disconnect, demolish, and remove selective HVAC systems, equipment, and components indicated to be removed.

    a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
    b. Equipment to Be Removed: Disconnect and cap services and remove equipment.

3.4 PROTECTION

A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
4. Cover and protect furniture, furnishings, and equipment that have not been removed.
5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Section 015000 "Temporary Facilities and Controls."

B. Remove temporary barricades and protections where hazards no longer exist.

3.5 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
3. Do not use cutting torches.
4. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
5. Dispose of demolished items and materials promptly. Comply with requirements in Section 017419 "Construction Waste Management and Disposal."

B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

C. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.

1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
4. Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."

B. Burning: Do not burn demolished materials.

END OF SECTION 024119

SECTION 072400 - EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS)

PART 1 - GENERAL

1.1 The work consists of patch/repair of damaged portions of EFIS on the exterior of the buildings to match adjacent surfaces in thickness and finish.

A. Patch/repair minor damage to EFIS finish to match adjacent surfaces.

B. Remove significantly damaged portions of EFIS to secure to concrete masonry unit (CMU) substrate.

C. Replace components of EFIS including insulation, drainage mat, vapor barrier, reinforcing mesh, heavy-duty reinforcing mesh and lamina finish.

D. The work must comply with Florida Department of Business & Professional Regulation Product Approval requirements. NOTE: EFIS is not approved for use in High Velocity Hurricane Zones (HVHZ). However, repair of damage to existing system should be considered maintenance.

PART 2 - PRODUCTS

2.1 Products from the following manufacturers are approved for use and are to be installed in accordance with manufacturer recommendations:

A. Dryvit – State of Florida #FL3423.1 Dryvit Outsulation LCMD Systems 1-5.
B. Sto – State of Florida #FL20110.1 StoTherm ci.

PART 3 - EXECUTION

3.1 Install in accordance with State of Florida Product Approval requirements.

END OF SECTION 072400

SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Sealants.

1.3 PREINSTALLATION MEETINGS

A. Pre-installation Conference: Conduct conference at the Project Site.

1.4 ACTION SUBMITTALS

A. Product Data: For each joint-sealant product.

1.5 INFORMATIONAL SUBMITTALS

A. Field-Adhesion-Test Reports: For each sealant application tested.

B. Sample Warranties: For special warranties.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.

B. Product Testing: Test joint sealants using a qualified testing agency.

1. Testing Agency Qualifications: Qualified according to ASTM C 1021 to conduct the testing indicated.

1.7 FIELD CONDITIONS

A. Do not proceed with installation of joint sealants under the following conditions:

1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer.
2. When joint substrates are wet.

3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.8 WARRANTY

1. Warranty for sealants shall be for ten (10) years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 JOINT SEALANTS, GENERAL

A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience. All joint sealants shall be manufactured or approved by the manufacturer of the roofing system being applied.

2.2 URETHANE JOINT SEALANTS

A. Urethane, M, P, 25, T, NT: Multicomponent, pourable, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type M, Grade P, Class 25, Uses T and NT.

2.3 POLYSULFIDE JOINT SEALANTS

A. Polysulfide, M, NS, 25, T, NT: Multicomponent, non-sag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, polysulfide joint sealant; ASTM C 920, Type M, Grade NS, Class 25, Use NT.

2.4 BUTYL JOINT SEALANTS

A. Butyl-Rubber-Based Joint Sealants: ASTM C 1311.

2.5 JOINT-SEALANT BACKING

A. Sealant Backing Material, General: Non-staining; compatible with joint substrates, sealants, primers, and other joint fillers; and approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint. Provide self-adhesive tape where applicable.

2.6 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.

C. Masking Tape: Non-staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:

1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
2. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:

    a. Concrete.
    b. EFIS.
    c. Stucco.

3. Remove laitance from concrete.

B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or

by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications.

B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions dictate.

C. Install sealant backings to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, puncture, or tear sealant backings.
3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.

E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses in each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

3.4 CLEANING

A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out, remove, and repair damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

END OF SECTION 079200

085113 - ALUMINUM WINDOWS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. The intended scope of work for aluminum windows is to inspect and repair existing aluminum windows to eliminate through wall water penetrations primarily at perimeters windows and at windowsills. If the aluminum window contractor is unable correct conditions to a weathertight condition. This Section includes replacement aluminum windows for selective exterior locations. Finish, size and appearance to match existing aluminum window units as closely as possible. Color of glazing shall match existing aluminum window units.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
2. Review and discuss the finishing of aluminum windows that is required to be coordinated with the finishing of other aluminum work for color and finish matching.
3. Review, discuss, and coordinate the interrelationship of aluminum windows with other exterior wall components. Include provisions for anchoring, flashing, weeping, sealing perimeters, and protecting finishes.
4. Review and discuss the sequence of work required to construct a watertight and weathertight exterior building envelope.
5. Inspect and discuss the condition of substrate and other preparatory work performed by other trades.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, glazing and fabrication methods, dimensions of individual components and profiles, hardware, and finishes for aluminum windows.

B. Shop Drawings: For aluminum windows.

1. Include plans, elevations, sections, hardware, accessories, insect screens, operational clearances, and details of installation, including anchor, flashing, and sealant installation.

C. Samples: For each exposed product and for each color specified, 2 by 4 inches in size.

D. Samples for Initial Selection: For units with factory-applied finishes.

1. Include Samples of hardware and accessories involving color selection.

E. Samples for Verification: For aluminum windows and components required, showing full range of color variations for finishes, and prepared on Samples of size indicated below:

1. Exposed Finishes: 2 by 4 inches.
2. Exposed Hardware: Full-size units.

F. Product Schedule: For aluminum windows. Use same designations indicated on Drawings.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For manufacturer and Installer.

B. Product Test Reports: For each type of aluminum window, for tests performed by a qualified testing agency.

C. Field quality-control reports.

D. Sample Warranties: For manufacturer's warranties.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: A manufacturer capable of fabricating aluminum windows that meet or exceed performance requirements indicated and of documenting this performance by test reports and calculations.

B. Installer Qualifications: An installer acceptable to aluminum window manufacturer for installation of units required for this Project.

C. Replacement aluminum windows must have State of Florida Notice of Acceptance (NOA) for small and large missile impact resistance in High Velocity Hurricane Zone (HVHZ).

1.7 WARRANTY

A. Manufacturer's Warranty: Manufacturer agrees to repair or replace aluminum windows that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Failure to meet performance requirements.
b. Structural failures including excessive deflection, water leakage, condensation, and air infiltration.
c. Faulty operation of movable sash and hardware.
d. Deterioration of materials and finishes beyond normal weathering.
e. Failure of insulating glass.

2. Warranty Period:

a. Window: 10 years from date of Substantial Completion.

b. Glazing Units: 20 years from date of Substantial Completion.
c. Aluminum Finish: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations: Obtain aluminum windows from single source from single manufacturer.

2.2 WINDOW PERFORMANCE REQUIREMENTS

A. Product Standard: Comply with AAMA/WDMA/CSA 101/I.S.2/A440 for definitions and minimum standards of performance, materials, components, accessories, and fabrication unless more stringent requirements are indicated.

1. Window Certification: AAMA certified with label attached to each window.

B. Performance Class and Grade: AAMA/WDMA/CSA 101/I.S.2/A440 as follows:

1. Minimum Performance Class: CW.
2. Minimum Performance Grade**:** 50.

C. Thermal Transmittance: NFRC 100 maximum whole-window U-factor of 0.30 Btu/sq. ft. x h x deg F.

D. Solar Heat-Gain Coefficient (SHGC): NFRC 200 maximum whole-window SHGC of 0.40.

E. Condensation-Resistance Factor (CRF): Provide aluminum windows tested for thermal performance according to AAMA 1503, showing a CRF of 45.

F. Thermal Movements: Provide aluminum windows, including anchorage, that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change: 120 deg F (67 deg C) ambient; 180 deg F (100 deg C) material surfaces.

G. Sound Transmission Class (STC): Rated for not less than 26 STC when tested for laboratory sound transmission loss according to ASTM E 90 and determined by ASTM E 413.

H. Outside-Inside Transmission Class (OITC): Rated for not less than 22 OITC when tested for laboratory sound transmission loss according to ASTM E 90 and determined by ASTM E 1332.

I. Windborne-Debris-Impact Resistance: Capable of resisting impact from windborne debris based on testing glazed windows identical to those specified, according to ASTM E 1886 and testing information in ASTM E 1996 and requirements of authorities having jurisdiction.

2.3 ALUMINUM WINDOWS

A. Operating Types: Provide the following operating types:

1. Fixed.

B. Frames and Sashes: Aluminum extrusions complying with AAMA/WDMA/CSA 101/I.S.2/A440.

1. Thermally Improved Construction: Fabricate frames and muntins with an integral, concealed, low-conductance thermal barrier located between exterior materials and window members exposed on interior side in a manner that eliminates direct metal-to-metal contact.

C. Windborne-Debris-Impact-Resistant Insulating-Glass Units: ASTM E 2190 with two lites and complying with impact-resistance requirements in "Window Performance Requirements" Article.

1. Exterior Lite: ASTM C 1036, Type 1, Class 1, q3.

a. Tint: Clear.
b. Kind: Fully tempered.

2. Interior Lite: ASTM C 1172 clear laminated glass with two plies of float glass.

a. Float Glass: As required by performance requirements indicated.
b. Interlayer Thickness: As required by performance requirements indicated.

3. Filling: Fill space between glass lites with argon.
4. Low-E Coating: Sputtered on second surface.

D. Glazing System: Manufacturer's standard factory-glazing system that produces weathertight seal.

1. Dual Glazing System:

a. Exterior Lite: Insulating-glass unit.

E. Fasteners: Noncorrosive and compatible with window members, trim, hardware, anchors, and other components.

1. Exposed Fasteners: Do not use exposed fasteners to greatest extent possible. For application of hardware, use fasteners that match finish hardware being fastened.

2.4 FABRICATION

A. Fabricate aluminum windows in sizes indicated. Include a complete system for assembling components and anchoring windows.

B. Glaze aluminum windows in the factory.

C. Weep Holes: Provide weep holes and internal passages to conduct infiltrating water to exterior.

D. Mullions: Provide mullions and cover plates, matching window units, complete with anchors for support to structure and installation of window units. Allow for erection tolerances and provide

for movement of window units due to thermal expansion and building deflections. Provide mullions and cover plates capable of withstanding design wind loads of window units.

E. Complete fabrication, assembly, finishing, hardware application, and other work in the factory to greatest extent possible. Disassemble components only as necessary for shipment and installation.

2.5 GENERAL FINISH REQUIREMENTS

A. Comply with NAAMM's "Metal Finishes Manual" for recommendations for applying and designating finishes.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.6 ALUMINUM FINISHES

A. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.

B. High-Performance Organic Finish (Three-Coat Fluoropolymer): AA-C12C40R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: conversion coatings; Organic Coating: manufacturer's standard three-coat, thermocured system consisting of specially formulated inhibitive primer, fluoropolymer color coat, and clear fluoropolymer topcoat, with both color coat and clear topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with AAMA 2605 and with coating and resin manufacturers' written instructions.

1. Color and Gloss: White to match existing adjacent aluminum windows.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Verify rough opening dimensions, levelness of sill plate, and operational clearances.

C. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure weathertight window installation.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Comply with manufacturer's written instructions for installing windows and other components. For installation procedures and requirements not addressed in manufacturer's written instructions, comply with installation requirements in ASTM E 2112.

B. Install windows level, plumb, square, true to line, without distortion or impeding thermal movement, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction to produce weathertight construction.

C. Install windows and components to drain condensation, water penetrating joints, and moisture migrating within windows to the exterior.

D. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.

3.3 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.

1. Testing and inspecting agency will interpret tests and state in each report whether tested work complies with or deviates from requirements.

B. Testing Services: Testing and inspecting of installed windows shall take place as follows:

1. Testing Methodology: Testing of windows for air infiltration and water resistance shall be performed according to AAMA 502.
2. Air-Infiltration Testing:

a. Test Pressure: That required to determine compliance with AAMA/WDMA/CSA 101/I.S.2/A440 performance class indicated.
b. Allowable Air-Leakage Rate: [**1.5**] <**Insert number**> times the applicable AAMA/WDMA/CSA 101/I.S.2/A440 rate for product type and performance class rounded down to one decimal place.

3. Water-Resistance Testing:

a. Test Pressure: Two-thirds times test pressure required to determine compliance with AAMA/WDMA/CSA 101/I.S.2/A440 performance grade indicated.
b. Allowable Water Infiltration: No water penetration.

4. Testing Extent: Three windows of each type as selected by Architect and a qualified independent testing and inspecting agency. Windows shall be tested after perimeter sealants have cured.
5. Test Reports: Prepared according to AAMA 502.

C. Windows will be considered defective if they do not pass tests and inspections.

D. Prepare test and inspection reports.

3.4 ADJUSTING, CLEANING, AND PROTECTION

A. Clean exposed surfaces immediately after installing windows. Avoid damaging protective coatings and finishes. Remove excess sealants, glazing materials, dirt, and other substances.

1. Keep protective films and coverings in place until final cleaning.

B. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.

C. Protect window surfaces from contact with contaminating substances resulting from construction operations. If contaminating substances do contact window surfaces, remove contaminants immediately according to manufacturer's written instructions.

END OF SECTION 085113

SECTION 092900 - GYPSUM BOARD

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Interior gypsum board.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For the following products:

1. Trim Accessories: Full-size Sample in 12-inch-long length for each trim accessory indicated.

C. Samples for Initial Selection: For each type of trim accessory indicated.

D. Samples for Verification: For the following products:

1. Trim Accessories: Full-size Sample in 12-inch-long length for each trim accessory indicated.

1.4 DELIVERY, STORAGE AND HANDLING

A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

1.5 FIELD CONDITIONS

A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written instructions, whichever are more stringent.

B. Do not install panels that are wet, moisture damaged, and mold damaged.

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 INTERIOR GYPSUM BOARD

A. Gypsum Wallboard: ASTM C 1396/C 1396M.

1. Acceptable manufacturers of gypsum board include but are not limited to:

a. American Gypsum.
b. Georgia-Pacific Gypsum LLC.
c. National Gypsum® Company.
d. USG.
e. Or Owner approved alternate.

2. Thickness: To match thickness of adjacent gypsum board surfaces.
3. Long Edges: Tapered.

2.2 TRIM ACCESSORIES

A. Interior Trim: ASTM C 1047.

1. Material: Galvanized or aluminum-coated steel sheet or rolled zinc.
2. Shapes:

a. Cornerbead.

2.3 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475/C 475M.

B. Joint Tape:

1. Interior Gypsum Board: Paper.

C. Joint Compound for Interior Gypsum Board: For each coat, use formulation that is compatible with other compounds applied on previous or for successive coats.

1. Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use all-purpose joint compound.
2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use all-purpose joint compound.

a. Use setting-type compound for installing paper-faced metal trim accessories.

3. Fill Coat: For second coat, use all-purpose joint compound.
4. Finish Coat: For third coat, use all-purpose joint compound.

2.4 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written instructions.

B. Steel Drill Screws: ASTM C 1002 unless otherwise indicated.

1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch thick.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and substrates including welded hollow-metal frames and support framing, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.

B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 APPLYING AND FINISHING PANELS, GENERAL

A. Comply with ASTM C 840.

B. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch of open space between panels. Do not force into place.

C. Locate edge and end joints over supports. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.

D. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments. Provide 1/4- to 1/2-inch-wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

E. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

3.3 APPLYING INTERIOR GYPSUM BOARD

A. Install interior gypsum board in the following locations:

1. Wallboard Type: Vertical surfaces unless otherwise indicated.
2. Remove water damaged gypsum board wall surfaces at perimeter of windows and patch/infill damaged areas to match adjacent surfaces.

B. Single-Layer Application:

1. On partitions/walls, apply gypsum panels vertically (parallel to framing) unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.

a. Stagger abutting end joints not less than one framing member in alternate courses of panels.

2. On Z-shaped furring members, apply gypsum panels vertically (parallel to framing) with no end joints. Locate edge joints over furring members.
3. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

3.4 INSTALLING TRIM ACCESSORIES

A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

B. Interior Trim: Install in the following locations:

1. Cornerbead: Use at outside corners.

3.5 FINISHING GYPSUM BOARD

A. General: Treat gypsum board joints, edge trim, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.

B. Prefill open joints and damaged surface areas.

C. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.

D. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840:

1. Level 4**:** At panel surfaces that will be exposed to view unless otherwise indicated.

a. Primer and its application to surfaces are specified in Section 099123 "Interior Painting."

3.6 PROTECTION

A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.

B. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

C. Remove and replace panels that are wet, moisture damaged, and mold damaged.

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 092900

SECTION 093013 - CERAMIC TILING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Glazed wall tile. The scope of work is to replace missing and broken glazed ceramic wall tile on the exterior faces of the buildings. Surplus tile from original installation may or may not be available on site for use. Match color and surface of existing tile as close as is practical. Match color, texture, and width of grout as close as is practical.

B. Related Requirements:

1. Section 079200 "Joint Sealants" for sealing of expansion, contraction, control, and isolation joints in tile surfaces.

1.3 DEFINITIONS

A. General: Definitions in the ANSI A108 series of tile installation standards and in ANSI A137.1 apply to Work of this Section unless otherwise specified.

B. ANSI A108 Series: ANSI A108.01, ANSI A108.02, ANSI A108.1A, ANSI A108.1B, ANSI A108.1C, ANSI A108.4, ANSI A108.5, ANSI A108.6, ANSI A108.8, ANSI A108.9, ANSI A108.10, ANSI A108.11, ANSI A108.12, ANSI A108.13, ANSI A108.14, ANSI A108.15, ANSI A108.16, and ANSI A108.17, which are contained in its "Specifications for Installation of Ceramic Tile."

C. Module Size: Actual tile size plus joint width indicated.

D. Face Size: Actual tile size, excluding spacer lugs.

1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1. Review requirements in ANSI A108.01 for substrates and for preparation by other trades.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples for Initial Selection: For tile, grout, and accessories involving color selection.

C. Samples for Verification:

1. Full-size units of each type and composition of tile and for each color and finish required.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Master Grade Certificates: For each shipment, type, and composition of tile, signed by tile manufacturer and Installer.

C. Product Certificates: For each type of product.

D. Product Test Reports: For tile-setting and -grouting products.

1.7 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match and are from same production runs as products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Tile and Trim Units: Furnish quantity of full-size units equal to 3 percent of amount installed for each type, composition, color, pattern, and size indicated.

2. Grout: Furnish quantity of grout equal to 3 percent of amount installed for each type, composition, and color indicated.

1.8 QUALITY ASSURANCE

A. Installer Qualifications:

1. Installer employs Ceramic Tile Education Foundation Certified Installers or installers recognized by the U.S. Department of Labor as Journeyman Tile Layers.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Comply with requirements in ANSI A137.1 for labeling tile packages.

B. Store tile and cementitious materials on elevated platforms, under cover, and in a dry location.

C. Store aggregates where grading and other required characteristics can be maintained, and contamination can be avoided.

D. Store liquid materials in unopened containers and protected from freezing.

1.10 FIELD CONDITIONS

A. Environmental Limitations: Do not install tile until construction in spaces is complete and ambient temperature and humidity conditions are maintained at the levels indicated in referenced standards and manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations for Tile: Obtain tile from single source or producer.

B. Source Limitations for Setting and Grouting Materials: Obtain ingredients of a uniform quality for each mortar, adhesive, and grout component from single manufacturer and each aggregate from single source or producer.

2.2 PRODUCTS, GENERAL

A. ANSI Ceramic Tile Standard: Provide tile that complies with ANSI A137.1 for types, compositions, and other characteristics indicated.

1. Provide tile complying with Standard grade requirements.

B. ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI A108.02, ANSI standards referenced in other Part 2 articles, ANSI standards referenced by TCNA installation methods specified in tile installation schedules, and other requirements specified.

C. Factory Blending: For tile exhibiting color variations within ranges, blend tile in factory and package so tile units taken from one package show same range in colors as those taken from other packages and match approved Samples.

D. Mounting: For factory-mounted tile, provide back- or edge-mounted tile assemblies as standard with manufacturer unless otherwise indicated.

1. Where tile is indicated for installation **on exteriors**, do not use back- or edge-mounted tile assemblies unless tile manufacturer specifies in writing that this type of mounting is suitable for installation indicated and has a record of successful in-service performance.

2.3 TILE PRODUCTS

A. Ceramic Tile Type: Glazed wall tile to match existing.

1. Module Size: To match existing.
2. Face Size Variation: Rectified.
3. Thickness: To match existing.
4. Face: To match existing.
5. Finish: To match existing.
6. Tile Color and Pattern: To match existing.
7. Grout Color: To match existing.

8. Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable and matching characteristics of adjoining flat tile. Provide shapes as follows, selected from manufacturer's standard shapes:

    a. External Corners for Thinset Mortar Installations: Same size as adjoining flat tile. To match existing.

2.4 SETTING MATERIALS

A. Improved Modified Dry-Set Mortar (Thinset): ANSI A118.15.

1. Provide prepackaged, dry-mortar mix containing dry, redispersible, vinyl acetate or acrylic additive to which only water must be added at Project site.
2. For wall applications, provide mortar that complies with requirements for non-sagging mortar in addition to the other requirements in ANSI A118.15.

2.5 GROUT MATERIALS

A. High-Performance Tile Grout: ANSI A118.7.

1. Acceptable manufacturers and product include but are not limited to:
    a. Laticrete Permacolor® Grout.
    b. MAPEI, Ultracolor Plus FA.
    c. Polyblend High Performance.
    d. Or Owner approved equal.

2.6 MISCELLANEOUS MATERIALS

A. Tile Cleaner: A neutral cleaner capable of removing soil and residue without harming tile and grout surfaces, specifically approved for materials and installations indicated by tile and grout manufacturers.

2.7 MIXING MORTARS AND GROUT

A. Mix mortars and grouts to comply with referenced standards and mortar and grout manufacturers' written instructions.

B. Add materials, water, and additives in accurate proportions.

C. Obtain and use type of mixing equipment, mixer speeds, mixing containers, mixing time, and other procedures to produce mortars and grouts of uniform quality with optimum performance characteristics for installations indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

1. Verify that substrates for setting tile are firm; dry; clean; free of coatings that are incompatible with tile-setting materials, including curing compounds and other substances that contain soap, wax, oil, or silicone; and comply with flatness tolerances required by ANSI A108.01 for installations indicated.
2. Verify that installation of grounds, anchors, recessed frames, electrical and mechanical units of work, and similar items located in or behind tile has been completed.
3. Verify that joints and cracks in tile substrates are coordinated with tile joint locations; if not coordinated, adjust joint locations in consultation with Architect.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 CERAMIC TILE INSTALLATION

A. Comply with TCNA's "Handbook for Ceramic, Glass, and Stone Tile Installation" for TCNA installation methods specified in tile installation schedules. Comply with parts of the ANSI A108 series "Specifications for Installation of Ceramic Tile" that are referenced in TCNA installation methods, specified in tile installation schedules, and apply to types of setting and grouting materials used.

B. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.

C. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.

D. Provide manufacturer's standard trim shapes where necessary to eliminate exposed tile edges.

E. Jointing Pattern: Match existing tile jointing pattern.

A. Joint Widths: Match existing tile joint widths.

B. Expansion Joints: Provide expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where existing. Form joints during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.

3.3 ADJUSTING AND CLEANING

A. Remove and replace tile that is damaged or that does not match adjoining tile. Provide new matching units, installed as specified and in a manner to eliminate evidence of replacement.

B. Cleaning: On completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.

1. Remove grout residue from tile as soon as possible.
2. Clean grout smears and haze from tile according to tile and grout manufacturer's written instructions but no sooner than 10 days after installation. Use only cleaners recommended by tile and grout manufacturers and only after determining that cleaners are safe to use by testing on samples of tile and other surfaces to be cleaned. Protect metal surfaces and plumbing fixtures from effects of cleaning. Flush surfaces with clean water before and after cleaning.

3.4 EXTERIOR CERAMIC TILE INSTALLATION SCHEDULE

A. Exterior Wall Installations, Masonry:

1. Ceramic Tile Installation TCNA W202; thinset mortar.

a. Ceramic Tile Type: Glazed ceramic tile to match existing.
b. Thinset Mortar: Improved modified dry-set mortar.
c. Grout: High-performance grout to match existing.

END OF SECTION 093013

SECTION 095113 - ACOUSTICAL PANEL CEILINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes acoustical panels and exposed suspension systems for interior ceilings.

B. Products furnished, but not installed under this Section, include anchors, clips, and other ceiling attachment devices to be cast in concrete.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For each exposed product and for each color and texture specified, 6 inches in size.

C. Samples for Verification: For each component indicated and for each exposed finish required, prepared on Samples of sizes indicated below:

1. Acoustical Panels: Set of 6-inch-square Samples of type, color, pattern, and texture.

1.5 INFORMATIONAL SUBMITTALS

A. Product Test Reports: For each acoustical panel ceiling, for tests performed by manufacturer and witnessed by a qualified testing agency.

1.6 CLOSEOUT SUBMITTALS

A. Maintenance Data: For finishes to include in maintenance manuals.

1.7 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials**,** from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Acoustical Ceiling Units: Full-size panels equal to 2 percent of quantity installed.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver acoustical panels to Project site and store them in a fully enclosed, conditioned space where they will be protected against damage from moisture, humidity, temperature extremes, direct sunlight, surface contamination, and other causes.

B. Before installing acoustical panels, permit them to reach room temperature and a stabilized moisture content.

1.9 FIELD CONDITIONS

A. Environmental Limitations: Do not install acoustical panel ceilings until spaces are enclosed and weathertight, wet-work in spaces is complete and dry, work above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations: Obtain each type of acoustical ceiling panel and its supporting suspension system from single source from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Flame-Spread Index: Class A according to ASTM E 1264.
2. Smoke-Developed Index: 50 or less.

2.3 ACOUSTICAL PANELS

A. Acoustical Panel Standard: Provide manufacturer's standard panels according to ASTM E 1264 and designated by type, form, pattern, acoustical rating, and light reflectance unless otherwise indicated.

B. Classification: Provide panels as follows:

1. Type and Form: Type III, mineral base with painted finish
2. Pattern: C (perforated, small holes) to match existing.

C. Color: White.

D. Light Reflectance (LR): Not less than 0.85.

E. Ceiling Attenuation Class (CAC): Not less than 35.

F. Noise Reduction Coefficient (NRC): Not less than 0.75.

G. Articulation Class (AC): Not less than 170.

H. Edge/Joint Detail: Square.

I. Thickness: To match existing.

J. Modular Size: 24 by 24 inches.

K. Antimicrobial Treatment: Manufacturer's standard broad spectrum, antimicrobial formulation that inhibits fungus, mold, mildew, and gram-positive and gram-negative bacteria and showing no mold, mildew, or bacterial growth when tested according to ASTM D 3273, ASTM D 3274, or ASTM G 21 and evaluated according to ASTM D 3274 or ASTM G 21.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, including structural framing to which acoustical panel ceilings attach or abut, with Installer present, for compliance with requirements specified in this and other Sections that affect ceiling installation and anchorage and with requirements for installation tolerances and other conditions affecting performance of acoustical panel ceilings.

B. Examine acoustical panels before installation. Reject acoustical panels that are wet, moisture damaged, or mold damaged.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install acoustical panel ceilings according to ASTM C 636/C 636M and manufacturer's written instructions.

B. Install acoustical panels with undamaged edges and fit accurately into suspension-system runners and edge moldings. Scribe and cut panels at borders and penetrations to provide precise fit.

1. Arrange directionally patterned acoustical panels as follows:

   a. Install panels with pattern to match adjacent panel ceilings.

2. For square-edged panels, install panels with edges fully hidden from view by flanges of suspension-system runners and moldings.

3. Install clean-room gasket system in areas indicated, sealing each panel and fixture as recommended by panel manufacturer's written instructions.
4. Protect lighting fixtures and air ducts according to requirements indicated for fire-resistance-rated assembly.

3.3 CLEANING

A. Clean exposed surfaces of acoustical panel ceilings, including trim, edge moldings, and suspension-system members. Comply with manufacturer's written instructions for cleaning and touchup of minor finish damage.

B. Remove and replace ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION 095113

SECTION 096513 - RESILIENT BASE AND ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Resilient base.
2. Resilient molding accessories (adapter & transition).

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For each exposed product and for each color and texture specified, not less than 12” inches long.

C. Samples for Initial Selection: For each type of product indicated.

D. Samples for Verification: For each type of product indicated and for each color, texture, and pattern required in manufacturer's standard-size Samples, but not less than 12 inches long.

E. Product Schedule: For resilient base and accessory products.

1.4 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Furnish not less than 10 linear feet of each type, color, pattern, and size of resilient product installed.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F.

1.6 FIELD CONDITIONS

A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 95 deg F, in spaces to receive resilient products during the following time periods:

1. 48 hours before installation.
2. During installation.
3. 48 hours after installation.

B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg F or more than 95 deg F.

C. Install resilient products after other finishing operations, including painting, have been completed.

PART 2 - PRODUCTS

2.1 THERMOPLASTIC-RUBBER BASE

A. Acceptable manufacturers and products include but are not limited to:

1. Armstrong Commercial Wallbase/Transitions.
2. Johnsonite/Tarkett Dura-Cove (Type TP).
3. Roppe Corporation 700 Series.
4. Or Owner approved equal.

B. Product Standard: ASTM F 1861, Type TP (rubber, thermoplastic).

1. Group: II (layered).
2. Style and Location:

a. Style B, Cove: Provide in areas with resilient flooring.

C. Thickness: 0.125 inch.

D. Height: 4 inches.

E. Lengths: Coils in manufacturer's standard length.

F. Outside Corners: Job formed.

G. Inside Corners: Job formed.

H. Colors: As selected by Architect from full range of industry colors.

2.2 RUBBER MOLDING ACCESSORY <**Insert drawing designation**>

A. Acceptable Manufacturers include but are not limited to:

1. Armstrong.
2. Johnsonite/Tarkett.

3. Roppe Corporation.
4. Or Owner approved equal.

B. Description: Rubber transition strip in doorway to Room 113 between new resilient floor tile and existing adjacent floor material.

C. Profile and Dimensions: As required to transition from new resilient floor tile to existing adjacent floor material. Provide transition strip with minimum height possible and minimum nominal width from 1”-3”.

D. Colors: selected by Architect from full range of industry colors.

2.3 INSTALLATION MATERIALS

A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by resilient-product manufacturer for applications indicated.

B. Adhesives: Water-resistant type recommended by resilient-product manufacturer for resilient products and substrate conditions indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

1. Installation of resilient products indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Prepare substrate according to manufacturer's written instructions to ensure adhesion of resilient products.

B. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.

C. Do not install resilient products until they are the same temperature as the space where they are to be installed.

1. At least 48 hours in advance of installation, move resilient products and installation materials into spaces where they will be installed.

D. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient products.

3.3 RESILIENT BASE INSTALLATION

A. Comply with manufacturer's written instructions for installing resilient base.

B. Apply resilient base to walls in rooms and areas where base is required.

C. Install resilient base in lengths as long as practical without gaps at seams and with tops of adjacent pieces aligned.

D. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.

E. Do not stretch resilient base during installation.

F. On masonry surfaces or other similar irregular substrates, fill voids along top edge of resilient base with manufacturer's recommended adhesive filler material.

G. Job-Formed Corners:

1. Outside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3 in length.

    a. Form without producing discoloration (whitening) at bends.

2. Inside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3 inches in length.

    a. Miter or cope corners to minimize open joints.

3.4 RESILIENT ACCESSORY INSTALLATION

A. Comply with manufacturer's written instructions for installing resilient accessories.

B. Resilient Molding Accessories: Butt to adjacent materials and tightly adhere to substrates throughout length of each piece. Install reducer strips at edges of floor covering that would otherwise be exposed.

3.5 CLEANING AND PROTECTION

A. Comply with manufacturer's written instructions for cleaning and protecting resilient products.

B. Perform the following operations immediately after completing resilient-product installation:

1. Remove adhesive and other blemishes from exposed surfaces.
2. Sweep and vacuum horizontal surfaces thoroughly.
3. Damp-mop horizontal surfaces to remove marks and soil.

C. Protect resilient products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.

D. Cover resilient products subject to wear and foot traffic until Substantial Completion.

END OF SECTION 096513

SECTION 096519 - RESILIENT TILE FLOORING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Vinyl composition floor tile.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For each type of floor tile. Include floor tile layouts, edges, columns, doorways, enclosing partitions, built-in furniture, cabinets, and cutouts.

1. Show details of special patterns.

C. Samples for Initial Selection: For each type of floor tile indicated.

D. Product Schedule: For floor tile.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For each type of floor tile to include in maintenance manuals.

1.6 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Floor Tile: Furnish one box type, color, and pattern of floor tile installed.

1.7 QUALITY ASSURANCE

A. Installer Qualifications: A qualified installer who employs workers for this Project who are competent in techniques required by manufacturer for floor tile installation and seaming method indicated.

1. Engage an installer who employs workers for this Project who are trained or certified by floor tile manufacturer for installation techniques required.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Store floor tile and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F. Store floor tiles on flat surfaces.

1.9 FIELD CONDITIONS

A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 95 deg F, in spaces to receive floor tile during the following time periods:

1. 48 hours before installation.
2. During installation.
3. 48 hours after installation.

B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg F or more than 95 deg F.

C. Close spaces to traffic during floor tile installation.

D. Close spaces to traffic for 48 hours after floor tile installation.

E. Install floor tile after other finishing operations, including painting, have been completed.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Test-Response Characteristics: For resilient tile flooring, as determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.

1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.

2.2 VINYL COMPOSITION FLOOR TILE

A. Acceptable manufacturers and products include but are not limited to:

1. Armstrong Commercial Vinyl Composition Tile.
2. Tarkett VCT II.
3. Or Owner approved alternate.

B. Tile Standard: ASTM F 1066, Class 2, through-pattern tile.

C. Wearing Surface: Smooth.

D. Thickness: 1/8” inch.

E. Size: 12 by 12 inches.

F. Colors and Patterns: As selected by Architect from full range of industry colors.

2.3 INSTALLATION MATERIALS

A. Trowelable Leveling and Patching Compounds: Latex-modified, Portland cement based or blended hydraulic-cement-based formulation provided or approved by floor tile manufacturer for applications indicated.

B. Adhesives: Water-resistant type recommended by floor tile and adhesive manufacturers to suit floor tile and substrate conditions.

C. Floor Polish: Provide protective, liquid floor-polish products recommended by floor tile manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of floor tile.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Prepare substrates according to floor tile manufacturer's written instructions to ensure adhesion of resilient products.

B. Concrete Substrates: Prepare according to ASTM F 710.

1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by floor tile manufacturer. Do not use solvents.
3. Alkalinity and Adhesion Testing: Perform tests recommended by floor tile manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer in writing, but not less than 5 or more than 9 pH.

4. Moisture Testing: Proceed with installation only after substrates pass testing according to floor tile manufacturer's written recommendations, but not less stringent than the following:

    a. Perform anhydrous calcium chloride test according to ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours.
    b. Perform relative humidity test using in situ probes according to ASTM F 2170. Proceed with installation only after substrates have a maximum 75 percent relative humidity level.

C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.

D. Do not install floor tiles until they are the same temperature as the space where they are to be installed.

1. At least 48 hours in advance of installation, move resilient floor tile and installation materials into spaces where they will be installed.

E. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient floor tile.

3.3 FLOOR TILE INSTALLATION

A. Comply with manufacturer's written instructions for installing floor tile.

B. Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter.

1. Lay tiles square with room axis.

C. Match floor tiles for color and pattern by selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles.

1. Lay tiles with grain direction alternating in adjacent tiles (basket-weave pattern).

D. Scribe, cut, and fit floor tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.

E. Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of door openings.

F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tiles as marked on substrates. Use chalk or other nonpermanent marking device.

G. Install floor tiles on covers for telephone and electrical ducts, building expansion-joint covers, and similar items in finished floor areas. Maintain overall continuity of color and pattern between pieces of tile installed on covers and adjoining tiles. Tightly adhere tile edges to substrates that abut covers and to cover perimeters.

H. Adhere floor tiles to flooring substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

3.4 CLEANING AND PROTECTION

A. Comply with manufacturer's written instructions for cleaning and protecting floor tile.

B. Perform the following operations immediately after completing floor tile installation:

1. Remove adhesive and other blemishes from exposed surfaces.
2. Sweep and vacuum surfaces thoroughly.
3. Damp-mop surfaces to remove marks and soil.

C. Protect floor tile from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.

D. Floor Polish: Remove soil, adhesive, and blemishes from floor tile surfaces before applying liquid floor polish.

1. Apply two coat(s).

E. Joint Sealant: Apply sealant to resilient terrazzo floor tile perimeter and around columns, at door frames, and at other joints and penetrations.

F. Sealers and Finish Coats: Remove soil, visible adhesive, and surface blemishes from resilient terrazzo floor tile surfaces before applying liquid cleaners, sealers, and finish products.

1. Sealer: Apply two base coats of liquid sealer.
2. Finish: Apply two coats of liquid floor finish.

G. Cover floor tile until Substantial Completion.

END OF SECTION 096519

SECTION 099113 - EXTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes surface preparation and the application of paint systems on the following exterior substrates:

1. Exterior Insulation Finishing System (EFIS).
2. Steel doors and frames.
3. Portland cement plaster (stucco).

B. Related Requirements:

1. Section 099600 "High-Performance Coatings."

1.3 DEFINITIONS

A. MPI Gloss Level 1: Not more than five units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.

B. MPI Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.

C. MPI Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.

D. MPI Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.

E. MPI Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.

F. MPI Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product. Include preparation requirements and application instructions.

1. Include printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
2. Indicate VOC content.

B. Samples for Initial Selection: For each type of topcoat product.

C. Samples for Verification: For each type of paint system and each color and gloss of topcoat.

1. Submit Samples on rigid backing, 8 inches square.
2. Apply coats on Samples in steps to show each coat required for system.
3. Label each coat of each Sample.
4. Label each Sample for location and application area.

D. Product List: Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules. Include color designations.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials**,** from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Paint: 5 percent, but not less than 1 gal. of each material and color applied.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

1.7 FIELD CONDITIONS

A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F.

B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include but are not limited to products listed in the Exterior Painting Schedule for the paint category indicated.

2.2 PAINT, GENERAL

A. MPI Standards: Products shall comply with MPI standards indicated and shall be listed in its "MPI Approved Products Lists."

B. Material Compatibility:

1. Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.

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

2.3 SOURCE QUALITY CONTROL

A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure:

1. Owner may engage the services of a qualified testing agency to sample paint materials. Contractor will be notified in advance and may be present when samples are taken. If paint materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.
2. Testing agency will perform tests for compliance with product requirements.
3. Owner may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Exterior Insulation Finishing System (EFIS): 12 percent.
2. Portland Cement Plaster: 12 percent.

C. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.

D. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and paint systems indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.

C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.

D. Steel Substrates: Remove rust, loose mill scale, and shop primer if any. Clean using methods recommended in writing by paint manufacturer.

E. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and areas where shop paint is abraded. Paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.

F. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

3.3 APPLICATION

A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual."

1. Use applicators and techniques suited for paint and substrate indicated.
2. Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.
3. Paint both sides and edges of exterior doors and entire exposed surface of exterior door frames.
4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
5. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.

B. Tint undercoats to be the same color as topcoat but tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Provide sufficient difference in shade of undercoats to distinguish each separate coat.

C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

E. Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:

1. Paint the following work where exposed to view:

a. Equipment, including panelboards and switch gear.
b. Metal conduit.

3.4 FIELD QUALITY CONTROL

A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.

1. Contractor shall touch up and restore painted surfaces damaged by testing.
2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

3.5 CLEANING AND PROTECTION

A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 EXTERIOR PAINTING SCHEDULE

A. Galvanized-Metal Substrates:

1. Water-Based Light Industrial Coating System MPI EXT 5.3:

a. Prime Coat: Primer, epoxy, anti-corrosive, MPI #101.

1) Benjamin Moore HP Epoxy Mastic.
2) PPG Architectural Protective and Marine Coatings Amercoat 235.
3) Sherwin-Williams Protective and Marine Coatings Dur-Plate 235 Multi-Purpose Epoxy

b. Intermediate Coat: Light industrial coating, exterior, water based, matching topcoat.

c. Topcoat: Light industrial coating, exterior, water based, gloss (MPI Gloss Level 6), MPI #164.

1) Benjamin Moore HP DTM Acrylic Enamel Gloss
2) PPG Architectural Protective and Marine Coatings Pitt-Tech Plus EP DTM Acrylic Gloss.
3) Sherwin-Williams Pro Industrial DTM Acrylic Gloss.

B. EFIS and Portland Cement Plaster Substrates:

1. Latex System MPI EXT 9.1.

a. Prime Coat: Primer, alkali resistant, water based, MPI #3.

1) Benjamin Moore Ultra Spec Interior/Exterior 100 Acrylic Sealer.
2) PPG Architectural PPG Paints Seal Grip Int/Ext Acrylic Universal Primer/Sealer.
3) Sherwin-Williams Loxon Concrete & Masonry Primer.

b. Intermediate Coat: Latex, exterior, matching topcoat.

c. Topcoat: Latex, exterior, low sheen (MPI Gloss Level 3-4), MPI #15.

1) Benjamin Moore Ultra Spec Ext Exterior Acrylic Satin.
2) PPG Architectural Speedhide Exterior 100% Acrylic Latex Satin.
3) Sherwin-Williams Emerald Exterior Acrylic Latex Satin.

END OF SECTION 099113

SECTION 099123 - INTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes surface preparation and the application of paint systems on the following interior substrates:

1. Gypsum board.

1.3 DEFINITIONS

A. MPI Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product. Include preparation requirements and application instructions.

1. Include Printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
2. Indicate VOC content.

B. Samples for Initial Selection: For each type of topcoat product.

C. Samples for Verification: For each type of paint system and in each color and gloss of topcoat.

1. Submit Samples on rigid backing, 8 inches square.
2. Apply coats on Samples in steps to show each coat required for system.
3. Label each coat of each Sample.
4. Label each Sample for location and application area.

D. Product List: Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules. Include color designations.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Paint: **5** percent, but not less than 1 gal. of each material and color applied.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

1.7 FIELD CONDITIONS

A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F.

B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Refer to Article 3.6 – Interior Painting Schedule.

2.2 PAINT, GENERAL

A. MPI Standards: Products shall comply with MPI standards indicated and shall be listed in its "MPI Approved Products Lists."

B. Material Compatibility:

1. Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.

C. Colors: To match adjacent surfaces.

2.3 SOURCE QUALITY CONTROL

A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure:

1. Owner may engage the services of a qualified testing agency to sample paint materials. Contractor will be notified in advance and may be present when samples are taken. If paint materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.
2. Testing agency will perform tests for compliance with product requirements.
3. Owner may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from

previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Gypsum Board: 12 percent.

C. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.

D. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.

E. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and paint systems indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.

C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.

3.3 APPLICATION

A. Apply paints according to manufacturer's written instructions and to recommendations in "MPI Manual."

1. Use applicators and techniques suited for paint and substrate indicated.
2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces.

3. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.

B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat but provide sufficient difference in shade of undercoats to distinguish each separate coat.

C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.4 FIELD QUALITY CONTROL

A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.

1. Contractor shall touch up and restore painted surfaces damaged by testing.
2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

3.5 CLEANING AND PROTECTION

A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 INTERIOR PAINTING SCHEDULE

A. Gypsum Board Substrates:

1. Institutional Low-Odor/VOC Latex System MPI INT 9.2M:

a. Prime Coat: Primer sealer, interior, institutional low odor/VOC, MPI #149.

1) Benjamin Moore Super Hide Zero VOC Interior Primer (354) or Ultra Spec 500 Interior Latex Primer (N534).
2) PPG Architectural Speedhide® Zero Interior Zero VOC Latex Sealer.
3) Sherwin-Williams ProMar 200 Zero VOC Interior Latex Primer.

4) Or Owner’s approved equal.

b. Intermediate Coat: Latex, interior, institutional low odor/VOC, matching topcoat.

c. Topcoat: Latex, interior, institutional low odor/VOC (MPI Gloss Level 3), MPI #145.

1) Benjamin Moore Super Hide Zero VOC Interior Eggshell,
2) PPG Architectural Speedhide® Mas Interior Latex.
3) Sherwin-Williams ProMar 200 HP Zero VOC interior Acrylic Eg-Shel.
4) Or Owner’s approved equal.

END OF SECTION 099123

SECTION 099600 - HIGH-PERFORMANCE COATINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes surface preparation and the application of high-performance coating systems on the following substrates:

1. Exterior Substrates:

a. Steel handrails.

B. Related Requirements:

1. Section 099113 "Exterior Painting" for general field painting.

1.3 DEFINITIONS

A. MPI Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.

B. MPI Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product. Include preparation requirements and application instructions.

1. Include printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
2. Indicate VOC content.

B. Samples for Initial Selection: For each type of topcoat product indicated.

C. Samples for Verification: For each type of coating system and each color and gloss of topcoat indicated.

1. Submit Samples on rigid backing, 8 inches square.
2. Apply coats on Samples in steps to show each coat required for system.
3. Label each coat of each Sample.
4. Label each Sample for location and application area.

D. Product List: Cross-reference to coating system and locations of application areas.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Coatings: 5 percent, but not less than 1 gal. of each material and color applied.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

1.7 FIELD CONDITIONS

A. Apply coatings only when temperature of surfaces to be coated and ambient air temperatures are between 50 and 95 deg F.

B. Do not apply coatings when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

C. Do not apply exterior coatings in snow, rain, fog, or mist.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include but are not limited to products listed in the Exterior High-Performance Coating Schedule or Interior High-Performance Coating Schedule for the coating category indicated.

2.2 HIGH-PERFORMANCE COATINGS, GENERAL

A. MPI Standards: Products shall comply with MPI standards indicated and shall be listed in its "MPI Approved Products Lists."

B. Material Compatibility:

1. Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.
3. Products shall be of same manufacturer for each coat in a coating system.

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

2.3 SOURCE QUALITY CONTROL

A. Testing of Coating Materials: Owner reserves the right to invoke the following procedure:

1. Owner may engage the services of a qualified testing agency to sample coating materials. Contractor will be notified in advance and may be present when samples are taken. If coating materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.
2. Testing agency will perform tests for compliance with product requirements.
3. Owner may direct Contractor to stop applying coatings if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying coating materials from Project site, pay for testing, and recoat surfaces coated with rejected materials. Contractor will be required to remove rejected materials from previously coated surfaces if, on recoating with complying materials, the two coatings are incompatible.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.

C. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and coating systems indicated.

B. Clean substrates of substances that could impair bond of coatings, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce coating systems indicated.

C. Steel Substrates: Remove rust, loose mill scale, and shop primer if any. Clean using methods recommended in writing by paint manufacturer.

D. Following cleaning method identified in Article 3.2.C treat all remaining corrosion with Ospho, or approved equal, in accordance with manufacturer recommendations.

E. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and areas where shop paint is abraded. Paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.

F. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied coatings.

3.3 APPLICATION

A. Apply high-performance coatings according to manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual."

1. Use applicators and techniques suited for coating and substrate indicated.

B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of the same material are to be applied. Tint undercoats to match color of finish coat but provide sufficient difference in shade of undercoats to distinguish each separate coat.

C. If undercoats or other conditions show through final coat, apply additional coats until cured film has a uniform coating finish, color, and appearance.

D. Apply coatings to produce surface films without cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections. Produce sharp glass lines and color breaks.

3.4 FIELD QUALITY CONTROL

A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test coatings for dry film thickness.

1. Contractor shall touch up and restore coated surfaces damaged by testing.
2. If test results show that dry film thickness of applied coating does not comply with coating manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with coating manufacturer's written recommendations.

3.5 CLEANING AND PROTECTION

A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

B. After completing coating application, clean spattered surfaces. Remove spattered coatings by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

C. Protect work of other trades against damage from coating operation. Correct damage to work of other trades by cleaning, repairing, replacing, and recoating, as approved by Architect, and leave in an undamaged condition.

D. At completion of construction activities of other trades, touch up and restore damaged or defaced coated surfaces.

3.6 EXTERIOR HIGH-PERFORMANCE COATING SCHEDULE

A. Steel Substrates:

1. Pigmented Polyurethane over Epoxy System MPI EXT 5.1H:

a. Prime Coat: Primer, epoxy, anti-corrosive, for metal**,** MPI #101.

1) Benjamin Moore HP Epoxy Mastic.
2) PPG Architectural Protective and Marine Coatings Amercoat 235.
3) Sherwin-Williams Protective and Marine Coatings Dura-Plate 235 Multi-Purpose Epoxy.

b. First and Second Topcoat: Polyurethane, two-component, pigmented, gloss (MPI Gloss Level 6), MPI #72.

1) Benjamin Moore High Performance Alipahatic Urethane.
2) PPG Architectural Protective and Marine Coatings Pitthane Ultra Gloss 95-812 Series.
3) Sherwin-Williams Protective and Marine Acrolon 218 HS.

END OF SECTION 099600

SECTION 102800 - TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Public-use washroom accessories.

1.3 COORDINATION

A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
2. Include anchoring and mounting requirements.

B. Samples: Full size, for each exposed product and for each finish specified.

1. Approved full-size Samples will be returned and may be used in the Work.

C. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required.

1. Identify locations using room designations.

1.5 INFORMATIONAL SUBMITTALS

A. Sample Warranty: For manufacturer's special warranty.

1.6 CLOSEOUT SUBMITTALS

A. Maintenance Data: For accessories to include in maintenance manuals.

1.7 WARRANTY

A. Manufacturer's standard 1 year warranty for materials and workmanship for liquid soap dispensers.

PART 2 - PRODUCTS

2.1 PUBLIC-USE WASHROOM ACCESSORIES

A. Source Limitations: Obtain public-use washroom accessories from single source from single manufacturer.

B. Commercial Liquid Soap Dispenser:

1. Acceptable products include but are not limited to:
   a. Bobrick B-2111 Classic Series® Surface Mounted Liquid Soap Dispenser
   b. Bradly Model 6562 – Liquid Soap Bradex®
   c. ASI 0347 Liquid Soap Dispenser
   d. Or, Owner approved equal.
2. Description: Designed for dispensing antibacterial soap in liquid or lotion form.
3. Mounting: Vertically oriented, surface mounted with manual push button operation.
4. Capacity: 40-oz.
5. Materials: Body, back and wall plate to be fabricated of 20- or 22-gauge Type-304 stainless steel with satin finish. Liquid soap dispenser to be chrome-plated brass housing with ABS plastic mechanism.
6. Lockset: Tumbler type.
7. Refill Indicator: Window type.
8. Install with top of push button to finished floor, maximum 40”.

2.2 MATERIALS

A. Stainless Steel: ASTM A 666, Type 304, 20- or 22-gauge minimum nominal thickness unless otherwise indicated.

B. Brass: ASTM B 19, flat products; ASTM B 16/B 16M, rods, shapes, forgings, and flat products with finished edges; or ASTM B 30, castings.

C. Steel Sheet: ASTM A 1008/A 1008M, Designation CS (cold rolled, commercial steel), 0.036-inch minimum nominal thickness.

D. Fasteners: Screws, bolts, and other devices of same material as accessory unit and tamper-and-theft resistant where exposed, and of galvanized steel where concealed.

E. Chrome Plating: ASTM B 456, Service Condition Number SC 2 (moderate service).

2.3 FABRICATION

A. General: Fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with full-length, continuous hinges. Equip units for concealed anchorage and with corrosion-resistant backing plates.

B. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of six keys to Owner's representative.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.

3.2 ADJUSTING AND CLEANING

A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.

B. Remove temporary labels and protective coatings.

C. Clean and polish exposed surfaces according to manufacturer's written instructions.

END OF SECTION 102800

SECTION 220700 - PLUMBING INSULATION

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

A. Types of mechanical insulation specified in this section include the following:

1. Piping System Insulation:
Domestic Hot Water Piping Systems
Condensate Piping Systems

1.2 QUALITY ASSURANCE

A. Firms regularly engaged in manufacturer of mechanical insulation products, of types and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years.

B. Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following: Armstrong, Certainteed Corp., Johns-Manville Corp., Knauf Fiber Glass, Owens-Corning Fiberglass Corp., Pittsburgh Corning Corp.

C. Installer: A firm with at least 5 years successful installation experience on projects with mechanical insulation similar to that required for this project.

D. Flame/Smoke Ratings: Provide composite mechanical insulation (insulation, jackets, coverings, sealers, mastics and adhesives) with flame-spread rating of 25 or less, and Smoke-developed rating of 50 or less, as tested by ANSI/ASIM E 84 (NFPA 255) method.

E. Appropriate ASTM, ANSI, UL, ASME and NFPA standards shall be met.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Deliver insulation, coverings, cements, adhesives, and coatings to site in containers with manufacturer's stamp or label, affixed showing fire hazard ratings of products.

B. Protect insulation against dirt, water, and chemical and mechanical damage. Do not install damaged insulation; remove from project site.

C. Protect cements, adhesives and coatings from freezing.

PART 2 - PRODUCTS

2.1 PIPE INSULATION MATERIALS

A. ¾” thick Armaflex insulation. 1” fibgerlass insulation acceptable for domestic hot water piping only, not condensate.

B. Adhesives, Sealers, and Protective Finishes: As recommended by insulation manufacturer for applications indicated.

C. Fiberglass Insulation: Factory applied white vapor barrier jacket.

PART 3 - EXECUTION

3.1 INSTALLATION OF PIPING INSULATION

A. General: Install insulation products in accordance with manufacturer's written instructions, and in accordance with recognized industry practices to ensure that insulation serves its intended purpose.

B. Install insulation on pipe systems subsequent to testing and acceptance of tests.

C. Install insulation materials with smooth and even surface. Insulate each continuous run of piping with full-length units of insulation, with single cut piece to complete run. Do not use cut pieces or scraps abutting each other.

D. Clean and dry pipe surfaces prior to insulating. Butt insulation joints firmly together to ensure complete and tight fit over surfaces to be covered.

E. Maintain integrity of vapor-barrier jackets on pipe insulation, and protect to prevent puncture or other damage.

F. Cover valves, fittings and similar items in each piping system with equivalent thickness and composition of insulation as applied to adjoining pipe run. Install factory molded, precut or job fabricated units (at Installer's option) except where specific form or type is indicated.

G. Extend piping insulating without interruption through walls, floors and similar piping penetrations, except where otherwise indicated.

H. Install protective metal shields and insulated inserts wherever needed to prevent compression of insulation.

I. Pipe Hanger Insulation Inserts: Butt pipe insulation against pipe hanger insulation inserts. For hot pipes, apply 3" wide vapor barrier tape or band over the butt joints. For cold piping apply wet coat of vapor barrier lap cement on butt joints and seal joints with 3" wide vapor barrier tape or band.

J. Fiberglass cloth jacket may be used in concealed areas.

3.2 PROTECTION AND REPLACEMENT

A. Replace damaged insulation which cannot be repaired satisfactorily, including units with vapor barrier damage and moisture saturated units.

B. Protection: Insulation Installer shall advise Contractor of required protection for insulation work during remainder of construction period, to avoid damage and deterioration.

END OF SECTION 220700

SECTION 22 13 00 – CLEANING SANITARY PIPING

PART 1 – GENERAL

1.1 SUMMARY

A. This section includes labor, equipment, materials, and procedures necessary to inspect and clean existing underground sanitary drainage piping within an existing building.

B. Scope includes:

- Pre-cleaning inspection and verification
- Mechanical and/or hydraulic cleaning
- Final inspection and verification of cleaning
- Removal and legal disposal of debris

1.2 REFERENCES

A. ASTM F2310 – Standard Guide for Rehabilitation of Sewers Using Chemical Grouting

B. NASSCO – National Association of Sewer Service Companies Specification Standards (PACP/MACP/LACP)

C. OSHA – Occupational Safety and Health Administration standards

D. NFPA 820 – Standard for Fire Protection in Wastewater Treatment and Collection Facilities

1.3 QUALITY ASSURANCE

A. All work shall be performed by licensed contractors experienced in underground sanitary system cleaning.

B. Use operators certified under NASSCO standards for CCTV inspections.

C. Comply with applicable local, state, and federal environmental and safety regulations.

1.5 PROJECT CONDITIONS

A. Contractor shall verify exact pipe locations, access points, and system layout prior to commencing work.

B. Work shall be performed during off-hours or coordinated to minimize impact on building operations.

C. Protect surrounding finishes, equipment, and occupied areas from contamination, noise, or damage.

PART 2 – PRODUCTS

2.1 CLEANING EQUIPMENT

A. High-Pressure Water Jetting Equipment:

- Capable of producing minimum 2,500 PSI pressure
- Equipped with rotating jet nozzles suited for pipe diameters

B. Mechanical Cleaning Tools:

- Cable machines with appropriate cutters
- Chain flails or scrapers

C. CCTV Inspection System:

- Color video camera system with self-leveling camera head
- On-screen footage time/date stamping
- Recording capability in digital format

D. Debris Collection:

- Wet/dry vacuum units
- Portable sump pumps
- Approved containers for transport and disposal

PART 3 – EXECUTION

3.1 PREPARATION

A. Coordinate with Owner/Facility Manager to identify access points and isolation valves.

B. Install temporary protection as needed to protect adjacent finishes and ensure proper drainage.

C. Perform pre-cleaning CCTV inspection to:

- Confirm pipe material, size, and condition
- Identify blockages, root intrusions, or structural damage
- Document conditions with video and narrative report

3.2 CLEANING PROCEDURE

A. General:

- Select cleaning method appropriate for pipe material and condition.
- Avoid excessive pressure or mechanical force that could damage pipe.

B. Hydraulic Cleaning:

- Insert jetting hose through accessible cleanouts
- Begin with lower pressure and increase as needed
- Clean from downstream to upstream direction

C. Mechanical Cleaning:

- Use only as necessary when hydraulic cleaning is insufficient
- Select cutting head suitable for pipe size and type of obstruction

D. Remove and legally dispose of all removed materials and debris per local regulations.

3.3 FINAL INSPECTION

A. Perform post-cleaning CCTV inspection.

B. Submit side-by-side documentation comparing pre- and post-cleaning conditions.

C. Confirm:

- All lines are free of obstructions
- Proper pipe slope and alignment
- No damage to pipe structure during cleaning

3.4 RESTORATION

A. Seal and re-install any removed cleanout covers or access panels.

B. Restore all surfaces, finishes, or landscaping disturbed by cleaning work.

C. Final cleaning of affected areas and removal of equipment.

END OF SECTION 22 13 00

SECTION 223000 – PLUMBING EQUIPMENT

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Types of plumbing equipment required for project include the following:

1. Domestic water heaters:
Commercial electric water heaters

1.2 QUALITY ASSURANCE

A. Manufacturer: Firms regularly engaged in the manufacture of plumbing equipment of type and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years.

B. UL and NEMA Compliance: Provide electric motors and electrical components required as part of plumbing equipment, which have been listed and labeled by Underwriters Laboratories and comply with NEMA standards.

C. NEC Compliance: Comply with National Electrical Code (ANSI/NFPA 70) as applicable to installation and electrical connections of ancillary electrical components of plumbing equipment.

D. ANSI Compliance: Comply with ANSI Z223.1 (NFPA 54) "National Fuel Gas Code', as applicable to installation of gas-fired water heaters.

E. AGA and NSF Labels: Provide water heaters which have been listed and labeled by American Gas Association and National Sanitation Foundation.

F. USDA Approval: Comply with requirements of United States Department of Agriculture for approved materials and installation practices for protective liners for potable water storage tanks.

G. ASME Code Symbol Stamps: For the following equipment, comply with ASME Boiler and Pressure Vessel Code for construction, and stamp with ASTM Code Symbol:

Commercial water heaters

H. ASME Relief Valve Stamps: Provide water heaters with safety relief valves hearing ASME valve markings.

I. Mineral Standards: Provide mineral products for water softeners, acceptable under state and local public health control regulations.

J. AWWA Compliance: Comply with applicable American Water Works Association standards pertaining to steel water tanks.

K. PDI Compliance: Comply with applicable Plumbing and Drainage Institute standards pertaining to grease interceptors and acid neutralization tanks.

PART 2 - PRODUCTS

2.1 DOMESTIC WATER HEATERS

A. Commercial Electric Water Heaters:

1. Provide commercial electric water heaters of size, capacity, and electrical characteristics as indicated on schedule. Comply with ANSI/ASHRAE/IES 90.1 for energy efficiency. Provide UL listing, and NSF approval.

2. Heater: Working pressure of 150 psi, magnesium anode rod; glass lining on internal surfaces exposed to water.

3. Heating Elements: Heavy-duty, medium watt density, with incoloy sheath, thermostat stepped through magnetic contactors.

4. Safety Controls: Double pole, manual reset, high limit; probe-type electric low water cutoff; both factory wired.

5. Jacket: Equip with full size control compartments with front panel opening. Insulate tank with vermin-proof glass fiber insulation. Provide outer steel jacket with bonderized undercoat and baked enamel finish.

6. Warranty: Furnish 3 year limited warranty for tank leakage.

7. Accessories: Provide brass drain valve; 3/4" temperature and pressure relief valve; ASME tank construction for 125 psi working pressure; and 4" x 6" handhole cleanout.

8. Controls: Adjustable immersion thermostat; power circuit fusing; pilot light and switch controlling control circuit; 3-stage time delay sequencer; and 7-day time clock.

9. Available Manufacturers: Subject to compliance with requirements, manufacturers offering commercial electric water heaters products which may be incorporated in the work include, but are not limited to, the following: A. O. Smith, Rheem Water Heater Div., Ruud Water Heater Div., State Industries, Viking Superior Corp.

PART 3 - EXECUTION

3.1 INSTALLATION OF DOMESTIC WATER HEATERS

A. Electric Water Heaters:

1. Install electric water heaters as indicated, in accordance with manufacturer's installation instructions, and in compliance with applicable codes.
2. Support: Set units on concrete pads, orient so controls and devices needing service and maintenance have adequate access. Level and plumb unit.
3. Electrical Supply: Furnish wiring diagram to Electrical Installer. Refer to Division 16000 for wiring of units.
4. Piping: Connect hot and cold water piping to units with shutoff valves and unions. Connect recirculating water line to unit with shutoff valve, check valve, and union.

5. Start-Up: Start-up, test, and adjust electric water heaters in accordance with manufacturer's start-up instructions. Check and calibrate controls.

END OF SECTION 223000

SECTION 224000 – PLUMBING FIXTURES

PART 1 - GENERAL

1.1 SCOPE

A. All plumbing fixtures shall be of “First Quality” as defined and set forth in Commercial Standard CS77-28 as promulgated by the US Department of Commerce.

B. Fixtures and fittings proposed shall be from one manufacturer and of similar character in any room or location. Escutcheons, handles, etc., on the different fixtures shall be of the same design.

C. All fixtures and fittings proposed shall be submitted for approval with cuts and full description.

PART 2 - PRODUCTS

2.1 PLUMBING FIXTURES

A. Provide factory-fabricated fixtures of type, style and material indicated. For each type fixture, provide fixture manufacturer's standard trim, carrier, seats and valves as indicated by their published product information, either as designed and constructed or as recommended by the manufacturer, and as required for a complete installation. Where more than one type is indicated, selection is Installer's option; but all fixtures of same type must be furnished by single manufacturer.

2.2 MATERIALS

A. Unless otherwise specified, comply with applicable Federal Specification WW-P-541/-Series sections pertaining to plumbing fixtures, fittings, trim, metals and finishes. Comply with requirements of WW-P-541/-specification relative to quality of ware, glazing enamel, composition and finish of metals, air gaps and vacuum breakers, even though some plumbing fixtures specified in this section are not described in WW-P-451/-Series.

1. Provide materials which have been selected for their surface flatness and smoothness. Exposed surfaces which exhibit pitting, seam marks, roller marks, foundry sand holes, stains, discoloration, or other surface imperfections on finished units are not acceptable.
2. Where fittings, trim and accessories are exposed or semi-exposed, provide bright chrome-plated or polished stainless steel units. Provide copper or brass where not exposed.

B. Stainless Steel Sheets: ANSI/ASTM A 167, Type 302/304, hardest workable temper.

Finish: No. 4, bright, directional polish on exposed surfaces.

C. Galvanized Steel Sheet: ANSI/ASTM A 526, except ANSI/ASTM A 527, for extensive forming; ANSI/ASTM A 252, G90 zinc coating, chemical treatment.

D. Aluminum: ANSI/ASTM B 209/B 221 sheet, plate and extrusions, as indicated; alloy, temper and finish as determined by manufacturer, except 0.40 mil natural anodized finish on exposed work unless another finish is indicated.

2.3 PLUMBING FITTINGS, TRIM AND ACCESSORIES

A. Water Outlets: At locations where water is supplied (by manual, automatic or remote control), provide commercial quality faucets, valves, or dispensing devices, of type and size indicated and as required to operate as indicated. Include manual shutoff valves and connecting stem pipes to permit outlet servicing without shutdown of water supply piping systems.

B. Vacuum Breakers: Provide with flush valves and locations where water outlets are equipped for hose attachment.

C. Escutcheons: Where fixture supplies and drains penetrate walls in exposed locations, provide chrome-plated, cast-brass escutcheons with set screw.

D. All faucets, stops and fittings must each be of one manufacturer with interchangeable parts, unless otherwise specified. All units are to be manufactured from brass and monel metal and be of institutional quality.

2.4 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering plumbing fixtures and trim which may be incorporated in the work include the following:

Plumbing Trim: American Standard, Delta, Elkay, Moen, Just Company, Kohler Co., T & S Brass.

Flush Valves: Zurn Aqua Flush, Delaney, Sloan.

Supplies: Brasscraft, Engineered Brass Company, Eljer Plumbingware, McGuire.

PART 3 - EXECUTION

3.1 iNSTALLATION

A. Layout fixtures to match existing.

B. Carefully install fixtures in accordance with manufacturer's data with sufficient clearances to coordinate with accessories, specialties and equipment specified in other divisions of these specifications and/or as shown on the drawings.

C. Clean all exposed metal surfaces from grease, dirt, paint or other foreign material.

D. Fixtures shall be properly protected from damage during construction and shall be cleaned in accordance with manufacturer's instruction under this section of the specification.

E. Fixtures, chrome-plated piping, fittings and trim shall be polished before requesting acceptance of the system.

END OF SECTION 224000

SECTION 23 01 30 – CLEANING EXISTING DUCTWORK

PART 1 – GENERAL

1.1 SUMMARY

A. This section specifies the requirements for inspection, cleaning, and verification of existing HVAC ductwork, including air handling units, registers, grilles, diffusers, and associated components.

B. Scope includes:

1. Pre-cleaning inspection and testing.
2. Protection of building systems and occupants.
3. Mechanical cleaning of ductwork systems.
4. Post-cleaning verification and documentation.

1.2 REFERENCES

A. Comply with latest editions of the following:

- National Air Duct Cleaners Association (NADCA):
  - ACR: The NADCA Standard for Assessment, Cleaning & Restoration of HVAC Systems
- SMACNA:
  - HVAC Duct Construction Standards
- ASHRAE Guidelines

1.3 DEFINITIONS

A. HVAC System Cleaning: The removal of visible contaminants and deposits from all components of the ductwork system.

B. Mechanical Cleaning: The use of agitation devices, brushes, air whips, and vacuum collection devices to remove debris.

C. HEPA Filtration: High-efficiency particulate air filtration capable of capturing 99.97% of particles ≥ 0.3 microns.

1.4 QUALITY ASSURANCE

A. Qualifications:

1. Contractor must be certified by NADCA.
2. Supervisors must have a current Air Systems Cleaning Specialist (ASCS) certification.

B. Compliance:

- Follow NADCA ACR Standard and OSHA regulations throughout the work.

C. Mock-up (Optional):

- Provide cleaning of a sample section (e.g., 20 linear feet) for approval before full work begins.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Protect duct interiors from recontamination after cleaning.

B. Store equipment and materials in clean, dry areas free of airborne debris.

1.6 COORDINATION

A. Coordinate with building operations staff to avoid disruption of HVAC services during peak hours.

B. Notify Owner at least 48 hours in advance before access to sensitive or secure areas.

PART 2 – PRODUCTS

2.1 CLEANING EQUIPMENT

A. Negative air machines with HEPA filters.

B. Agitation tools: air whips, brushes, compressed air nozzles.

C. Robotic or manual inspection equipment with video recording capability.

2.2 CLEANING MATERIALS

A. All chemical cleaning agents must be:

- Non-toxic
- Biodegradable
- EPA-approved for HVAC use

B. Disinfectants (only if authorized by Owner) must be:

- Applied in accordance with manufacturer's recommendations
- Documented in post-cleaning report

PART 3 – EXECUTION

3.1 PREPARATION

A. Conduct pre-cleaning inspection to assess duct condition, contamination levels, and access points.

B. Seal all supply and return registers, diffusers, and grilles to prevent dust migration.

C. Shut down HVAC system during cleaning unless otherwise directed.

3.2 CLEANING PROCESS

A. Establish negative air pressure within the duct system during cleaning.

B. Mechanically agitate internal duct surfaces to loosen debris.

C. Extract contaminants using HEPA-filtered vacuum systems.

D. Clean and disinfect (if required) air handling units, coils, drain pans, fans, and all duct interiors.

E. Replace or clean air filters after completion.

3.3 POST-CLEANING PROCEDURES

A. Remove all debris from site in sealed containers.

B. Restore all HVAC components to operational condition.

C. Perform visual inspection and testing in accordance with NADCA ACR Standard.

D. Submit final report with:

- Photo documentation
- Inspection results
- Confirmation of airflow restoration

3.4 FIELD QUALITY CONTROL

A. Owner or third-party inspector may conduct random inspections to verify cleanliness.

B. If work is found deficient, re-clean at no additional cost to the Owner.

END OF SECTION 23 01 30

SECTION 230593 - TESTING, ADJUSTING AND BALANCING

PART 1 - GENERAL

1.1 SUMMARY STATEMENT

A. Test and balance of HVAC systems (both heating and cooling) and air exhaust systems shall be performed by an independent AABC or NEBB certified test and balance agency. Acceptable Agencies in the Tampa Bay Region include: Southern Independent Testing, Inc., The Phoenix Agency, Test and Balance Corporation, Pro-Tech Diversified Services, Inc., and SpecTec.

B. The Contractor and the Test and Balance Agency, shall coordinate all work required so that the test and balance work is complete and the final report delivered one week prior to the scheduled Substantial Completion date. The Test and Balance Agency shall be at the site with his test equipment during the Substantial Completion Inspection so that random report values may be verified.

C. Test and balance work shall not begin until all systems have been completed and are in full working order. Place all systems and equipment into full operation during each working day of testing and balancing.

1.2 DESCRIPTION OF WORK

A. Extent of testing, adjusting and balancing work is indicated by requirements of this section, and also by drawings and schedules, and is defined to include, but is not necessarily limited to, air distribution systems, hydronic distribution systems and associated equipment and apparatus of mechanical work. The work consists of setting speed and volume (flow), adjusting facilities provided for systems, recording data, conducting tests, preparing and submitting reports and recommending modifications to work as required by contract documents.

B. Component types of testing, adjusting and balancing specified in this section includes the following, but not limited to, as applied to mechanical equipment:

Fans
Air Handling Units
Ductwork systems

C. Testing and balancing shall be begun and completed during each season, heating and cooling; i.e. cooling system during the cooling season and heating system during the heating season. All systems shall be tested and balanced under full load conditions and a report submitted.

1. The HVAC system shall be started, operated and stopped to determine that it operates according to the design specifications and sequence of operations. Each element in the system shall be systematically and individually started, operated and stopped.
2. Temperature and humidity shall be measured and recorded in each room during each season’s testing. Test and calibrate all temperature and humidity sensors.
3. Notification to perform the opposite season test and balance will be made by the Owner. The work shall then be scheduled by mutual agreement. The report shall be submitted within fifteen (15) days after completion of the work and shall include:

a. Characterization of the system quality of operation.
b. Data and results of test and balance work.
c. Description of system deficiencies found and recommendations.

D. Cooperate with the test and balance agency in establishing a schedule to perform this work. If changes in the construction schedule affecting test and balance work are necessary, all such changes shall be coordinated with the test and balance firm.

E. Replacement pulleys (adjustable and non-adjustable), additional balancing dampers, pressure taps, balancing valves, cocks and fittings, etc., required to effect proper air and water balance shall be provided by the Contractor at no additional cost to the contract. The test and balance firm shall furnish the Contractor and Project Architect/Engineer at the end of each day a list of items that must be repaired, replaced or adjusted.

F. Air filters shall be replaced before proceeding with test and balance and thereafter as required by the test and balance firm.

G. Systems shall be placed into service using approved startup procedures. The Contractor shall be responsible for proper initial setting and adjustment of HVAC equipment, air handlers, VAV boxes, exhaust fans, etc. furnished and installed by him and shall verify same for the test and balance firm.

H. Contractor shall provide test openings as required, shall operate HVAC equipment and provide trade persons to assist and make adjustments for test and balance during the process.

I. The test and balance firm shall periodically visit the site during construction of the HVAC system. No less than two visits shall be made. After each visit, the test and balance firm shall report in writing to the Architect, with copy to the Engineer, its observations from the visit and potential problem areas. Should methods, materials or workmanship being used adversely affect balancing and adjusting work, the test and balance agency shall report its findings in the report to the Architect with recommendations for correction.

J. The test and balance firm executing this test and balance work shall hold valid Certificate of Authorization from the State of Florida Board of Professional Engineers to provide services under the firm name.

K. The test and balance firm shall carry out the test and balance work in accordance with the AABC National Standards for Total Systems Balance or the NEBB Procedural Standard for Testing, Adjusting and Balancing of Environmental systems, and in conformance with ASHRAE Handbook, Testing, Adjusting and Balancing.

L. The Contractor shall furnish to the testing and balancing agency a complete set of plans and specifications, addenda, shop drawings, schedules and change orders as may be required.

1.4 QUALITY ASSURANCE

A. Installer: A firm with not less than 3 years of similar experience and certified by Associated Air Balance Council (AABC) or NEBB in testing and balancing disciplines similar to those required for this project shall be employed.

B. Industry Standards: Comply with American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc. (ASHRAE) recommendations pertaining to measurements, instruments and testing, adjusting and balancing, except as otherwise indicated.

C. The final result of balancing shall be to provide uniform air temperatures within a 2° F spread in the conditioned space at peak load conditions. All air flows shall be within –5/+10% of design air flows.

D. Gages and Thermometers installed as part of the project are not to be used for Test and Balance. The test and balance firm shall calibrate all such gages and thermometers and shall affix a permanent tag to each stating the corrections to be applied.

E. In the event of dispute with regard to test results, the Owner or Project Architect/Engineer may choose to provide verification of test and balance reports, and such verification shall be by a second independent agency selected by the Project Architect/Engineer or the Owner. Reports found to be inaccurate will be disallowed, and the test and balance firm will be required to repeat operations under the supervision of the second independent agency until accurate reports are completed and agreed upon. The cost of initial test and balance work will be borne by the Owner. The cost of verification test and balance work shall be borne by the Owner or Contractor or Project Architect/Engineer (whichever demanded the second opinion). If the original test and balance reports are found inaccurate and subsequent costs of supervision are necessary in order to secure acceptable reports, such will be borne by the original test and balance firm.

1.5 JOB CONDITIONS

A. Do not proceed with testing, adjusting and balancing work until work has been completed and is operable. Ensure that there is no latent residual work still to be completed.

B. Do not proceed until work scheduled for testing, adjusting and balancing is clean and free from debris, dirt and discarded building materials.

1.6 GUARANTEE

A. The test and balance firm shall include extended services for six months after completion of test and balance work, during which time the Project Architect/ Engineer and/or Owner, at their discretion, may request a recheck or resetting of any piece of equipment listed in the test report believed to not be performing properly. The Contractor shall assist in this extended service.

B. The test and balance firm shall provide technicians to assist in making any tests required. Should the system be found to not work properly any time during the first year of operation it shall then be required to be rebalanced.

C. The test and balance agency shall provide to the Architect five (5) copies of a certified statement that the HVAC systems have been balanced to optimum performance capabilities in accordance with the intent of the Drawings and Specifications.

PART 2 - PRODUCTS

2.1 PATCHING MATERIALS

A. Except as otherwise indicated, use same products as used by original Installer for patching holes in insulation, ductwork and housings which have been cut or drilled for test purposes, including access for test instruments, attaching jigs, and similar purposes. At Tester's option, plastic plugs

with retainers may be used to patch drilled holes in ductwork and housings. Test and Balance Agency shall coordinate with the system insulator to rework any void in the thermal insulation or moisture barrier.

2.2 TEST INSTRUMENTS

A. Utilize test instruments and equipment for testing and balancing work required, of type, precision and capacity as recommended in the following testing and balancing standards:

AABC's Manual MN-1 "AABC National Standards"

PART 3 - EXECUTION

3.1 TESTING, ADJUSTING AND BALANCING

A. Examine installed work and conditions under which testing is to be done to ensure that work has been completed, cleaned and is operable. Do not proceed with testing and balancing work until unsatisfactory conditions have been corrected in manner acceptable to Tester.

B. Test, adjust and balance environmental systems and components, as indicated, in accordance with procedures outlined in applicable standards.

C. Prepare report of test results, including instrumentation calibration reports, in format recommended by applicable standards. The report shall include a system schematic for each air handling system; clearly identifying which air device in the field corresponds to the air device in the Report.

D. Patch holes in insulation, ductwork and housings which have been cut or drilled for test purposes.

E. Mark equipment settings, including damper control positions, valve indicators, fan speed control levers and similar controls and devices, to show final settings at completion of testing and balancing work. Provide markings with paint or other suitable permanent identification materials.

F. Prepare a report of recommendations for correcting unsatisfactory mechanical performance when system cannot be successfully balanced; including, where necessary, modifications which exceed requirements of contract documents for mechanical work.

G. Retest, adjust and balance systems subsequent to significant system modifications, and resubmit test results.

H. The Test and Balance Contractor shall assist the Architect/Engineer in verifying that proper measuring instruments and methods were used.

3.2 TESTS

A. Direct Expansion Systems:

1. Air Distribution:

a. Measure fan speeds, motor voltages, operating currents, CFM and static pressure at fan outlet.
b. Adjust dampers, air supply and return and exhaust outlets to –5/+10% of design quantities. Supply grilles shall be adjusted to provide proper throw and uniform pattern.
c. Measure air flow at duct connected return or exhaust grilles.
d. Record the specified horsepower and all electrical characteristics of all motors.
e. Record the actual installed motors as to horsepower and electrical characteristics.

2. Verify function and calibration of temperature controls to +/- 2.0 degree F. of set point.
3. Perform the following Cooling Cycle Temperature Measurements:

a. "Entering air" temperature. (D.B. and W.B.)
b. "Leaving air" temperature. (D.B. and W.B.)
c. Outside air temperature. (D.B. and W.B.)
d. Room temperature (D.B. and W.B.) measured near thermostats, four feet above floor.
e. Air CFM at unit discharge. (D.B. and W.B.)

4. Perform the following heating cycle measurements:

a. "Entering" and "Leaving" air temperatures. (D.B.)
b. Outside air temperature. (D.B. and W.B.)
c. Room temperature measured near thermostats four feet above floor.
d. Air CFM at unit discharge. (D.B. and W.B.)

END OF SECTION 230593

SECTION 232115 – CONDENSATE PIPING SYSTEMS

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

A. Applications for condensate piping include the following:

1. Conductor piping from air handling equipment to building storm drain or as indicated on drawings.

PART 2 - PRODUCTS

2.1 CONDENSATE PIPING MATERIALS AND PRODUCTS

A. Provide piping materials and factory-fabricated piping products of sizes, types, pressure ratings, and capacities as indicated. Where not indicated, provide proper selection as determined by Installer to comply with installation requirements. Provide sizes and types matching piping and equipment connections; provide fittings of materials which match pipe materials used in storm water piping systems.

2.2 Schedule 40 and 80 CPVC

A. Corzan® CPVC Schedule 40 and 80 Pressure Pipe and Fitting System

B. CPVC is intended for pressure applications where the operating temperature will not exceed 200°F.

C. Pipe and fittings shall be manufactured from virgin rigid CPVC (chlorinated polyvinyl chloride) vinyl compounds with a Cell Class of 23447-B as identified in ASTM D 1784. CPVC Schedule 40 and 80 pipe shall be Iron Pipe Size (IPS) conforming to ASTM F 441. CPVC Schedule 80 fittings shall conform to ASTM F 439. CPVC Schedule 80 threaded fittings shall conform to ASTM F 437. Pipe and fittings shall be manufactured as a system and be the product of one manufacturer. All pipe and fittings shall be manufactured in the United States. Pipe and fittings shall conform to National Sanitation Foundation (NSF) Standard 61 or the health effects portion of NSF Standard 14.

D. Installation shall comply with the latest installation instructions published by Charlotte Pipe and Foundry and shall conform to all local plumbing, building, and fire code requirements. Solvent cement joints shall be made in a two step process with primer manufactured for thermoplastic piping systems and solvent cement conforming to ASTM F 493. The system shall be protected from chemical agents, fire stopping materials, thread sealant, plasticized vinyl products, or other aggressive chemical agents not compatible with CPVC compounds. Systems shall be hydrostatically (water) tested after installation. Testing with compressed air or gas is not recommended.

2.3 BASIC SUPPORTS, ANCHORS AND SEALS

A. Adjustable steel clevises, steel pipe clamps and pipe saddle supports for horizontal piping hangers and supports.

B. Two-bolt riser clamps for vertical piping supports.

C. Concrete inserts, C-clamps, and steel brackets for building attachments.

D. Copper flashings for piping penetrations.

2.4 DRAINAGE PIPING PRODUCTS

A. Provide factory fabricated drainage piping products of size and type indicated. Where not indicated, provide proper selection as determined by Installer to comply with installation requirements and governing regulations.

B. Cleanout Plugs: Cast-bronze or brass, threads complying with ANSI B2.1 countersunk head.

C. Floor Cleanouts: Cast-iron body and frame: cleanout plug; adjustable round top as follows:

Nickel-Bronze Top: Manufacturer's standard cast unit of pattern indicated.

D. Available Manufacturers: Subject to compliance with requirements, manufacturers offering piping products which may be incorporated in the work include the following: Ancon, Inc., Josam Manufacturing Co., J.R. Smith Manufacturing Co., Wade Div., Tyler Pipe, Zurn

PART 3 - EXECUTION

3.1 INSTALLATION OF BUILDING DRAIN PIPING

A. Lay building drains beginning at low point of systems, true to grades and alignment indicated with unbroken continuity of invert. Clear the interior of piping from dirt and other superfluous material. Place plugs in ends of uncompleted piping at end of day or whenever work stops.

B. Install condensate piping pitched to drain at minimum slope of 1/4" per foot (2%) for piping 3" and smaller, and 1/8" per foot (1%) for piping 4" and larger.

3.2 EQUIPMENT CONNECTIONS

A. Provide union and P-trap with cleanout and union connection to equipment. Refer to details on drawings.

B. Provide condensate piping as required and make connection to all Owner furnished/Contractor installed equipment.

3.3 INSTALLATION OF DRAINAGE PIPING PRODUCTS

A. Cleanouts: Install in condensate piping as indicated, as required by the Florida Building Code; at each change in direction of piping greater than 45^{o}; at minimum intervals of 50' for piping 4" and smaller and 100' for larger piping; and at base of each conductor. Install floor and wall cleanout covers for concealed piping. Select type to match adjacent building finish.

B. Flashing Flanges: Install flashing flange and clamping device with each cleanout passing through waterproof membrane.

END OF SECTION 232115

SECTION 233400 – HVAC FANS

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

A. Extent of power and gravity ventilator and exhaust fan work is shown on drawings and schedules, and by requirements of this section.

1.2 QUALITY ASSURANCE

A. Firms regularly engaged in the manufacture of power and gravity ventilators and exhaust fans, of types and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years.

B. Provide power roof ventilators and exhaust fans bearing the Air Movement and Control Association, Inc. (AMCA) Certified Ratings Seal.

C. Provide power roof ventilator and exhaust fans electrical components which have been listed and labeled by Underwriters Laboratories (UL).

PART 2 - PRODUCTS

2.1 POWER ROOF VENTILATORS

A. General: Except as otherwise indicated, provide standard pre-fabricated power ventilator and exhaust fan units of type and size indicated, modified as necessary to comply with requirements, and as required for complete installation.

B. Centrifugal Roof Ventilators and Exhaust Fans: Provide centrifugal roof type, curb mounted, power ventilators and exhaust fans of type, size, capacity, with options and accessories, as scheduled, and as specified herein.

1. Type: Centrifugal fan, direct or belt driven, upblast or downblast, as scheduled. Provide aluminum weatherproof housings as scheduled. Provide square base. Provide permanent split-capacitor type motor for direct driven fans; capacitor-start, induction-run type motor for belt driven fans.
2. Electrical: Provide thermal overload protection in fan motor. Provide conduit chase within unit for electrical connection. Provide disconnect switches, external type for the kitchen hood fan.
3. Curbs: Provide insulated metal curbs with cants to fit base of roof ventilator, height as indicated (minimum 14 inches), and type to suit roof construction. Provide slanted roof curb for kitchen hood fan that meets NFPA codes. Kitchen exhaust air fans shall terminate a minimum 40 inched above the adjacent roof surface.
4. Bird Screens: Provide removable bird screens, 1/2" mesh, 16 ga. aluminum or brass wire.
5. Dampers: Provide gravity-actuated louvered dampers in curb bases except for kitchen hood exhaust fan.
6. The kitchen hood exhaust fan shall be provided with an extended base and grease trough.

C. Acceptable Manufacturers: Greenheck Fan Corp., Acme, Carnes Co., Cook (Loren) Co., Penn

2.2 CEILING EXHAUST AIR FANS

A. Provide ceiling mounted exhaust fans of type, size and capacity as scheduled, and as specified herein.

1. Provide insulated steel housing with baked enamel finish and adjustable mounting brackets. Provide centrifugal type blower with direct drive motor. Fan rpm, air delivery and sound shall be no greater than those listed for each model. Fans shall be UL approved and bear AMCA label for both air performance and sound. Motors shall be mounted with neoprene mounts to isolate vibration. Automatic backdraft damper shall be located within duct connector and have cushioned stops to prevent chatter.
2. Provide wall caps or louvers where shown and/or required as shown on the drawings.

B. Acceptable Manufacturers: Greenheck Fan Corp., Acme, Carnes Co., Cook (Loren) Co., Penn.

PART 3 - EXECUTION

3.1 GENERAL

A. Examine areas and conditions under which power and gravity ventilators and exhaust fans are to be installed. Do not proceed with work until unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF POWER AND GRAVITY VENTILATORS

A. General: Except as otherwise indicated or specified, install ventilators and exhaust fans in accordance with manufacturer's installation instructions and recognized industry practices to insure that ventilators serve their intended function.

B. Coordinate ventilator and exhaust fan work with work of roofing, walls, and ceilings, as necessary for proper interfacing.

C. Ensure that power ventilators and exhaust fans are wired properly, with correct motor rotation, and positive electrical motor grounding.

D. Remove shipping bolts and temporary supports within ventilators and exhaust fans. Adjust dampers for free operation.

3.3 TESTING

A. After installation of ventilators and exhaust fans has been completed, test each to demonstrate proper operation of units at performance requirements specified. When possible, field correct malfunctioning units, and then retest to demonstrate compliance. Replace units which cannot be satisfactorily corrected.

3.4 SPARE PARTS

A. General: Furnish to Owner, with receipt, one (1) spare set of belts for each belt drive power ventilator and exhaust fans.

END OF SECTION 233400

SECTION 26 51 19 - INTERIOR LIGHTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes the following types of LED luminaires:

1. Cylinder.
2. Downlight.
3. Highbay, linear.
4. Linear industrial.
5. Lowbay.
6. Parking garage.
7. Recessed linear.
8. Strip light.
9. Surface mount, linear.
10. Surface mount, nonlinear.
11. Suspended, linear.
12. Suspended, nonlinear.
13. Materials.
14. Finishes.
15. Luminaire support.

1.3 DEFINITIONS

A. CCT: Correlated color temperature.

B. CRI: Color Rendering Index.

C. Fixture: See "Luminaire."

D. IP: International Protection or Ingress Protection Rating.

E. LED: Light-emitting diode.

F. Lumen: Measured output of lamp and luminaire, or both.

G. Luminaire: Complete lighting unit, including lamp, reflector, and housing.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Arrange in order of luminaire designation.
2. Include data on features, accessories, and finishes.
3. Finishes shall be coordinated with the Architect.
4. Include physical description and dimensions of luminaires.
5. Include emergency lighting units, including batteries and chargers.
6. Include life, output (lumens, CCT, and CRI), and energy efficiency data.
7. Photometric data and adjustment factors based on laboratory tests, complying with IES Lighting Measurements Testing and Calculation Guides, of each luminaire type. The adjustment factors shall be for lamps and accessories identical to those indicated for the luminaire as applied in this Project. Conform to IES LM-79 and IES LM-80.

    a. Manufacturers' Certified Data: Photometric data certified by manufacturer's laboratory with a current accreditation under the National Voluntary Laboratory Accreditation Program for Energy Efficient Lighting Products.

B. Shop Drawings:

1. Include plans, elevations, sections, and mounting and attachment details.
2. Include details of luminaire assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
3. Include diagrams for power, signal, and control wiring.

C. Samples for Substitutions:

1. Include samples of luminaires for substituted luminaires whose model numbers and manufacturers are not specifically called on the drawings, or have not been prior approved during the bid or permit process.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For testing laboratory providing photometric data for luminaires.

B. Product Certificates: For each type of luminaire.

C. Product Test Reports: For each luminaire, for tests performed by manufacturer and witnessed by a qualified testing agency.

D. Sample warranty.

1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For luminaires and lighting systems to include in operation and maintenance manuals.

1. Provide a list of all lamp types used on Project; use ANSI and manufacturers' codes.

1.7 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Lamps: Ten for every 100 of each type and rating installed. Furnish at least one of each type.
2. Diffusers and Lenses: One for every 100 of each type and rating installed. Furnish at least one of each type.
3. Globes and Guards: One for every 20 of each type and rating installed. Furnish at least one of each type.

1.8 QUALITY ASSURANCE

A. Luminaire Photometric Data Testing Laboratory Qualifications: Luminaire manufacturer's laboratory that is accredited under the NVLAP for Energy Efficient Lighting Products.

B. Provide luminaires from a single manufacturer for each luminaire type.

C. All lighting fixtures shall be manufactured, furnished, and installed in compliance with all government agencies having jurisdiction. All fixtures shall bear the appropriate UL (or ETL) and IBEW identifications.

D. Mockups: For interior luminaires in room or module mockups, complete with power and control connections.

1. Obtain Architect's approval of luminaires in mockups before starting installations.
2. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Protect finishes of exposed surfaces by applying a strippable, temporary protective covering before shipping.

1.10 WARRANTY

A. Warranty: Manufacturer and Installer agree to repair or replace components of luminaires that fail in materials or workmanship within specified warranty period.

B. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 LUMINAIRE REQUIREMENTS

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Standards (As applicable for installation location):

1. ENERGY STAR certified.
2. NRTL Compliance: Luminaires for hazardous locations shall be listed and labeled for indicated class and division of hazard by an NRTL.
3. FM Global Compliance: Luminaires for hazardous locations shall be listed and labeled for indicated class and division of hazard by FM Global.
4. UL Listing: Listed for damp location.
5. Recessed luminaires shall comply with NEMA LE 4.
6. User Replaceable Lamps (if applicable):

    a. Bulb shape complying with ANSI C78.79.
    b. Lamp base complying with ANSI C81.61 or IEC 60061-1.

C. See Luminaire Schedule on Drawings for specific requirements for each type of luminaires.

D. Internal driver.

E. Nominal Operating Voltage: As indicated on Luminaire Schedule.

2.2 MATERIALS

A. Metal Parts:

1. Free of burrs and sharp corners and edges.

2. Sheet metal components shall be steel unless otherwise indicated.
3. Form and support to prevent warping and sagging.

B. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit re-lamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during re-lamping and when secured in operating position.

C. Diffusers and Globes: See Luminaire Schedule.

D. Factory-Applied Labels: Comply with UL 1598. Include recommended lamps. Locate labels where they will be readily visible to service personnel but not seen from normal viewing angles when lamps are in place.

1. Label shall include the following lamp characteristics:

a. "USE ONLY" and include specific lamp type.
b. Lamp diameter, shape, size, wattage, and coating.
c. CCT and CRI for all luminaires.

2.3 METAL FINISHES

A. Variations in finishes are unacceptable in the same piece. Variations in finishes of adjoining components are acceptable if they are within the range of approved Samples and if they can be and are assembled or installed to minimize contrast.

2.4 LUMINAIRE SUPPORT

A. Comply with requirements in Section 260529 "Hangers and Supports for Electrical Systems" for channel and angle iron supports and nonmetallic channel and angle supports.

B. Single-Stem Hangers: 1/2-inch steel tubing with swivel ball fittings and ceiling canopy. Finish same as luminaire.

C. Wires: ASTM A 641/A 641 M, Class 3, soft temper, zinc-coated steel, 12 gage.

D. Rod Hangers: 3/16-inch minimum diameter, cadmium-plated, threaded steel rod.

E. Hook Hangers: Integrated assembly matched to luminaire, line voltage, and equipment with threaded attachment, cord, and locking-type plug.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Examine roughing-in for luminaire to verify actual locations of luminaire and electrical connections before luminaire installation. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 TEMPORARY LIGHTING

A. If approved by the Engineer, use selected permanent luminaires for temporary lighting. When construction is sufficiently complete, clean luminaires used for temporary lighting and install new lamps.

3.3 INSTALLATION

A. Comply with NECA 1.

B. Install luminaires level, plumb, and square with ceilings and walls unless otherwise indicated.

C. Install lamps in each luminaire (if applicable).

D. Supports:

1. Sized and rated for luminaire weight.
2. Able to maintain luminaire position after cleaning and re-lamping.
3. Provide support for luminaire without causing deflection of ceiling or wall.
4. Luminaire mounting devices shall be capable of supporting a horizontal force of 100 percent of luminaire weight and vertical force of 400 percent of luminaire weight.

E. Flush-Mounted Luminaire Support:

1. Secured to outlet box.
2. Attached to ceiling structural members at four points equally spaced around circumference of luminaire.
3. Trim ring flush with finished surface.

F. Wall-Mounted Luminaire Support:

1. Per industry standard. Coordinate with Structural Engineer.
2. Do not attach luminaires directly to gypsum board.

G. Ceiling-Mounted Luminaire Support:

1. Ceiling mount with minimum of two 5/32-inch diameter aircraft cable supports adjustable to 120 inches in length.

H. Suspended Luminaire Support:

1. Pendants and Rods: Where longer than 48 inches, brace to limit swinging.
2. Stem-Mounted, Single-Unit Luminaires: Suspend with twin-stem hangers. Support with approved outlet box and accessories that hold stem and provide damping of luminaire oscillations. Support outlet box vertically to building structure using approved devices.
3. Continuous Rows of Luminaires: Use tubing or stem for wiring at one point and tubing or rod for suspension for each unit length of luminaire chassis, including one at each end.
4. Do not use ceiling grid as support for pendant luminaires. Connect support wires or rods to building structure.

I. Ceiling-Grid-Mounted Luminaires:

1. Secure to any required outlet box.
2. Secure luminaire to the luminaire opening using approved fasteners in a minimum of four locations, spaced near corners of luminaire.
3. Use approved devices and support components to connect luminaire to ceiling grid and building structure in a minimum of four locations, spaced near corners of luminaire.

3.4 FIELD QUALITY CONTROL

A. Perform the following tests and inspections:

1. Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.
2. Test for Emergency Lighting: Interrupt power supply to demonstrate proper operation. Verify transfer from normal power to battery power and retransfer to normal.

B. Luminaire will be considered defective if it does not pass operation tests and inspections.

C. Prepare test and inspection reports.

3.5 STARTUP SERVICE

A. Comply with requirements for startup as indicated in Drawings.

3.6 ADJUSTING

A. Occupancy Adjustments: When requested within 12 months of date of Substantial Completion, provide on-site assistance in adjusting the direction of aim of luminaires to suit occupied conditions. Make up to two visits to Project during other-than-normal hours for this purpose. Some of this work may be required during hours of darkness.

1. During adjustment visits, inspect all luminaires. Replace lamps or luminaires that are defective.
2. Parts and supplies shall be manufacturer's authorized replacement parts and supplies.
3. Adjust the aim of luminaires in the presence of the Architect.

END OF SECTION 265119

EXTERIOR LIGHTING - SECTION 26 56 00

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Exterior luminaires with lamps, LED drivers, and induction lamp generators.

1.2 STRUCTURAL ANALYSIS CRITERIA FOR POLE SELECTION

A. Wind Load: Pressure of wind luminaire and banners and banner arms, calculated and applied as stated in the Florida Building Code. Poles and fixtures assemblies shall meet 145 mph.

1.3 ACTION SUBMITTALS

A. Product Data: For each luminaire and support component, arranged in order of lighting unit designation. Include data on features, accessories, and finishes.

B. Submit photometric calculations superimposed onto the site plan or floor plan for all exterior lighting. The photometric levels shall be legible when plotted to scale. Provide separate photometric calculations for emergency egress lighting.

1.4 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with IEEE C2, "National Electrical Safety Code”.

C. Comply with NFPA 70.

1.5 WARRANTY

A. LED fixtures, lighting emitting diodes, and drivers: Manufacturer shall provide five year warranty against defects in materials and workmanship for all products. Project contractor shall replace defective fixtures and components during the first year of warranty without additional compensation.

B. Induction fixtures, lamps, coupler, and generators: Manufacturer shall provide five year warranty against defects in materials and workmanship for all products. Project contractor shall replace defective fixtures and components during the first year of warranty without additional compensation.

C. Warranty period shall begin on date of substantial completion.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers and products are subject Owner review and approval.

1. Provide electronic (PDF format) cutsheets of proposed fixtures.

2.2 GENERAL REQUIREMENTS FOR LUMINAIRES

A. Luminaires shall comply with UL 1598 and be listed and labeled for installation in wet locations by an NRTL acceptable to authorities having jurisdiction.

B. All exterior light fixtures shall be full cutoff type, dark sky friendly, to reduce light pollution.

C. Metal Parts: Free of burrs and sharp corners and edges.

D. Sheet Metal Components: Corrosion-resistant aluminum unless otherwise indicated. Form and support to prevent warping and sagging.

E. Housings: Rigidly formed, weather- and light-tight aluminum enclosures that will not warp, sag, or deform in use.

F. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit relamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position. Doors shall be removable for cleaning or replacing lenses.

G. Exposed Hardware Material: Stainless steel.

H. Plastic Parts: High resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.

I. Light Shields: Metal baffles, factory installed and field adjustable, arranged to block light distribution to indicated portion of normally illuminated area or field.

J. Lenses and Refractors Gaskets: Use heat- and aging-resistant resilient gaskets to seal and cushion lenses and refractors in luminaire doors.

K. All exterior fixtures shall be aluminum. Factory-applied finish for aluminum luminaires shall comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

1. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
2. Natural Satin Finish: Provide fine, directional, medium satin polish (AA-M32); buff complying with AA-M20; and seal aluminum surfaces with clear, hard-coat wax.

L. Factory-Applied Labels: Comply with UL 1598. Include recommended lamps and ballasts, driver or generator. Labels shall be located where they will be readily visible to service personnel but not seen from normal viewing angles when lamps are in place.

PART 3 - EXECUTION

3.1 LUMINAIRE INSTALLATION

A. Install lamps in each luminaire.

B. Provide final aiming and focusing of luminaires that require field adjustment or aiming under the direction of owner. Aiming and focusing luminaires shall be performed during non-daylight hours.

C. Provide adjustment of photoelectric device to prevent false operation of relay by artificial light sources, favoring a north orientation.

END OF SECTION 265600

PUBLIC ENTITY CRIMES FORM

SWORN STATEMENT UNDER SECTION 287.133(3)(a), FLORIDA STATUTES

1. This sworn statement is submitted to Tampa-Hillsborough County Expressway Authority

by _____
[print individual's name and title]

for _____
[print name of entity submitting sworn statement]

whose business address is _____

and (if applicable) its Federal Employer Identification Number (FEIN) is _____

(If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: _____.)

2. I understand that a "public entity crime" as defined in a Paragraph 287.133(1)(g), Florida Statutes**,** means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or of the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

3. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjunction of guilt in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.

4. I understand that an "affiliate" as defined in Paragraph 287.133 (1)(a), Florida Statutes, means:

   i. A predecessor or successor of a person convicted of a public entity crime; or

   ii. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of the affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

5. I understand that a "person" as defined in Paragraph 287.133(1)(e), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of

goods or services let by a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

6. Based on the information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. **[indicate with a check mark which statement applies.]**

____ Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of entity, nor any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent of July 1, 1989.

____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent of July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. **[attach a copy of the final order]**

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

_____
Signature

_____
Date

State of _____

County of _____

PERSONNALLY APPEARED BEFORE ME, the undersigned authority,

_____ who, after first being sworn by me, affixed his/her signature in
[Name of individual signing]

the space provided above on this _____ day of _____, 20____.

_____ My commission expires: _____
Notary Public

[Notary Seal]

DRUG-FREE WORKPLACE FORM

The undersigned firm, in accordance with Florida Status 287.087 hereby certifies that

_____ does:
Name of Business

1. Publish a statement of 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 Paragraph 1.

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

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

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs 1 thru 5.

As the person authorized to sign this statement, I certify that this firm complies with the above requirements.

_____
Firm's Signature

_____
Date

BID TABULATION FORM
THEA - EAST TOLL PLAZA REMEDIATION
FL-618 TOLL, TAMPA, FL 33619

Company Name: _____

Bid Date: _____

Item	Item Description	Quantity	Unit	Unit Cost	Bid Amount	TOTALS
1	Exterior of the buildings:					
	a. Patch/repair damage to the Exterior Insulation and Finish System (EFIS) on both buildings. Remove only damaged portions of the EFIS system in its entirety to concrete masonry unit substrate and patch/repair EFIS in-kind to match adjacent surfaces to remain.					
	b. Inspect and investigate cause of through wall water intrusion at aluminum windows. Repair or replace aluminum windows, as required, to eliminate water intrusion into buildings. Provide and install metal flashing at exterior sills of aluminum windows to slope provide positive slope over the face of the building.					
	c. Remove and replace exterior sealant at the perimeter of windows and doors.					
	d. Trim trees that prohibit access to the exterior faces of the buildings to allow for surface preparation and painting.					
	e. Prepare all exterior EFIS surfaces and paint.					
	f. Prepare all exterior door and frame surfaces and paint.					
	g. Clean exterior wall tile, replace broken exterior wall tile to match existing and fill holidays in grout.					
	h. Treat rust and paint all exterior steel railings.					
	i. Power wash all concrete sidewalks.					

	j. Provide and install protective metal trim on the south jamb of the rolling overhead door opening at Shop Building. Match existing metal trim on the north door jamb.					
2	Interior of buildings:					
	a. Replace water damaged gypsum board at aluminum windows. Tape, float and finish to match adjacent surfaces. Paint entire affected wall (from corner to corner and from top of base to bottom of suspended acoustical ceiling) to match adjacent wall surfaces.					
	b. Replace damaged components of sink base cabinet in break room and finish to match adjacent surfaces.					
	c. Remove resilient coved base, provide and install resilient floor tile in Room 113 in the Administration Building, and install new coved resilient base.					
	d. Replace all vertical blinds at all building windows. Vertical blind assemblies to fit within the window opening.					
	e. Cut posts/standards for steel storage shelving to terminate below the finished ceiling.					
	f. Replace missing and damaged acoustical ceiling panels in suspended ceiling to match existing.					
	g. Clean and sanitize four restrooms, two in each building.					
	h. Replace deteriorated vanity counter and splash in Administration Building restroom and reinstall existing top mounted lavatory sink.					
	i. Replace all soap dispensers in all restrooms.					
	j. Replace missing mirror in restroom.					
	SUBTOTAL OF ARCHITECTURAL WORK					
3	Mechanical/Electrical/Plumbing (MEP):					
	a. Clean HVAC ductwork, diffusers and grilles in the Administration Building.					
	b. Test and balance HVAC system in the Administration Building to comply with original design requirements.					
	c. Replace PVC condensate piping in the Administration Building with return air plenum approved CPVC piping.					

	d. Replace two inoperable exhaust fans and one inoperable supply fan in the Administration Building.					
	e. Remove abandoned ductless mini-split system in the Administration Building in its entirety including electrical distribution to its source. Patch/repair all through wall penetrations to match adjacent surfaces and finishes.					
	f. Clean HVAC ductwork, diffusers and grilles in the Shop Building.					
	g. Test and balance HVAC system in the Shop Building to comply with original design requirements.					
	h. Repair or replace leaking AHU condensate piping and underground drywell for the Shop Building.					
	i. Replace inoperable exhaust fan in the Shop Building.					
	j. Provide and install inoperable water heater in Shop Building in-kind.					
	k. Clean sanitary piping throughout both buildings.					
	l. Replace faucets and flush valves through out both buildings.					
	m. Insulate hot water piping throughout both buildings.					
	n. Replace interior fluorescent light fixtures throughout the buildings with LED type light fixtures.					
	o. Replace exterior wall mounted wall pack light fixtures on the buildings with LED type light fixtures.					
4	SUBTOTAL OF MEP WORK					
5	**TOTAL (ARCHITECTURAL and MEP WORK)**					

PRICE PROPOSAL FORM

(Print this page on bidder's letterhead and attach with response)

Date: _____

TAMPA-HILLSBOROUGH COUNTY EXPRESSWAY AUTHORITY (THEA)
Attention: Procurement Department
Toni Atkinson, Contracts and Procurement Manager
1104 East Twiggs Street, Suite 300
Tampa, FL 33602

Subject: _____

Dear THEA:

Having carefully examined the Instructions to Bidders, Supplementary Instructions to Bidders, General Provisions, Supplementary General Provisions, Special Provisions and Technical Specifications, Plans or Drawings (if issued), of the above subject project and contract, as well as the premises and the conditions affecting the work, the undersigned proposes to furnish all labor and materials called for by them and equipment necessary and to accomplish the entire work within the time period indicated in accordance with the said documents for the prices presented in the price schedules included on the attached BID TABULATION SHEET.

The undersigned acknowledges that they understand the following conditions that within the price schedules amounts indicated with brackets around the amounts are considered to be deductions or credits to the overall project cost. Calculations of price schedule extensions and price totals shall appropriately account for individual deductive and additive pay items.

TOTAL LUMP SUM PRICE: $_____

WRITTEN AMOUNT:

_____ DOLLARS AND _____ CENTS

The undersigned firm agrees to keep this offer open for acceptance for One Hundred Twenty (120) days after date of opening the bid proposal package.

The signer of this bid proposal package hereby declares that the only person, persons, company or parties interested in this bid proposal package as principals are named herein, that this bid proposal package is made without connection with any other person, persons, company or parties submitting a proposal; and that it is in all respects fair and in good faith, without collusion or fraud.

_____
Name of Respondent

_____ _____
Authorized Signature **Date**

CONFLICT OF INTEREST STATEMENT

Check one of the boxes below:

☐ To the best of our knowledge, the undersigned bidder has no potential conflict of interest due to any other clients, contracts, or property interest for this solicitation and project.

OR

☐ The undersigned bidder, by attachment to this form, submits information which **may** be a potential conflict of interest due to other clients, contracts or property interest for this solicitation and project.

BIDDER:

By: _____
Authorized Signature

_____
Printed Name of Signer

_____
Title of Signer

_____
Date Signed

EXPERIENCE AND REFERENCES				
	Experience	Total Dollar Vaue	Number of Contracts	Number of Government Contracts
1	State the total work volume and value that your organization has been responsible for in the past five (5) years in:			
2	List the dollar volume and number of government projects you have completed in the past five (5) years:			
3	Provide the following information on at least three (3) projects that Bidder has performed within the past five (5) years that were similar to this project. List chronologically, starting with the last project. Complete a new questionnaire for each representative project.			

EXPERIENCE AND REFERENCES

3.1 Project Title:

a.	Date Project Completed:	
b.	Project Name:	
c.	Total Project Cost:	
d.	Owner Address:	
e.	Owner Telephone:	
f.	Name of Reference for this Project:	
g.	Relationship of Reference to Owner:	
h.	Title and Position Reference held for this Project:	
i.	Firm name where Reference was employed for this Project:	
j.	Reference's Email:	
k.	Reference's Telephone:	
l.	List any other special criteria i.e specialized repair or equipment, etc. worked:	
m.	Describe your specific scope of work:	
n.	Specific scope of work cost:	
o.	Your Participation was: circle one	Prime / Sub
p.	Penalties imposed? (Yes or No; if Yes, explain):	
q.	Any liens, claims, or lawsuits? (Yes or No; if Yes, explain):	
r.	Any other pertinent information?	

EXPERIENCE AND REFERENCES		
	3.2 Project Title:	
a.	Date Project Completed:	
b.	Project Name:	
c.	Total Project Cost:	
d.	Owner Address:	
e.	Owner Telephone:	
f.	Name of Reference for this Project:	
g.	Relationship of Reference to Owner:	
h.	Title and Position Reference held for this Project:	
i.	Firm name where Reference was employed for this Project:	
j.	Reference's Email:	
k.	Reference's Telephone:	
l.	List any other special criteria i.e specialized repair or equipment, etc. worked:	
m.	Describe your specific scope of work:	
n.	Specific scope of work cost:	
o.	Your Participation was: circle one	Prime / Sub
p.	Penalties imposed? (Yes or No; if Yes, explain):	
q.	Any liens, claims, or lawsuits? (Yes or No; if Yes, explain):	
r.	Any other pertinent information?	

EXPERIENCE AND REFERENCES

3.3 Project Title:

a.	Date Project Completed:	
b.	Project Name:	
c.	Total Project Cost:	
d.	Owner Address:	
e.	Owner Telephone:	
f.	Name of Reference for this Project:	
g.	Relationship of Reference to Owner:	
h.	Title and Position Reference held for this Project:	
i.	Firm name where Reference was employed for this Project:	
j.	Reference's Email:	
k.	Reference's Telephone:	
l.	List any other special criteria i.e specialized repair or equipment, etc. worked:	
m.	Describe your specific scope of work:	
n.	Specific scope of work cost:	
o.	Your Participation was: circle one	Prime / Sub
p.	Penalties imposed? (Yes or No; if Yes, explain):	
q.	Any liens, claims, or lawsuits? (Yes or No; if Yes, explain):	
r.	Any other pertinent information?	

INSURANCE REQUIREMENTS, COVERAGES and LIMITS
for
Tampa-Hillsborough County Expressway Authority

Consultants, Contractors and Vendors, hereinafter referred to collectively and individually as "Insured" conducting business with the Tampa-Hillsborough County Expressway, "THEA" are required to maintain adequate insurance coverage and provide insurance certification to THEA.

A. INSURANCE REQUIREMENTS:

1) All insurance shall be from responsible insurance companies eligible to do business in the State of Florida and having an AM Best rating of A- or better and a financial size category of VII or better. Utilization of non-rated companies or companies with AM Best ratings lower than A- or a financial size category lower than VII may be approved on a case by case basis. If the insurer does not meet these requirements, THEA retains the right to approve or disapprove the use of the insurer.

2) INSURED'S liability policies, other than the Workers' Compensation and Professional Liability, shall provide that THEA, its officials, officers and employees are additional named insureds as to the operations of the INSURED under this AGREEMENT.

3) INSURED'S liability policies, other than the Workers' Compensation and Professional Liability, shall provide the "Severability of Interest" provision (a/k/a "Separation of Insureds" provision).

4) The INSURED'S Certificate of Insurance(s) shall provide THEA as an additional certificate holder for all policies issued.

5) The INSURED'S Certificate of Insurance(s) shall state the description of the operations, i.e., "Name of Agreement" between THEA and "Name of Insured" and shall state the Contract Number assigned for the AGREEMENT between THEA and the INSURED.

6) The INSURED shall deliver to THEA, within ten (10) days from the receipt of a Notice of Award of this AGREEMENT, properly executed Certificate(s) of Insurance on insurance industry standard certificate of insurance form(s) (example: ACORD form) setting forth the insurance coverages and limits required herein. All of the required insurance coverages shall be issued as required by law and shall be endorsed, where necessary, to comply with the minimum requirements contained herein.

7) Except as otherwise specified in the AGREEMENT, the insurance will commence on or prior to the effective date of the AGREEMENT and will be maintained in force throughout the duration of the AGREEMENT. Three years' completed operations coverage may be required to be maintained on specific commercial general liability policies and/or professional liability policies effective on the date of substantial completion or the termination of the AGREEMENT, whichever is earlier.

8) Aggregate Policy Limits on policies required of INSURED shall apply exclusively for this AGREEMENT.

9) INSURED authorizes THEA to verify its insurance information with its insurance agents, brokers, surety, and insurance carriers. At THEA'S request, INSURED shall provide copies of the policies at no cost to THEA, subject to redaction by the INSURED of any proprietary information.

10) All insurance coverages of the INSURED shall be primary to any insurance or self-insurance programs carried by THEA; and any THEA insurance or coverages shall not be contributory to INSURED'S insurance requirements in this AGREEMENT.

11) The insurance coverages and limits required of the INSURED under this AGREEMENT are designed to meet the minimum requirements of THEA. They are not designed as a recommended insurance program for the INSURED. The INSURED alone shall be responsible for the sufficiency of its own insurance program.

12) All policies of insurance required herein will be specifically endorsed to require the insurer provide THEA with thirty (30) days notice prior to any cancellation, intent not to renew any policy and/or any change that will reduce the insurance coverages required in this AGREEMENT, except for the application of the Aggregate Limits Provisions.

The endorsement will specify that such notice will be sent to:

Tampa-Hillsborough County Expressway, (THEA)
Contracts & Procurement Manager
1104 East Twiggs St, Suite 300
Tampa, FL 33602

13) THEA accepts no responsibility for determining whether the INSURED'S insurance is in full compliance with the insurance required by the AGREEMENT. Neither the approval by THEA nor the failure to disapprove the insurance furnished by the INSURED will relieve the INSURED of their full responsibility to provide the insurance required by this AGREEMENT.

14) If the INSURED fails to provide or maintain the insurance coverages required in this AGREEMENT, THEA may terminate or suspend this AGREEMENT, or, at the THEA'S sole discretion, may obtain such coverages and invoice the INSURED and include a 15% administrative cost. If not paid within 45 days, the amount will be deducted from INSURED'S invoice. The decision of THEA to purchase such insurance coverages shall in no way be construed as a waiver of its rights under this AGREEMENT.

15) INSURED shall fully comply with the insurance requirements of this AGREEMENT unless excused in writing by THEA. Any deductible applicable to any claim shall be the responsibility of the INSURED.

16) Any liability insurance aggregate limits are to be confirmed in writing by the respective insurance company that to their knowledge, as of the date of the AGREEMENT, there are no pending claims or legal actions against the INSURED, which if resolved in favor of the claimant would impair the insurance company's ability to cover the minimum insurance limits stated herein.

17) Current Insurance Service Office (ISO) policies, forms, and endorsements or broader shall be used where applicable. Notwithstanding the foregoing, the wording of all policies, forms, and endorsements must be acceptable to THEA without restrictive endorsement.

18) The INSURED will not commence work, use or occupy THEA premises in connection with the AGREEMENT until the required insurance is in force, preliminary evidence of insurance acceptable to THEA has been provided to THEA and THEA has granted permission to the INSURED to commence work or use or occupy the premises in connection with the AGREEMENT.

19) Upon request, the INSURED shall promptly make available a certified, true and exact copy of the insurance policy and endorsements issued to the policy and any renewal thereof for THEA'S review and inspection. In the event of cancellation or non-renewal of this insurance, the INSURED agrees to purchase the maximum "extended claims reporting period" permitted under the policy within the time allowed, unless replacement coverage is obtained with retroactive coverage applicable as of the date the INSURED services started under this AGREEMENT.

20) All insurance minimum coverage limits extend to any subcontractor and the Prime INSURED is responsible for all subcontractors.

B. INSURANCE COVERAGES and LIMITS:

For the term of this AGREEMENT the INSURED shall procure and maintain insurances of the types and limits specified herein.

1) **Workers' Compensation and Employers' Liability Insurance** - The minimum limits of Worker's Compensation/Employer's Liability Insurance (inclusive of any amount provided by an umbrella or excess policy) are:

Workers' Compensation	Florida Statutory Requirements
Employers' Liability	
Each Accident	$500,000
Disease – Policy Limit	$500,000
Disease - Each Employee	$500,000

2) **Commercial General Liability Insurance -** The minimum limits of Commercial General Liability Insurance (inclusive of any amount provided by an umbrella or excess policy) are:

General Aggregate	$1,000,000
Per Person	$1,000,000
Each Occurrence	$2,000,000
Personal Injury	$1,000,000
Property Damage	$1,000,000
Products & Completed Operations	$1,000,000

The General Aggregate Limit must be specifically applicable to the AGREEMENT between THEA and the INSURED.

The Certificate must reflect whether the policy is "claims made" or "occurrence".

Products & Completed Operations coverage to be maintained for three (3) years after final completion of the work under this AGREEMENT.

3) **Business Automobile Liability Insurance -** The minimum limits of Business Automobile Liability Insurance (inclusive of any amount provided by an umbrella or excess policy) covering ownership, maintenance, use, loading and unloading of all its owned, non-owned, leased or hired vehicles are:

Bodily Injury	
Each Person	$1,000,000
Each Accident	$1,000,000
Property Damage	$1,000,000
Bodily Injury & Property Damage Combined	$1,000,000

4) **Umbrella Liability Insurance or Excess Liability Insurance –** Umbrella Liability Insurance or Excess Liability Insurance must provide the same coverages as required for the underlying Commercial General, Business Automobile and Employers' Liability Coverages with no gaps in continuity of coverages or limits.

Bodily Injury & Property Damage Combined	
Each Occurrence	$2,000,000
Aggregate (specific to this AGREEMENT)	$2,000,000
Aggregate (not specific to this AGREEMENT)	$1,000,000

5) **Professional Liability Insurance, also known as "Errors and Omissions".** The minimum limits of Professional Liability Insurance covering all work of the INSURED without any exclusions unless approved in writing by THEA are:

Professional Liability	
Each Claim	$1,000,000
Aggregate	$1,000,000

Any deductible applicable to any claim shall be the responsibility of the INSURED and shall not be greater than $100,000 unless approved by THEA in writing. This coverage shall be maintained by the INSURED for a period of not less than three (3) years from the date the INSURED has completed and THEA has accepted the services under this AGREEMENT.

6) **Environmental Impairment (Pollution) Liability, (if required)** – Environmental Impairment (Pollution) Liability insurance is required **only** if specifically stated in the Instructions and Submittal Documents package.

If required, the minimum limits of Environmental Impairment (Pollution) Liability insurance coverage (inclusive of any amount provided by an umbrella or excess policy) for liability resulting from pollution or other environmental impairment in connection with operations performed by or on behalf of INSURED under this AGREEMENT or the use or occupancy of THEA premises by or on behalf of the INSURED are:

Each Occurrence	$1,000,000
Annual Aggregate	$1,000,000

[END OF INSURANCE REQUIREMENTS, COVERAGES AND LIMITS]

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we _____

(Here In after called the "Principal") and _____

(Hereinafter called the "Surety"), a Corporation chartered and existing under the laws of the State of _____with its principal offices in the City of _____
and authorized to do business in the State of Florida are held firmly bound unto the Tampa-Hillsborough County Expressway Authority, in the full and just sum of _____Dollars ($_____), equal to 10% of the bid amount, good and lawful money of the United Statesof America, to be paid upon demand of the Tampa-Hillsborough County Expressway Authority, to which payment well and truly to be made we bind ourselves, our heirs, executors, administrators, and assigns, jointly and severally by these presents.

WHEREAS, the Principal is about to submit, or has submitted to the Tampa-Hillsborough County Expressway Authority, a proposal for the

_____

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

"NOW, THEREFORE: The conditions of this obligation are such that if the Proposal is accepted, the Principal shall, within ten (10) days after the date of receipt of a written notice of Award of Contract, execute a contract in accordance with the Proposal and upon the terms, conditions and prices set forth therein in the form and manner required by the Tampa-Hillsborough County Expressway Authority and execute a sufficient and satisfactory Public Construction Bond, payable to the Tampa-Hillsborough County Expressway Authority and deliver documents which are condition to commencing the work... ". then this obligation to be void; otherwise to be and remain In full force and virtue in law; and the Surety shall, upon failure within the time specified above, immediately pay to the aforesaid Expressway Authority 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

(Seal) BY: _____

_____
Surety

(Seal) BY: _____

_____
Countersigned

CERTIFICATE AND AFFIDAVIT FOR SURETY BOND INSURER

TO: TAMPA-HILLSBOROUGH EXPRESSWAY AUTHORITY
RE: REQUEST FOR PROPOSALS NO. _____; PROJECT: _____
_____

BIDDER: Name: _____
Address: _____
Telephone: _____

AMOUNT OF BOND: _____
SURETY BOND INSURER
Name: _____
Address: _____
Telephone: _____

Before me, the undersigned authority, personally appeared, _____ on this _____ day of _____, 20___ who hereby certifies that, in accordance with Section 287.0935, Florida Statutes, the insurer named above:

1. Is licensed to do business in the State of Florida;
2. Holds a certificate of authority authorizing it to write surety bonds in Florida;
3. Has twice the minimum surplus and capital required by the Florida Insurance Code at the time the invitation to bid is Issued;
4. Is otherwise in compliance with the provisions of the Florida Insurance Code; and
5. Holds a currently valid certificate of authority issued by the United States Department of the Treasury under Section 9304-9308 of Title 31 of the United States Code.

_____
Signature of Officer of Surety Insure

STATE OF: _____

COUNTY OF: _____
THE FOREGOING INSTRUMENT was sworn to, subscribed and acknowledged before me this _____ day of _____, 20____ by who is personally known to me or _____ has produced _____ as identification and did take an oath.

(Notary, check appropriate blank; and if obtaining identification, fill in appropriate identification number.)

_____
Notary Public

_____
(Printed Name of Notary)

My Commission Expires:

_____
Serial Number, if any)

CERTIFICATION REGARDING SCRUTINIZED COMPANIES LISTS

This certification is required pursuant to Florida Statute, Section 287.135.

By executing this form and each and every renewal hereof (if renewal is separately provided for herein), pursuant to section 287.135, Florida Statutes, Consultant certifies, represents, and warrants that: (a) it is not on the Scrutinized Companies with Activities in Sudan List, (b) it is not on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, (c) it is not on the Scrutinized Companies with Activities in Iran Terrorism Sectors List, (d) that it does not have Business operations or is engaged in business in Cuba or Syria, and (e) that it is not engaged or engaging in a Boycott of Israel, and that all such certifications were true at the time it submitted its bid or proposal for this Agreement, as of the Effective Date of this Agreement, and as of the effective date of any renewal of this Agreement. Notwithstanding anything contained in this Agreement to the contrary, the Authority may terminate this Agreement immediately for cause if: (1) Consultant is found to have submitted a false certification regarding (a) – (e) above in accordance with section 287.135(5), Florida Statutes, (2) Consultant is found to have been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or is or has been engaged in Business operations in Cuba or Syria or a Boycott of Israel, or (3) Consultant is found to have been placed on a list created pursuant to section 215.473, Florida Statutes, relating to scrutinized active business operations in Iran. Such termination shall be in addition to any and all remedies available to the Authority at law or in equity. The terms "Boycott of Israel" and "Business operations" used in this section are defined as in Section 287.135, Florida Statutes. The Lists referred to in this section are those Lists in and maintained pursuant to section 287.135, Florida Statutes.

Firm: _____

Firm FID or EIN: _____

Address: _____

City: _____ State: _____ Zip: _____

I hereby warrant that I am duly authorized to sign and bind on behalf of the company listed above as the "Firm".

I hereby certify and affirm that the company listed above as the "Firm" certifies, represents, and warrants that: (a) it is not on the Scrutinized Companies with Activities in Sudan List, (b) it is not on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, (c) it is not on the Scrutinized Companies with Activities in Iran Terrorism Sectors List, (d) that it does not have Business operations or is engaged in business in Cuba or Syria, and (e) that it is not engaged or engaging in a Boycott of Israel, and that all such certifications were true at the time it submitted its bid or proposal for this Agreement, as of the Effective Date of this Agreement, and as of the effective date of any renewal of this Agreement. I understand pursuant to Florida Statue, Section 287.135, the submission of a false certification may subject the Respondent/Bidder to civil penalties, attorney's fees and/or costs.

Firm:

By: _____
(Authorized Signature)

_____
(Printed Name of Signer)

_____
(Title of Signer)

_____
(Date Signed)

EAST TOLL PLAZA AS-BUILD PALNS

INDEX OF DRAWINGS

SHEET NO	SHEET DESCRIPTION
T01	KEY SHEET
ARCHITECTURAL	
SITE DRAWINGS	
AS01	SITE PLAN - EXISTING CONDITIONS
AS02	DEMOLITION SITE PLAN
AS03	ARCHITECTURAL SITE PLAN
AS04	TEMPORARY COVERED WALK
ADMINISTRATION BUILDING DEMOLITION DRAWINGS	
D01	DEMOLITION FLOOR PLAN
D02	BASEMENT DEMOLITION FLOOR PLAN
D03	EXTERIOR ELEVATIONS
D04	EXTERIOR ELEVATIONS
D05	ROOF PLAN
D06	REFLECTED CEILING PLAN
D07	EXISTING BUILDING SECTIONS
D08	EXISTING BUILDING SECTIONS
D09	EXISTING BUILDING SECTIONS
BUILDING DRAWINGS	
A01	ADMINISTRATION BUILDING FLOOR PLAN
A02	PARTIAL BASEMENT PLAN AND STAIR SECTION
A03	TECH SHOP FLOOR PLAN
A04	ADMIN. BUILDING EQUIPMENT FLOOR PLAN
A05	TECH SHOP EQUIPMENT FLOOR PLAN
A06	ADMIN. BUILDING REFLECTED CEILING PLAN
A07	TECH SHOP REFLECTED CEILING PLAN
A08	ADMINISTRATION BUILDING FLOOR FINISH PLAN
A09	TECH SHOP FLOOR FINISH PLAN
A10	ADMINISTRATION BUILDING ROOF PLAN
A11	TECH SHOP ROOF PLAN
A12	ADMINISTRATION BUILDING ELEVATIONS
A13	ADMINISTRATION BUILDING ELEVATIONS
A14	TECH SHOP ELEVATIONS
A15	TECH SHOP ELEVATIONS
A16	ADMINISTRATION BUILDING SECTIONS
A17	TECH SHOP BUILDING SECTIONS
A18	WALL SECTIONS
A19	WALL SECTIONS
A20	ELEVATOR WALL SECTIONS
A21	DOOR SCHEDULE, FINISH SCHEDULE
A22	DOOR AND WINDOW DETAILS
A23	INTERIOR ELEVATIONS
A24	ENLARGED PLAN AND ELEVATIONS
A25	ENLARGED PLAN AND ELEVATIONS
A26	CABINET DETAILS
A27	WALL SECTIONS AND DETAILS
A28	LOADING DOCK DETAILS AT ADMIN. BUILDING
CIVIL	
C01	GENERAL NOTES
C02	ALIGNMENT & CONTROL POINTS
C03-C05	SITE PLAN
C06-C08	GRADING PLAN
C09-C10	SITE PLAN WITH OPTIONAL TECH SHOP
C11-C12	GRADING PLAN WITH OPTIONAL TECH SHOP
STRUCTURAL	
S01	GENERAL NOTES AND ADMINISTRATION BUILDING FOUNDATION PLAN
S02	TECH SHOP FOUNDATION PLAN
S03	ADMINISTRATION BUILDING ROOF FRAMING PLAN
S04	TECH SHOP ROOF FRAMING PLAN
S05	FOUNDATION DETAILS
S06	ADMINISTRATION BUILDING TUNNEL DETAILS
S07	ADMINISTRATION BUILDING TUNNEL DETAILS
S08	ROOF FRAMING DETAILS
S09	CANOPY DETAILS
S10	LOADING DOCK DETAILS
S11	ADMINISTRATION BUILDING CRITICAL TEMPORARY WALL DETAILS

SHEET NO	SHEET DESCRIPTION
PLUMBING	
P01	ADMINISTRATION BUILDING PLUMBING FLOOR PLAN
P02	TECH SHOP PLUMBING FLOOR PLAN
P03	PLUMBING ISOMETRICS
P04	PLUMBING LEGEND, NOTES & DETAILS
MECHANICAL	
M01	ADMINISTRATION BUILDING HVAC FLOOR PLAN
M02	TECH SHOP HVAC FLOOR PLAN
M03	MECHANICAL SCHEDULES
M04	MECHANICAL LEGEND AND SYMBOLS
M05	MECHANICAL DETAILS
ELECTRICAL	
E01	ADMINISTRATION BUILDING AND TECH SHOP GENERAL ELECTRICAL NOTES AND SCHEDULES
E02	ADMINISTRATION BUILDING POWER PLAN
E03	ADMINISTRATION BUILDING LIGHTING PLAN
E04	ADMINISTRATION BUILDING AND TECHNICAL SHOP BUILDING RISER DIAGRAM
E05	ADMINISTRATION BUILDING PANEL SCHEDULES
E06	ADMINISTRATION BUILDING LIGHTNING PROTECTION PLAN
E07	ADMINISTRATION BUILDING AND TECH SHOP TELEPHONE RISER DIAGRAM
E08	ADMINISTRATION BUILDING TELEPHONE PLAN
E09	TECHNICAL SHOP POWER PLAN
E10	TECHNICAL SHOP LIGHTING PLAN
E11	TECHNICAL SHOP BUILDING PANEL SCHEDULES AND MISCELLANEOUS DETAILS
E12	TECHNICAL SHOP LIGHTNING PROTECTION PLAN
E13	ELECTRICAL SITE PLAN
E14	ADMINISTRATION BUILDING SECURITY & CARD ACCESS SYSTEM PLAN
E15	ADMINISTRATION BUILDING-SECURITY & CARD ACCESS SYSTEM RISER DIAGRAM
E16	TECHNICAL SHOP TELEPHONE PLAN
E17	TEMPORARY ELECTRICAL SERVICE RISER DIAGRAM
E18	TOLL BOOTH TUNNEL SECURITY & CARD ACCESS PLAN
E19	ADMINISTRATION BUILDING CCTV & DATA EMPTY CONDUIT SYSTEM PLAN
E20	ADMINISTRATION BUILDING CCTV & DATA EMPTY CONDUIT RISER DIAGRAM
E21	TECHNICAL SHOP CCTV & DATA EMPTY CONDUIT SYSTEM PLAN
E22	ADMINISTRATION BUILDING BASEMENT MISCELLANEOUS SYSTEMS PLAN
E23	TEMPORARY ELECTRICAL SERVICE SITE PLAN
E24	ADMINISTRATION BUILDING & TUNNEL TELEPHONE/INTERCOM PLAN
E25	FIRE ALARM SYSTEM DETAILS AND SCHEDULES
E26	ADMINISTRATION BUILDING FIRE ALARM PLAN
E27	TECHNICAL SHOP FIRE ALARM PLAN

REVISIONS

GOVERNING STANDARDS AND SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION.
ROADWAY AND TRAFFIC DESIGN STANDARDS
DATED JANUARY 1994 AND
STANDARD SPECIFICATIONS FOR ROAD AND
BRIDGE CONSTRUCTION DATED 1991
AS AMENDED BY CONTRACT DOCUMENTS.

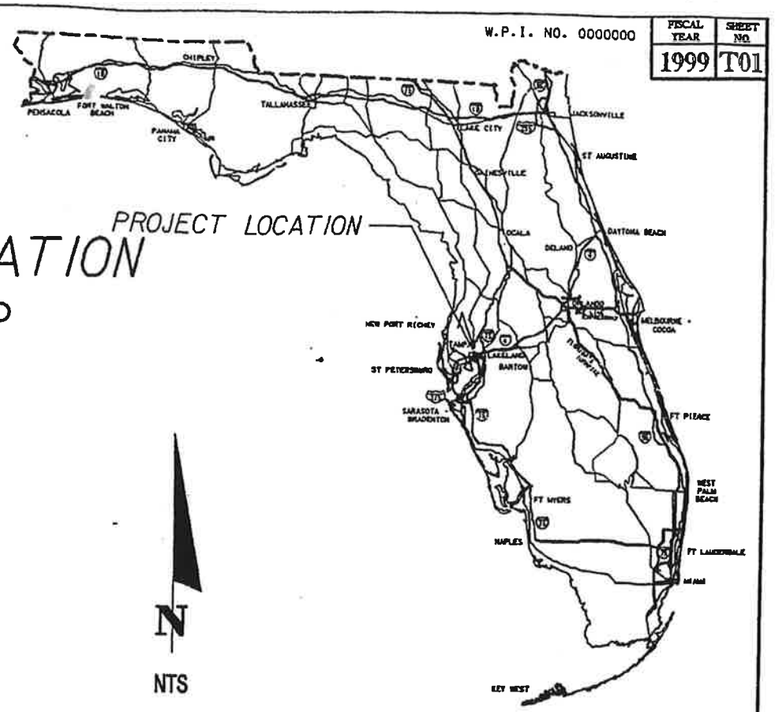
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION
CONTRACT PLANS

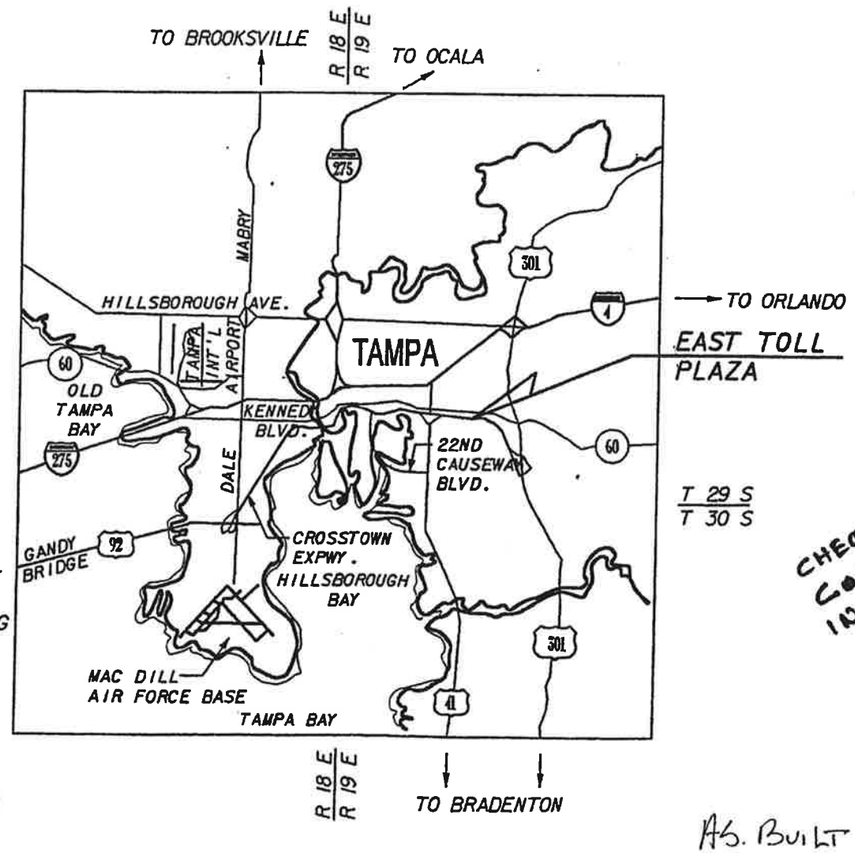
CROSSTOWN EXPRESSWAY
EAST TOLL PLAZA ADMINISTRATION BUILDING AND TECH SHOP

FINANCIAL PROJECT ID 190352-1-52-01
STATE PROJECT NO. 10002-0000
HILLSBOROUGH COUNTY

W.P.I. NO. 0000000

FISCAL YEAR	SHEET NO.
1999	T01





PLANS PREPARED BY
AND SHOP DRAWINGS TO
BE SUBMITTED TO:
EDWARD W. BREKHUS
P.E. NO. 44822
David Volkert & Associates, Inc.
3409 West Lemon Street, Suite 1
Tampa, Florida 33609
(813) 875-1365
VENDOR ID V1636-008-050-002

CHECKED & FOUND CORRECT. ALL THE INFO UPDATED. 33672
4-19-02

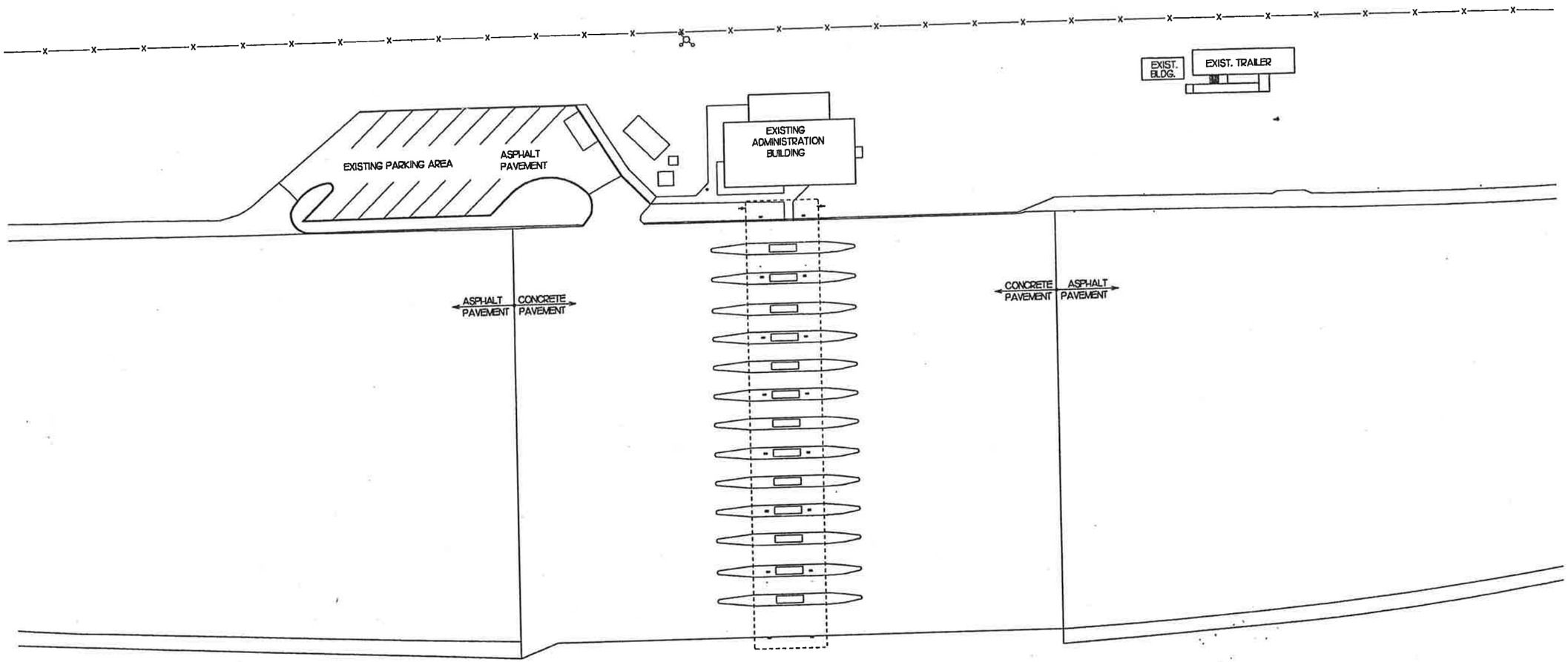
NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED BY REPRODUCTION.

FDOT PROJECT MANAGER: LEE BOHNING

AS BUILT SET
4-1-02
STEVE TOYE
EVERLAND BROS

2-4-00

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	AS01



A SITE PLAN-EXISTING CONDITIONS
SCALE: 1" = 30'-0" SPC: 01/21/99

0 30 60 120

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS " 735-88 TOLL PLAZA MODIFY EXISTING " AND " 770-101-106 BUILDING ". ITEMS INDICATED " TECH SHOP " SHALL APPLY TO " 770-101-106 BUILDING " ONLY.

REVISIONS												
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	

	NAME	DATE		NAME	DATE
DESIGNED BY	E.A.C.	01/24/00	DRAWN BY	E.J.M.	01/24/00
CHECKED BY	E.A.C.	01/24/00	CHECKED BY	E.A.C.	01/24/00

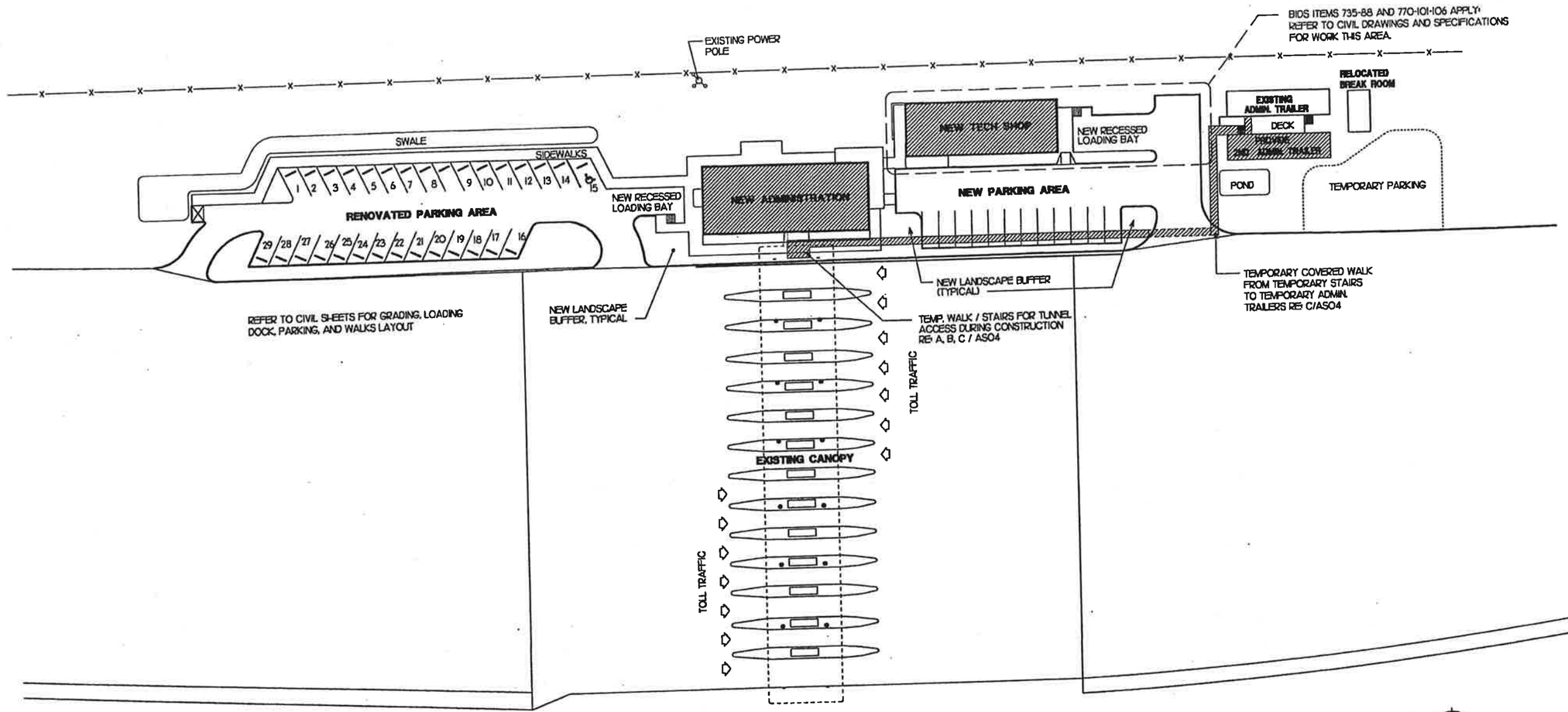
SUPERVISED BY: EDWARD A. CALDWELL, AIA

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

SITE PLAN - EXISTING CONDITIONS

BASIC 01/31/00

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	AS03



A ARCHITECTURAL SITE PLAN
SCALE 1" = 30' SPD3 01/13/00

0 30 60 120

02/04/00

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS " 735-88 TOLL PLAZA MODIFY EXISTING " AND " 770-101-106 BUILDING ". ITEMS INDICATED " TECH SHOP " SHALL APPLY TO " 770-101-106 BUILDING " ONLY.

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

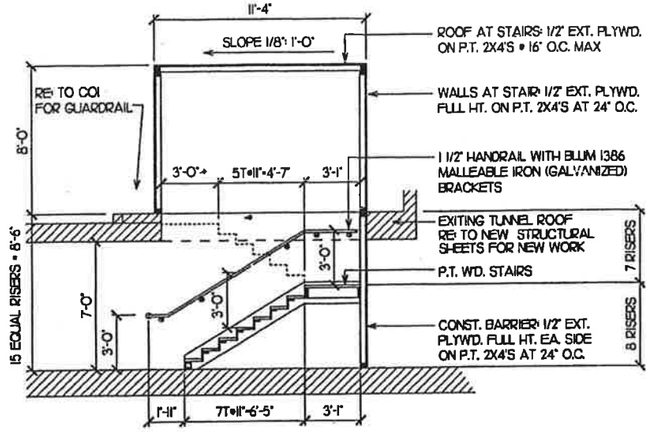
	NAME	DATE		NAME	DATE
DESIGNED BY	E.A.C.	01/24/00	DRAWN BY	E.J.M.	01/24/00
CHECKED BY	E.A.C.	01/24/00	CHECKED BY	E.A.C.	01/24/00
SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ARCHITECTURAL SITE PLAN

#AS03 01/13/00

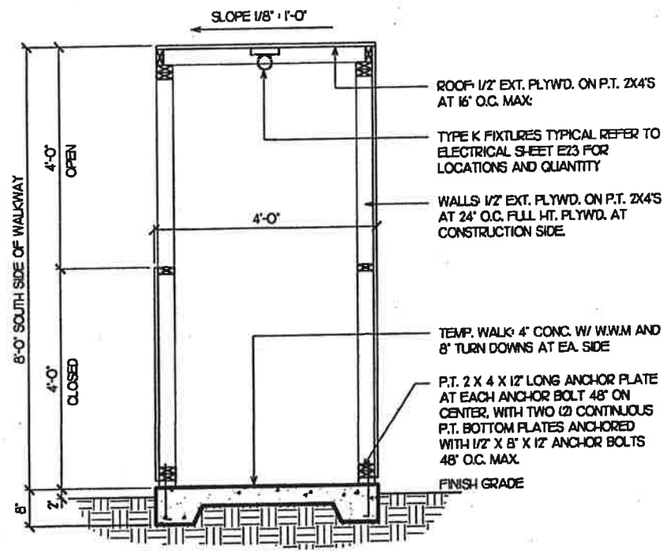
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	AS04



B TEMPORARY STAIR SECTION

SCALE: 1/4" = 1'-0" WS06 06/21/99

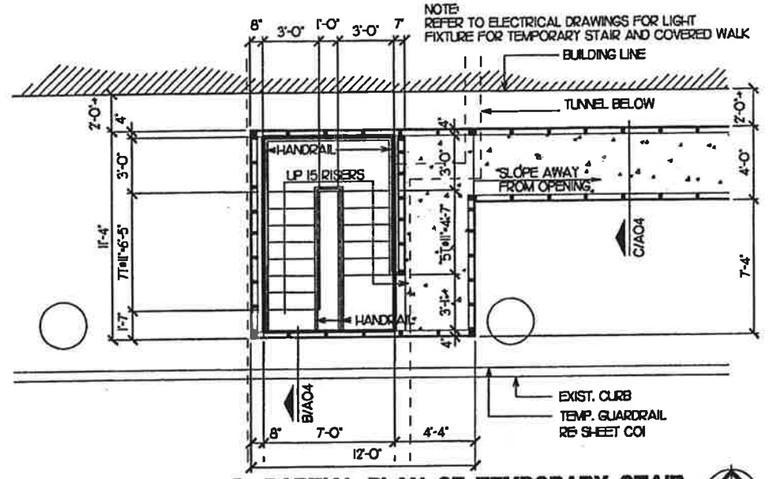
0 4 8 12



C TEMP. COVERED WALK SECTION

SCALE: 3/4" = 1'-0" WS07 07/27/99

0 1 2 4



A PARTIAL PLAN OF TEMPORARY STAIR

SCALE: 1/4" = 1'-0" FP04 06/28/99

0 4 8 12

02/04/00

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS " 735-88 TOLL PLAZA MODIFY EXISTING " AND " 770-101-106 BUILDING ". ITEMS INDICATED " TECH SHOP " SHALL APPLY TO " 770-101-106 BUILDING " ONLY.

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	E.A.C.	01/24/00	DRAWN BY	E.J.M.	01/24/00
CHECKED BY	E.A.C	01/24/00	CHECKED BY	E.A.C.	01/24/00

SUPERVISED BY: EDWARD A. CALDWELL, AIA

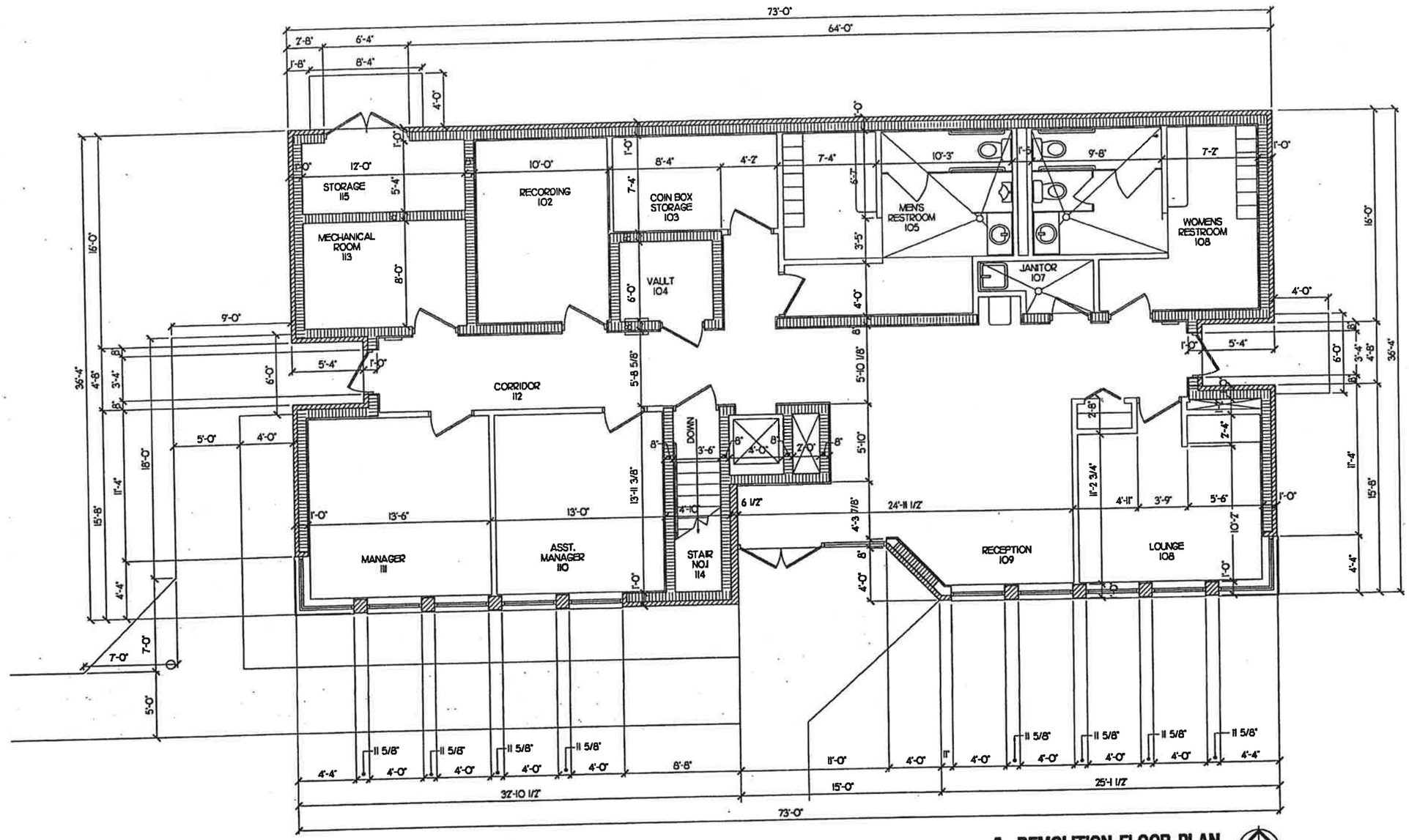
DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners

MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

TEMPORARY COVERED WALK

AS04 01/31/00

STATE PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
000106-1-52-01	10002-0000	D01



A DEMOLITION FLOOR PLAN

SCALE: 1/4" = 1'-0" FPOI 02/11/99

0 4 8 12

N

DEMOLITION NOTES

GNOI 05/28/99

PLANS AND DETAILS ARE TAKEN FROM ORIGINAL DOCUMENTS DATED JUNE 24, 1974 AS PROVIDED BY F.D.O.T. ACTUAL FIELD CONDITIONS MAY VARY. CONTRACTOR SHALL ALLOW FOR CONTINGENCY FOR DEMOLITION AND LABOR IN THE BASE BID.

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DRAWN BY	EM	07/07/99
CHECKED BY	E.A.C.	07/07/99	CHECKED BY	E.A.C.	07/07/99
SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

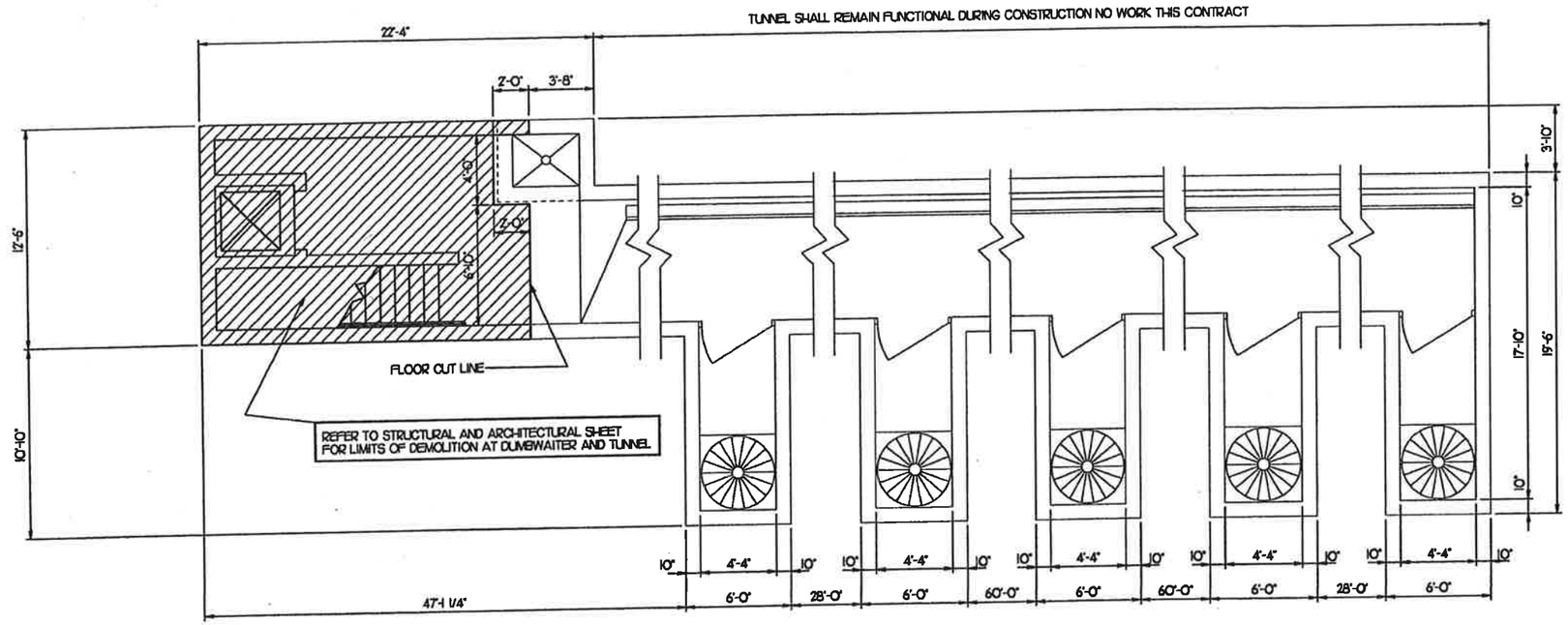
DAVID VOLKERT & ASSOCIATES, INC. Architects · Engineers · Planners

MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ADMINISTRATION BUILDING DEMOLITION
DEMOLITION FLOOR PLAN

#D01 06/01/99

STATE PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
000106-1-52-01	10002-0000	002



A BASEMENT DEMOLITION FLOOR PLAN

SCALE: 1/4" = 1'-0"

FP02 02/11/99

0 4 8 12

DEMOLITION NOTES

GNOI 05/28/99

PLANS AND DETAILS ARE TAKEN FROM ORIGINAL DOCUMENTS DATED JUNE 24, 1974 AS PROVIDED BY F.D.O.T.. ACTUAL FIELD CONDITIONS MAY VARY. CONTRACTOR SHALL ALLOW FOR CONTINGENCY FOR DEMOLITION AND LABOR IN THE BASE BID.

#003 06/04/99

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

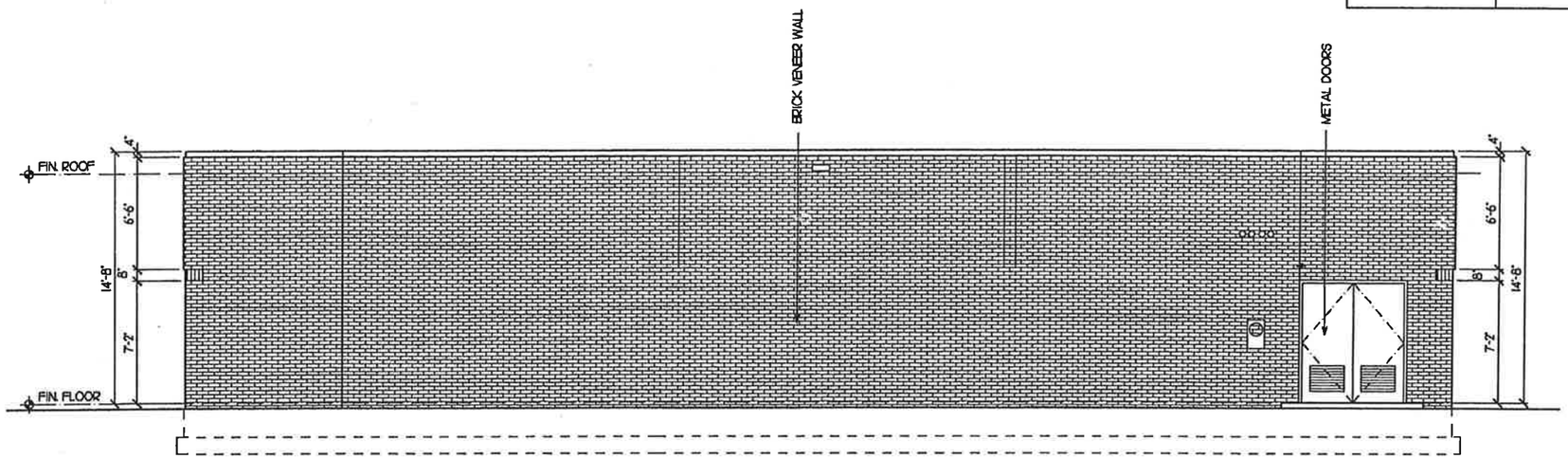
	NAME	DATE		NAME	DATE
DESIGNED BY			DRAWN BY	EM	07/07/99
CHECKED BY	E.A.C.	07/07/99	CHECKED BY	E.A.C.	07/07/99
SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners

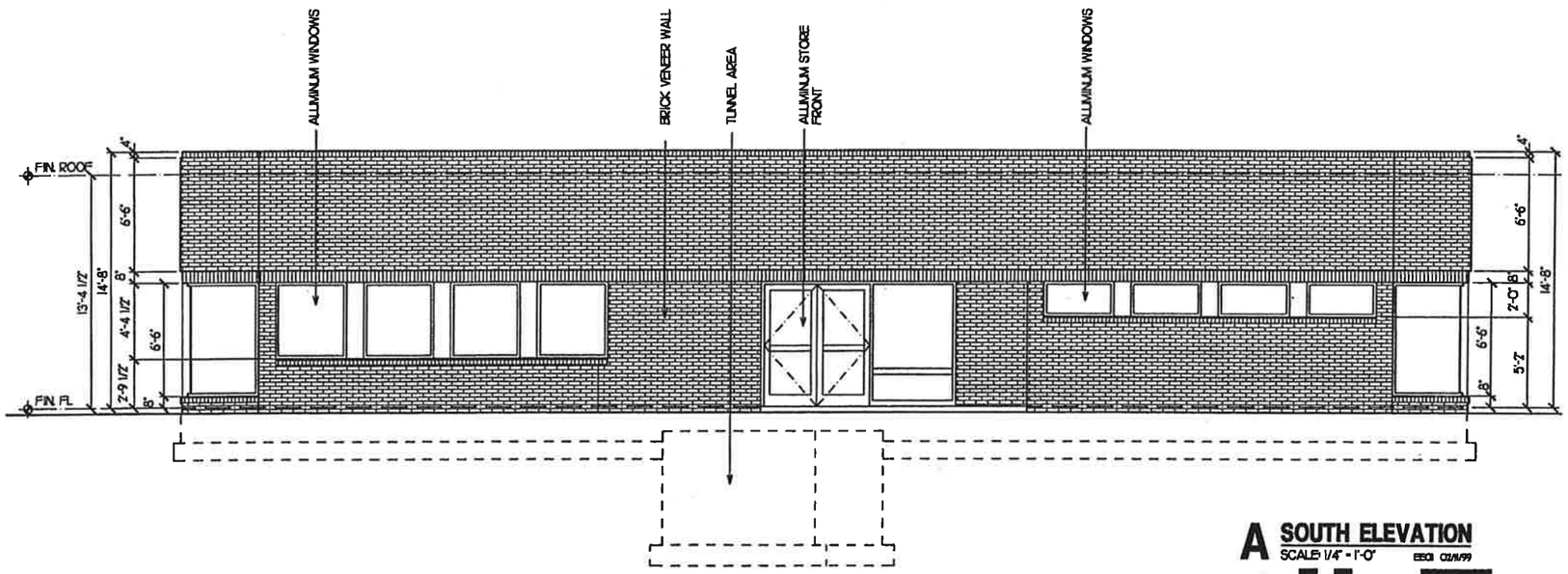
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ADMINISTRATION BUILDING DEMOLITION
BASEMENT DEMOLITION FLOOR PLAN

STATE PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
000106-1-52-01	10002-0000	D03



B NORTH ELEVATION
SCALE: 1/4" = 1'-0" EEOI 02/11/99



A SOUTH ELEVATION
SCALE: 1/4" = 1'-0" EEOI 02/11/99

0 4 8 12

DEMOLITION NOTES

GNOI 05/28/99

PLANS AND DETAILS ARE TAKEN FROM ORIGINAL DOCUMENTS DATED JUNE 24, 1974 AS PROVIDED BY F.D.O.T. ACTUAL FIELD CONDITIONS MAY VARY. CONTRACTOR SHALL ALLOW FOR CONTINGENCY FOR DEMOLITION AND LABOR IN THE BASE BID.

D03 04/04/99

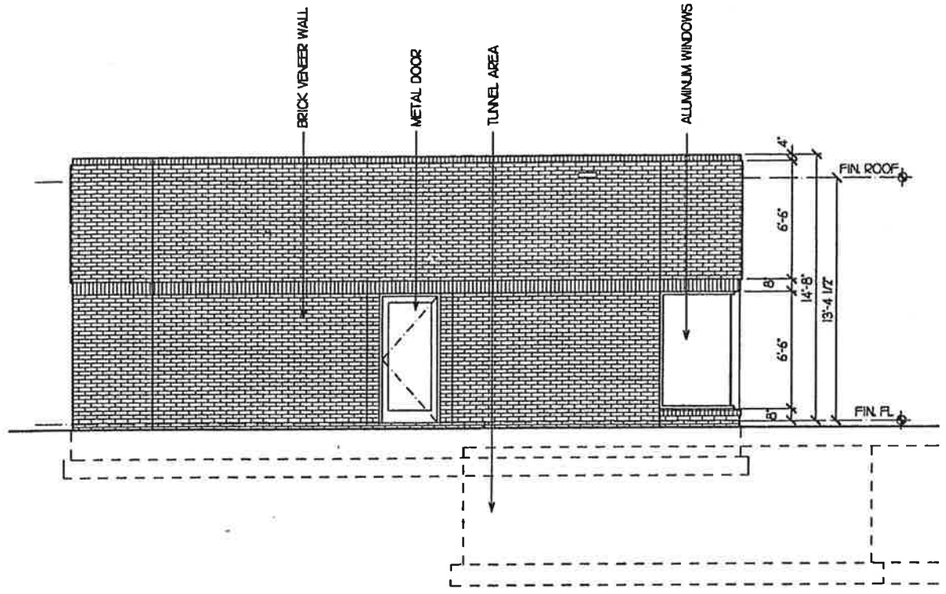
REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DRAWN BY	EM	07/07/99
CHECKED BY	E.A.C.	07/07/99	CHECKED BY	E.A.C.	07/07/99
SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

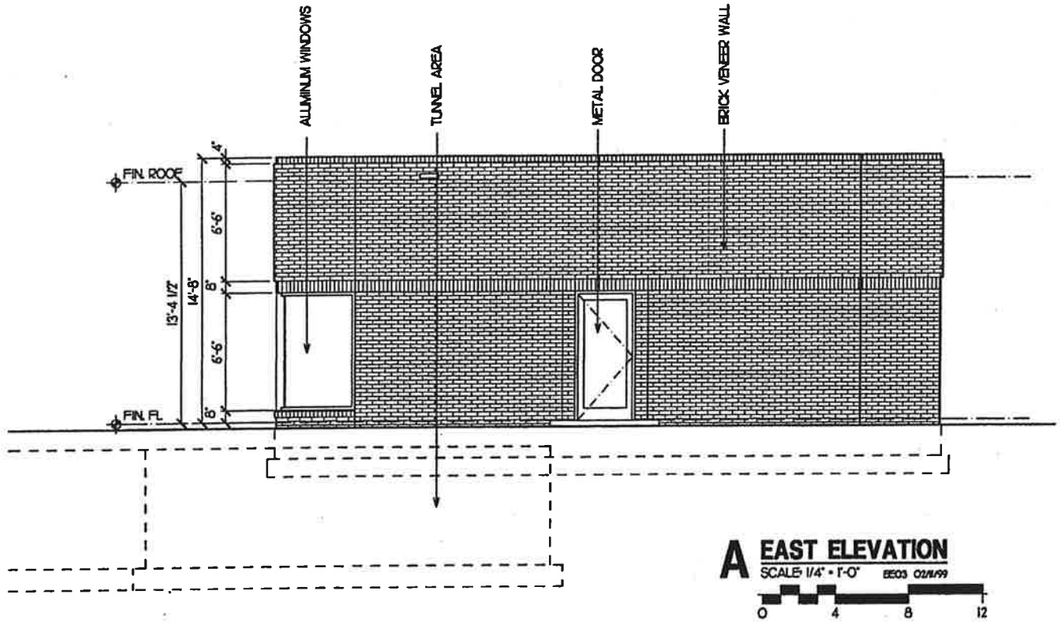
ADMINISTRATION BUILDING DEMOLITION
EXTERIOR ELEVATIONS

STATE PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
00010-6-1-52-01	10002-0000	D04



B WEST ELEVATION
SCALE: 1/4" = 1'-0" EE04 02/11/99

0 4 8 12



A EAST ELEVATION
SCALE: 1/4" = 1'-0" EE03 02/11/99

0 4 8 12

DEMOLITION NOTES

GNO1 05/28/99

PLANS AND DETAILS ARE TAKEN FROM ORIGINAL DOCUMENTS DATED JUNE 24, 1974 AS PROVIDED BY F.D.O.T.. ACTUAL FIELD CONDITIONS MAY VARY. CONTRACTOR SHALL ALLOW FOR CONTINGENCY FOR DEMOLITION AND LABOR IN THE BASE BID.

D04 05/01/99

REVISIONS

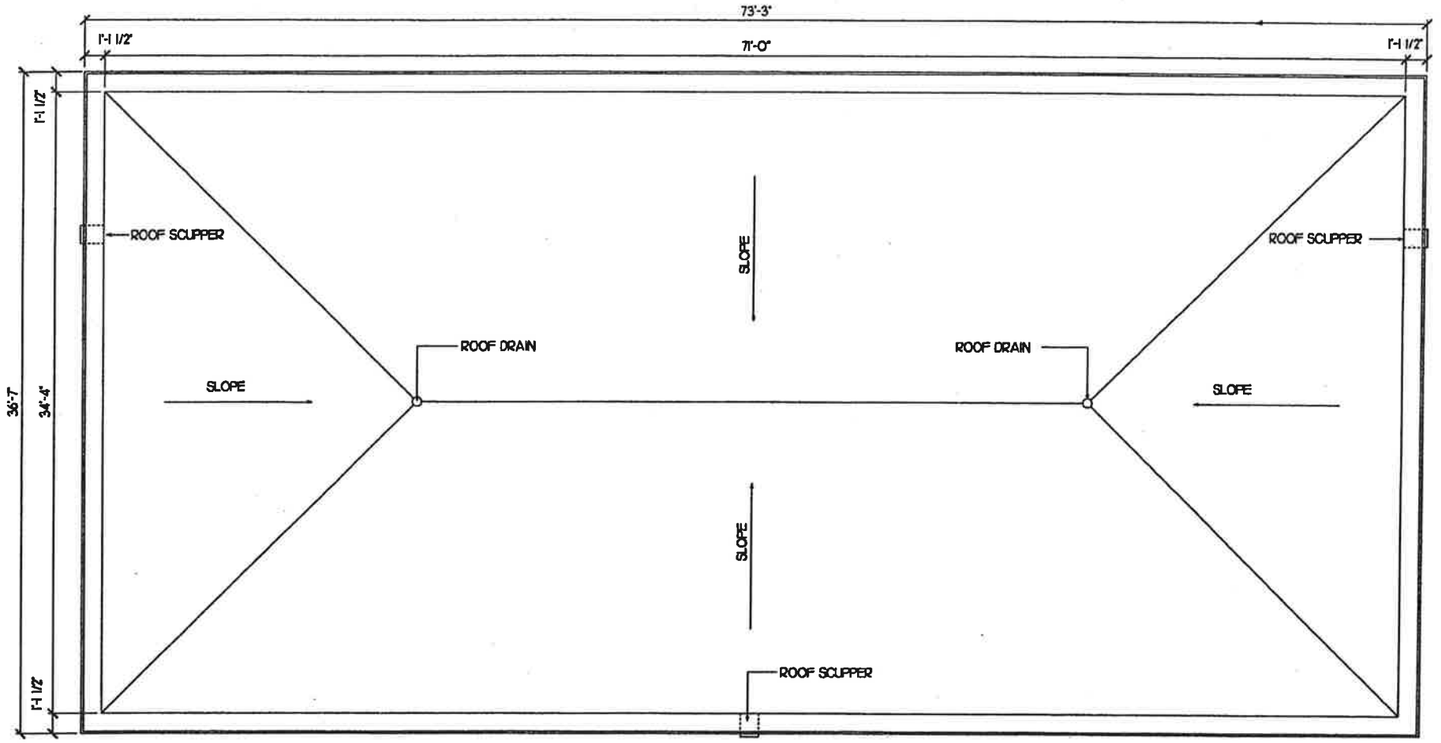
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DRAWN BY	EM	07/07/99
CHECKED BY	E.A.C.	07/07/99	CHECKED BY	E.A.C.	07/07/99
SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ADMINISTRATION BUILDING DEMOLITION
EXTERIOR ELEVATIONS

STATE PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
000106-1-52-01	10002-0000	D05



A ROOF PLAN

SCALE: 1/4" = 1'-0" RPCI 02/11/99

0 4 8 12

DEMOLITION NOTES

GNOI 05/28/99

PLANS AND DETAILS ARE TAKEN FROM ORIGINAL DOCUMENTS DATED JUNE 24, 1974 AS PROVIDED BY F.D.O.T. ACTUAL FIELD CONDITIONS MAY VARY. CONTRACTOR SHALL ALLOW FOR CONTINGENCY FOR DEMOLITION AND LABOR IN THE BASE BID.

D05 06/04/99

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DRAWN BY	EM	07/07/99
CHECKED BY	E.A.C.	07/07/99	CHECKED BY	E.A.C.	07/07/99
SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

DAVIS VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners

MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

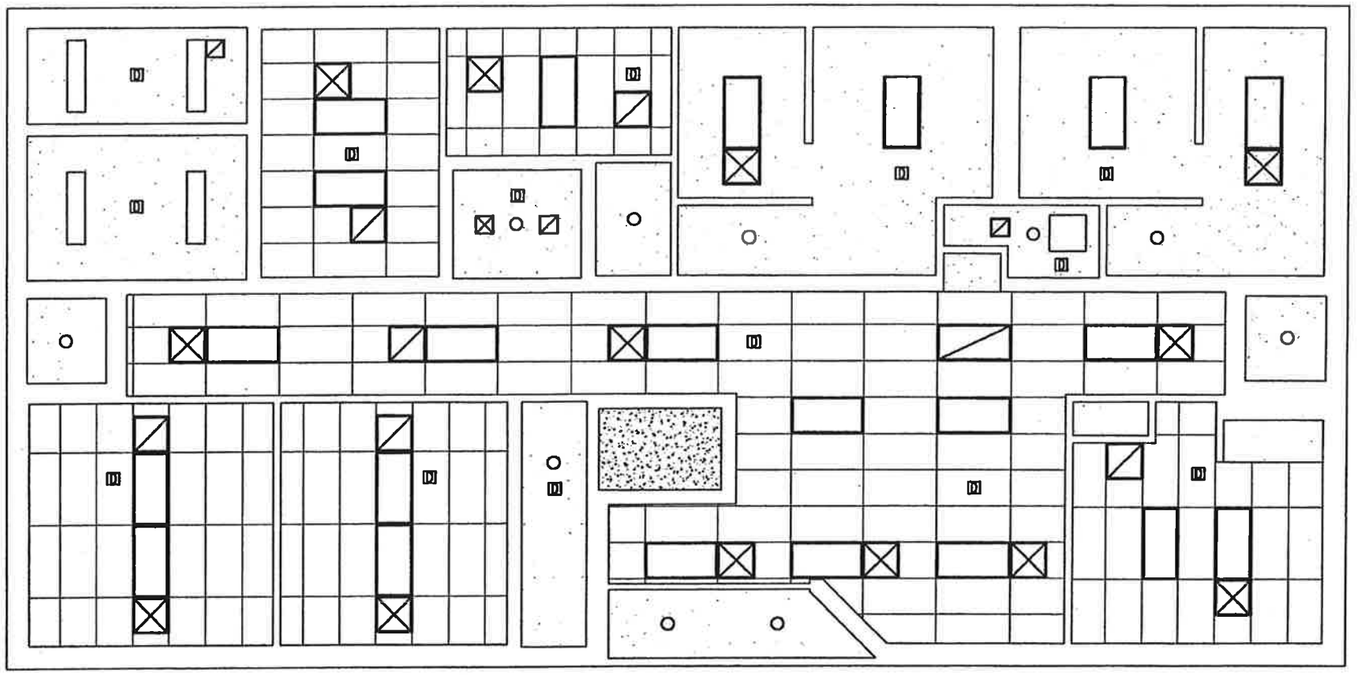
ADMINISTRATION BUILDING DEMOLITION
ROOF PLAN

STATE PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
000106-1-52-01	10002-0000	D06

CEILING LEGEND

RCLE 02/11/99

	2 X 4 RECESSED FLUORESCENT FIXTURE
	1 X 4 SURFACE MOUNTED FLUORESCENT FIXTURE
O	INCANDESCENT FIXTURE
	HVAC SUPPLY GRILLE
	HVAC RETURN GRILLE
D	SURFACED MOUNTED SMOKE DETECTOR
	SUSPENDED GYPSUM BOARD CEILING
	EXPOSED CONCRETE
	2 X 4 LAY-IN ACOUSTICAL CEILING



A REFLECTED CEILING PLAN

SCALE: 1/4" = 1'-0" RCOLDWG 02/8/99

0 4 8 12

DEMOLITION NOTES

GNCI 05/28/99

PLANS AND DETAILS ARE TAKEN FROM ORIGINAL DOCUMENTS DATED JUNE 24, 1974 AS PROVIDED BY F.D.O.T. ACTUAL FIELD CONDITIONS MAY VARY. CONTRACTOR SHALL ALLOW FOR CONTINGENCY FOR DEMOLITION AND LABOR IN THE BASE BID.

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DRAWN BY	EM	07/07/99
CHECKED BY	E.A.C	07/07/99	CHECKED BY	E.A.C.	07/07/99
SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

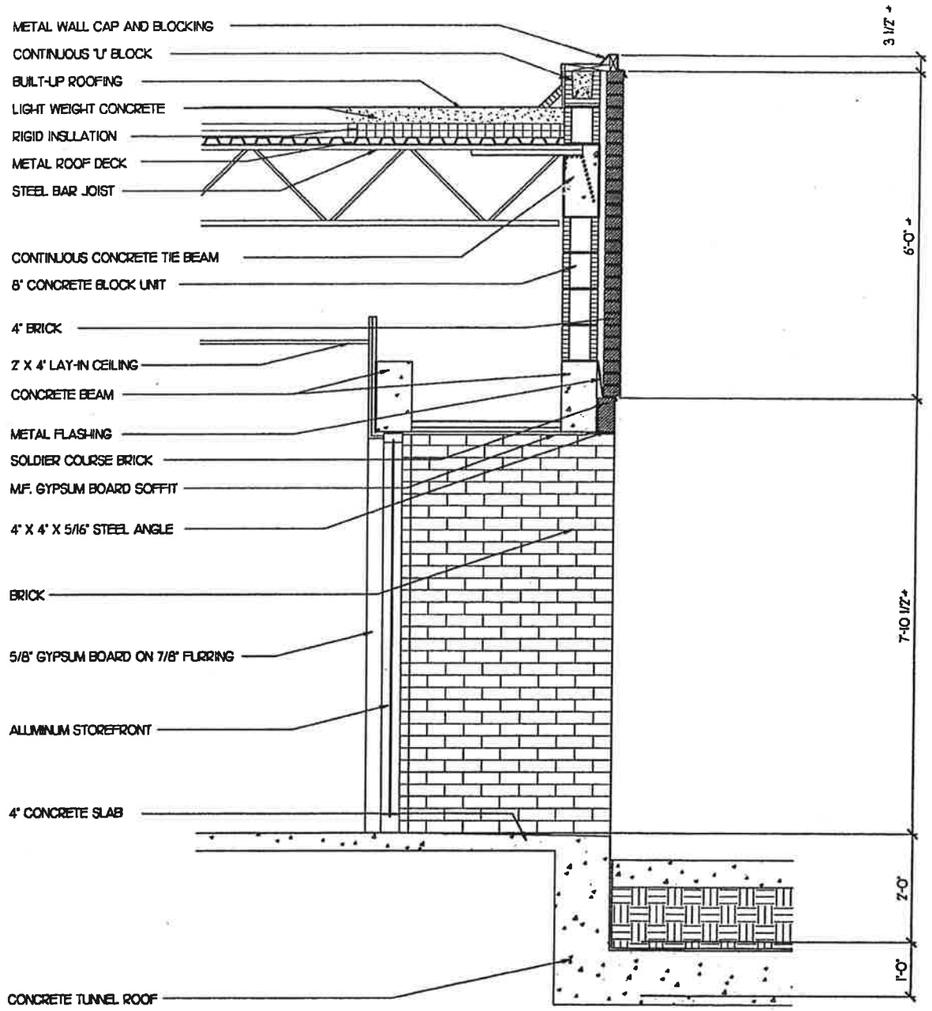
DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners

MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ADMINISTRATION BUILDING DEMOLITION
REFLECTED CEILING PLAN

D006 05/20/99

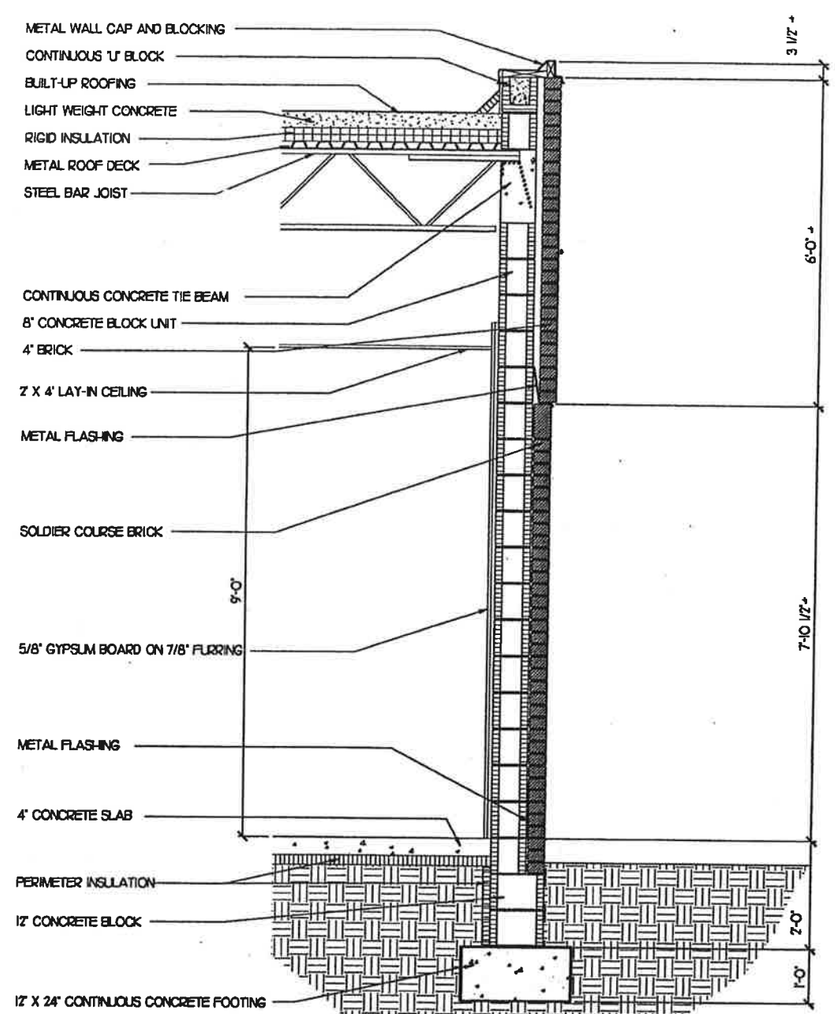
STATE PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
000106-1-52-01	10002-0000	D07



B EXISTING WALL SECTION THRU ENTRY

SCALE: 3/4" = 1'-0" WSO1 02/16/99

0 1 2 4



A EXISTING WALL SECTION (TYPICAL)

SCALE: 3/4" = 1'-0" WSO1 02/16/99

0 1 2 4

DEMOLITION NOTES

GN01 05/28/99

PLANS AND DETAILS ARE TAKEN FROM ORIGINAL DOCUMENTS DATED JUNE 24, 1974 AS PROVIDED BY F.D.O.T.. ACTUAL FIELD CONDITIONS MAY VARY. CONTRACTOR SHALL ALLOW FOR CONTINGENCY FOR DEMOLITION AND LABOR IN THE BIASE BID.

D07 03/16/99

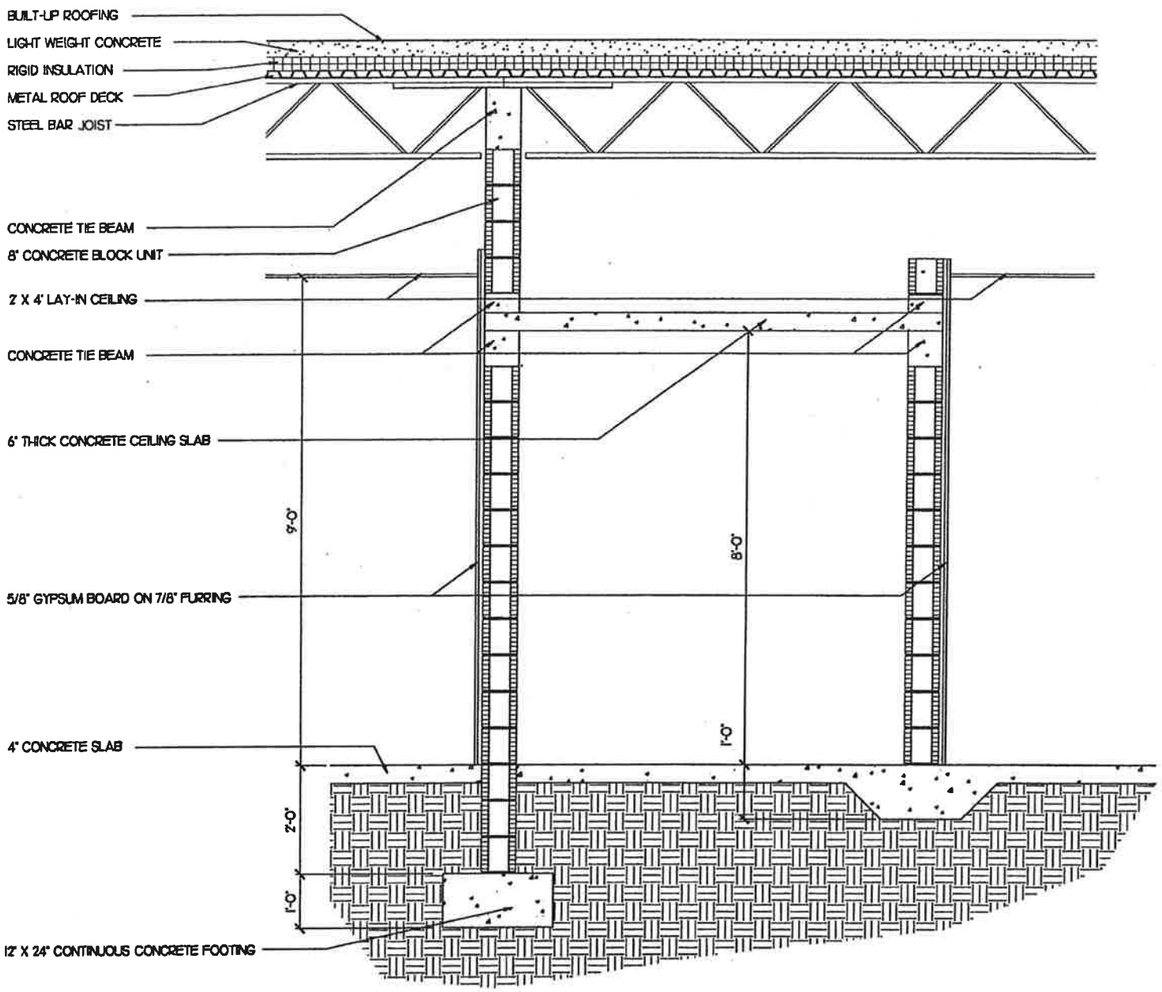
REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DRAWN BY	EM	07/07/99
CHECKED BY	E.A.C.	07/07/99	CHECKED BY	E.A.C.	07/07/99
SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

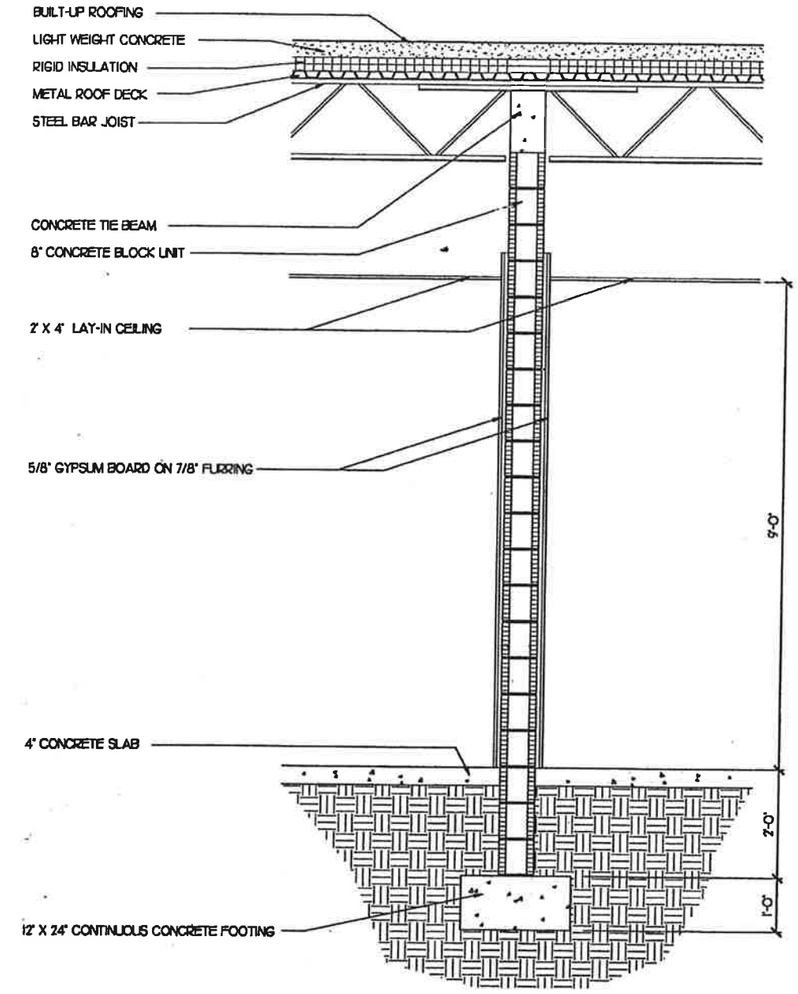
DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ADMINISTRATION BUILDING DEMOLITION
EXISTING BUILDING SECTIONS

STATE PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
00010G-1-52-01	10002-0000	D08



B EXISTING SECTION THRU VAULT WALLS
SCALE: 3/4" = 1'-0"
W604 02/16/99



A EXISTING SECTION THRU BEARING WALL
SCALE: 3/4" = 1'-0"
W503 02/16/99

DEMOLITION NOTES

GN01 05/28/99

PLANS AND DETAILS ARE TAKEN FROM ORIGINAL DOCUMENTS DATED JUNE 24, 1974 AS PROVIDED BY F.D.O.T. ACTUAL FIELD CONDITIONS MAY VARY. CONTRACTOR SHALL ALLOW FOR CONTINGENCY FOR DEMOLITION AND LABOR IN THE BASE BID.

D08 04/29/99

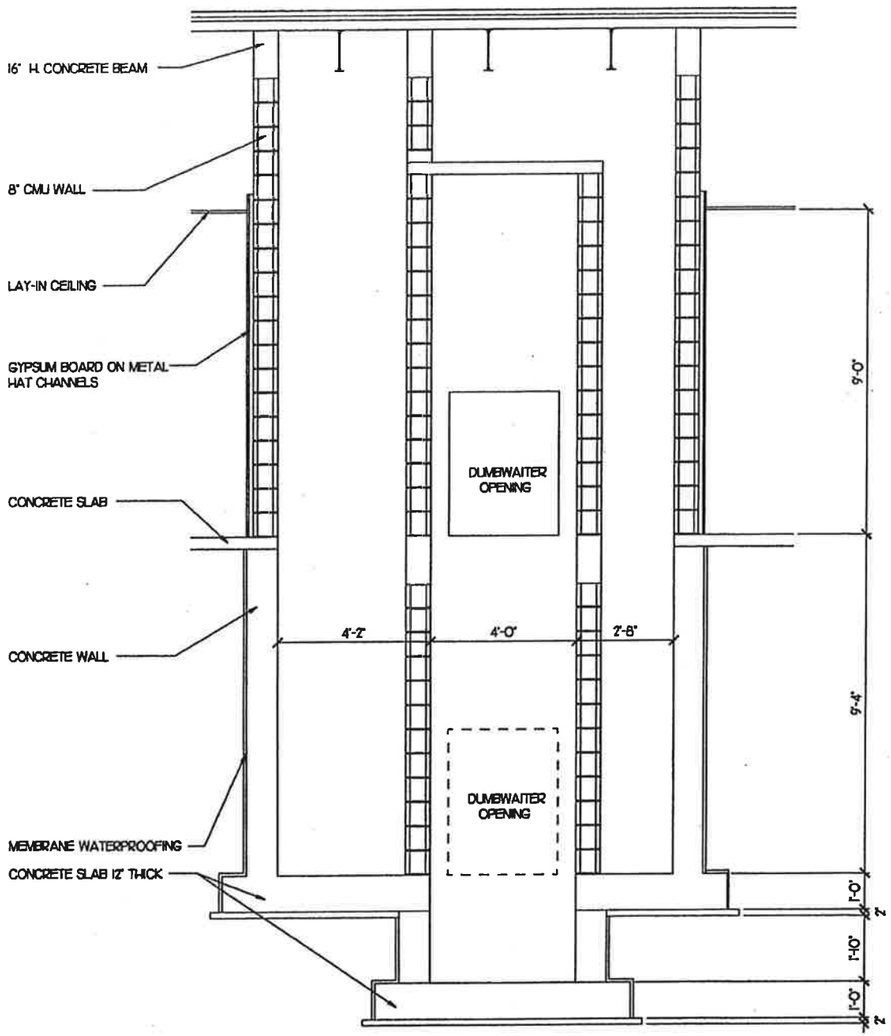
REVISIONS												
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DRAWN BY	EM	07/07/99
CHECKED BY	E.A.C.	07/07/99	CHECKED BY	E.A.C.	07/07/99
SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, AUDUBON, BIRMINGHAM, METAIRIE, TAMPA

ADMINISTRATION BUILDING DEMOLITION
EXISTING BUILDING SECTIONS

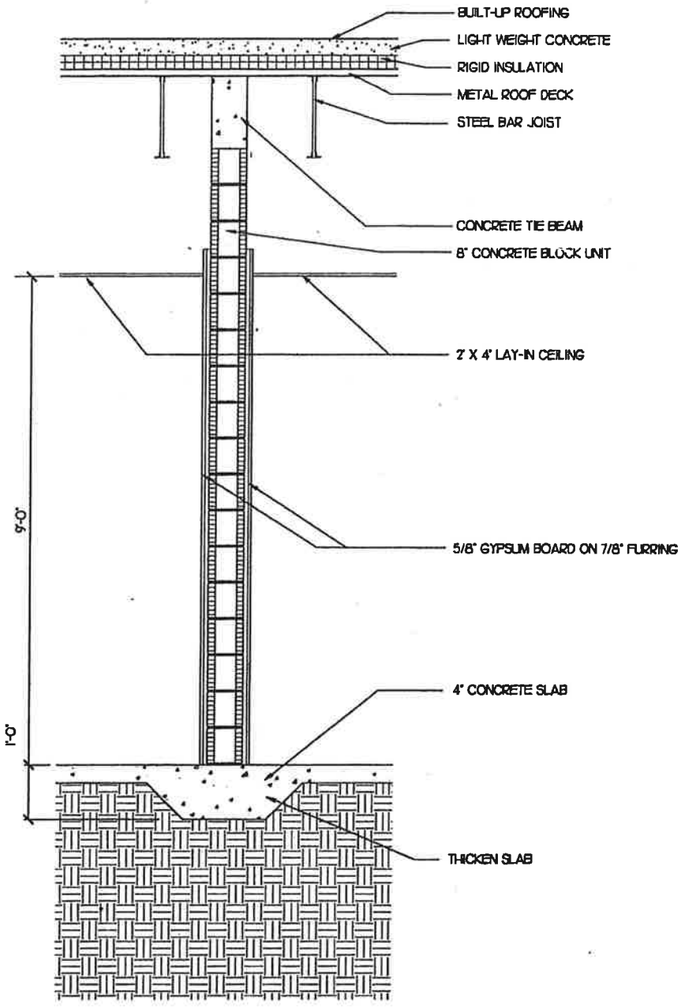
STATE PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
00010G-1-52-01	10002-0000	009



C DUMBWAITER SECTION

SCALE: 1/2" = 1'-0" BSK 02/08/99

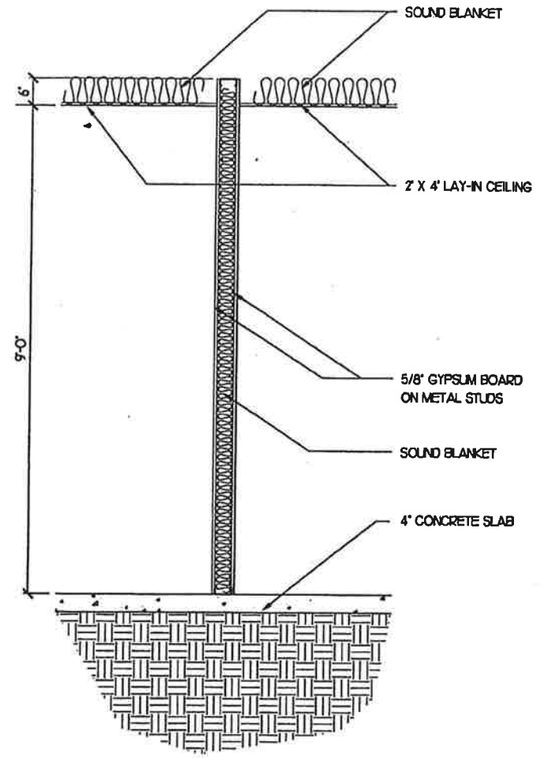
0 2 4 6



B EXISTING SECTION THRU NON BEARING WALLS

SCALE: 3/4" = 1'-0" WSOS 02/17/99

0 1 2 4



A EXISTING SECTION THRU INTERIOR PARTITIONS

SCALE: 3/4" = 1'-0" WSOS 02/17/99

0 1 2 4

DEMOLITION NOTES

GNOI 03/28/99

PLANS AND DETAILS ARE TAKEN FROM ORIGINAL DOCUMENTS DATED JUNE 24, 1974 AS PROVIDED BY F.D.O.T. ACTUAL FIELD CONDITIONS MAY VARY. CONTRACTOR SHALL ALLOW FOR CONTINGENCY FOR DEMOLITION AND LABOR IN THE BASE BID.

009 04/04/99

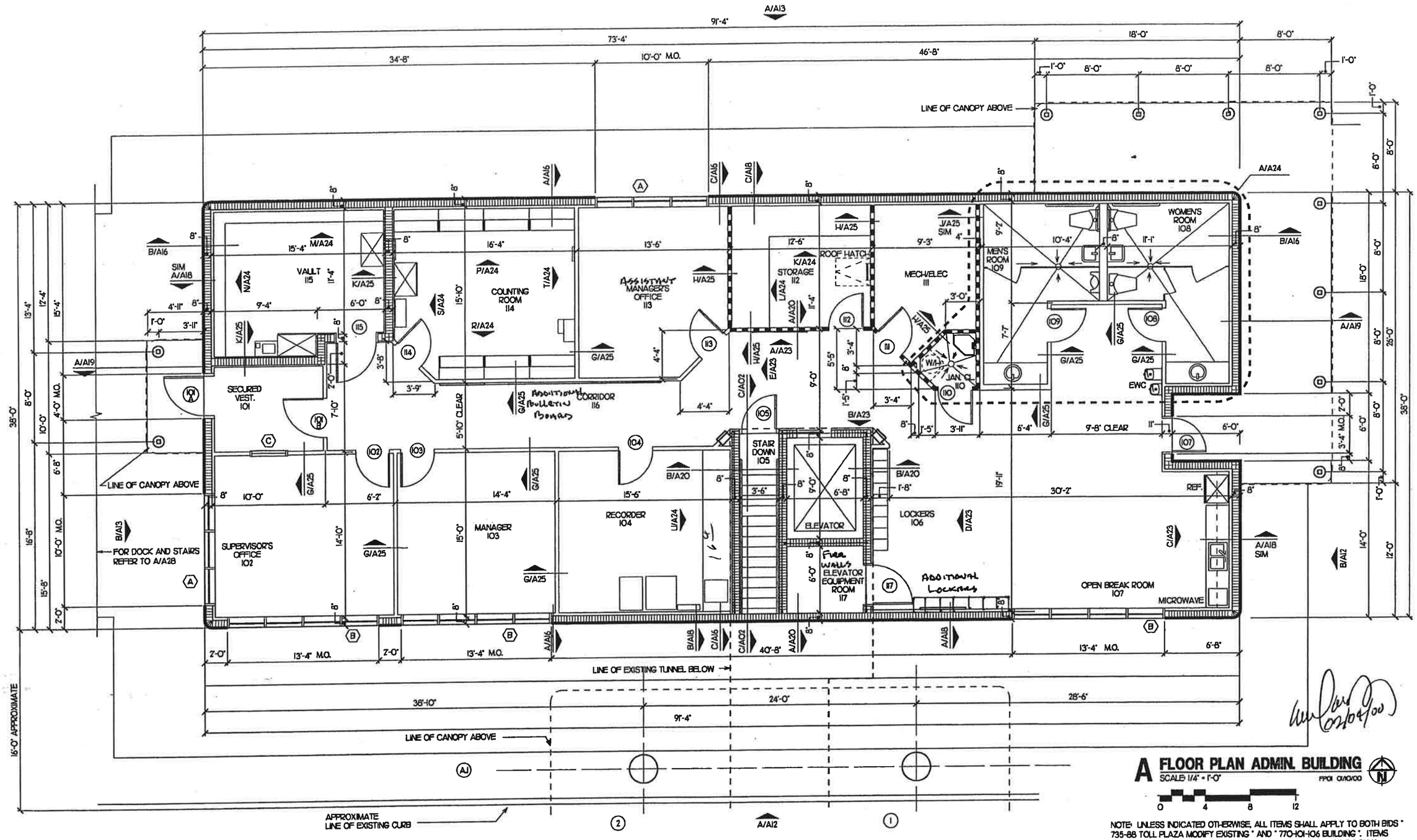
REVISIONS												
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DRAWN BY	EM	07/07/99
CHECKED BY	E.A.C.	07/07/99	CHECKED BY	E.A.C.	07/07/99
SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ADMINISTRATION BUILDING DEMOLITION
EXISTING BUILDING SECTIONS

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A01



A FLOOR PLAN ADMIN. BUILDING

SCALE: 1/4" = 1'-0" FPOI 01/01/00

0 4 8 12

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS " 735-88 TOLL PLAZA MODIFY EXISTING " AND " 770-101-106 BUILDING ". ITEMS INDICATED " TECH SHOP " SHALL APPLY TO " 770-101-106 BUILDING " ONLY.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	E.A.C.	01/24/00	DRAWN BY	E.I.M.	01/24/00
CHECKED BY	E.A.C.	01/24/00	CHECKED BY	E.A.C.	01/24/00
SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
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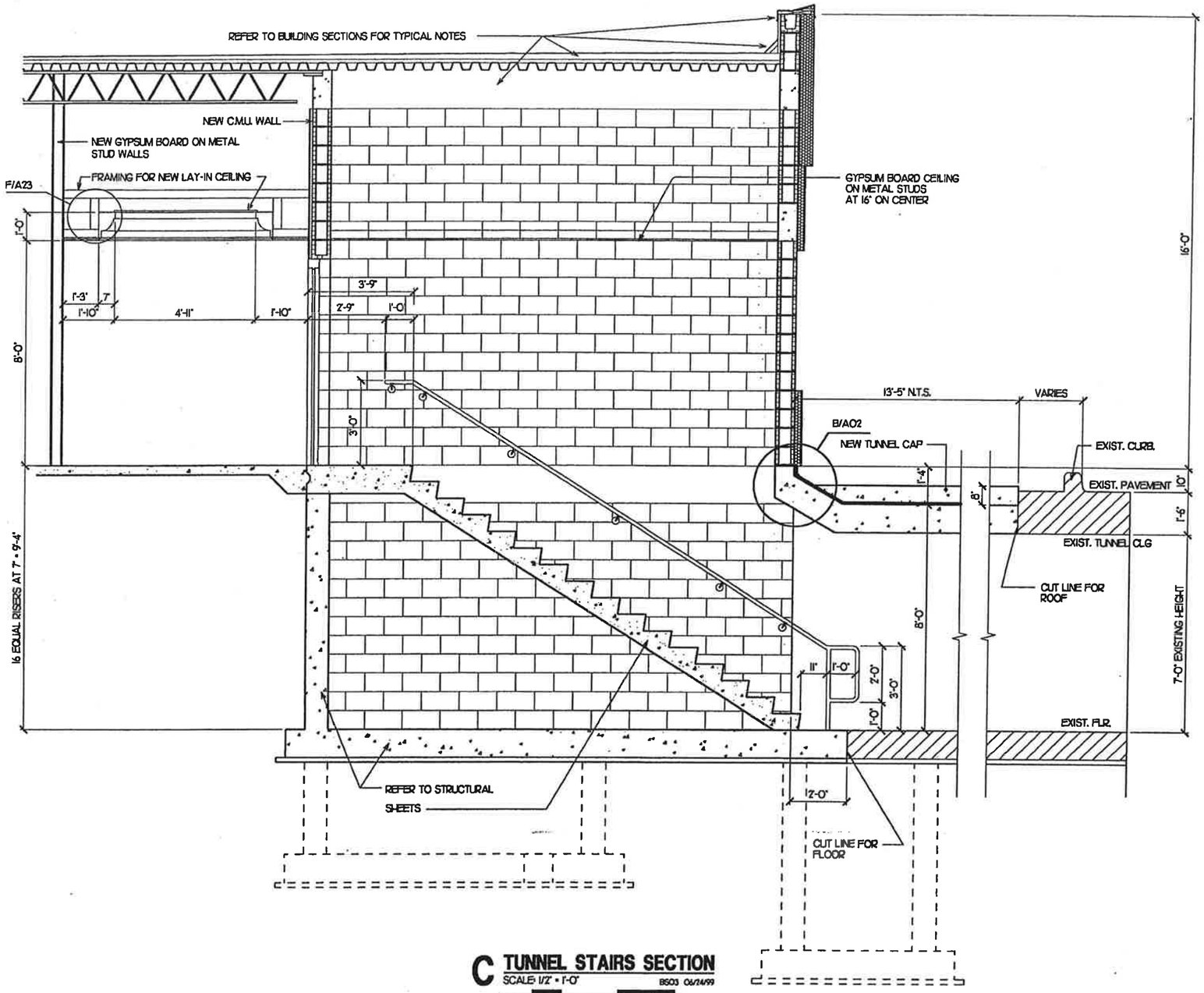
ADMINISTRATION BUILDING FLOOR PLAN

COPYRIGHT VOLKERT

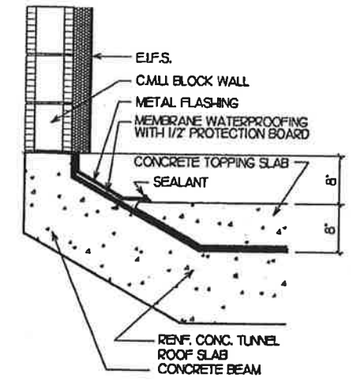
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A02



C TUNNEL STAIRS SECTION

SCALE: 1/2" = 1'-0" BS03 06/24/99

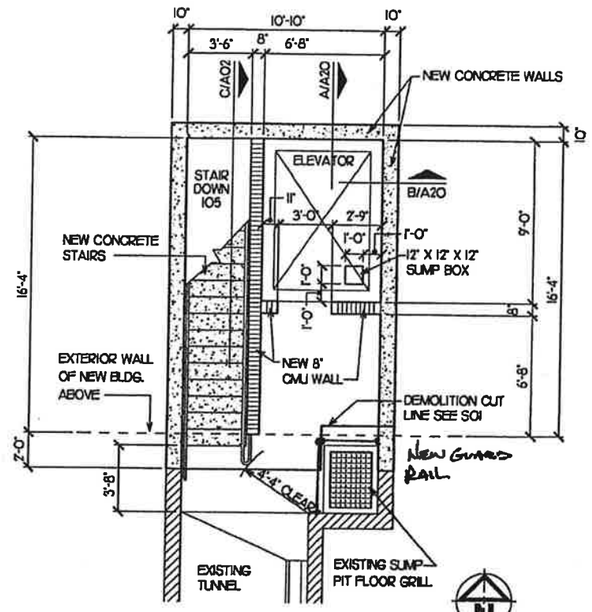
0 2 4 6



B FLASHING DETAIL

SCALE: 1" = 1'-0" 03400-43 06/08/99

0 1 2 3



A PARTIAL STAIR/ELEV. PLAN

SCALE: 1/4" = 1'-0" FP03 06/24/99

0 4 8 12

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS "735-68 TOLL PLAZA MODIFY EXISTING" AND "770-101-106 BUILDING". ITEMS INDICATED "TECH SHOP" SHALL APPLY TO "770-101-106 BUILDING" ONLY.

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	E.A.C.	01/24/00	DRAWN BY	E.J.M.	01/24/00
CHECKED BY	E.A.C.	01/24/00	CHECKED BY	E.A.C.	01/24/00
SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

DAVID VOLKERT ASSOCIATES, INC. Architects • Engineers • Planners

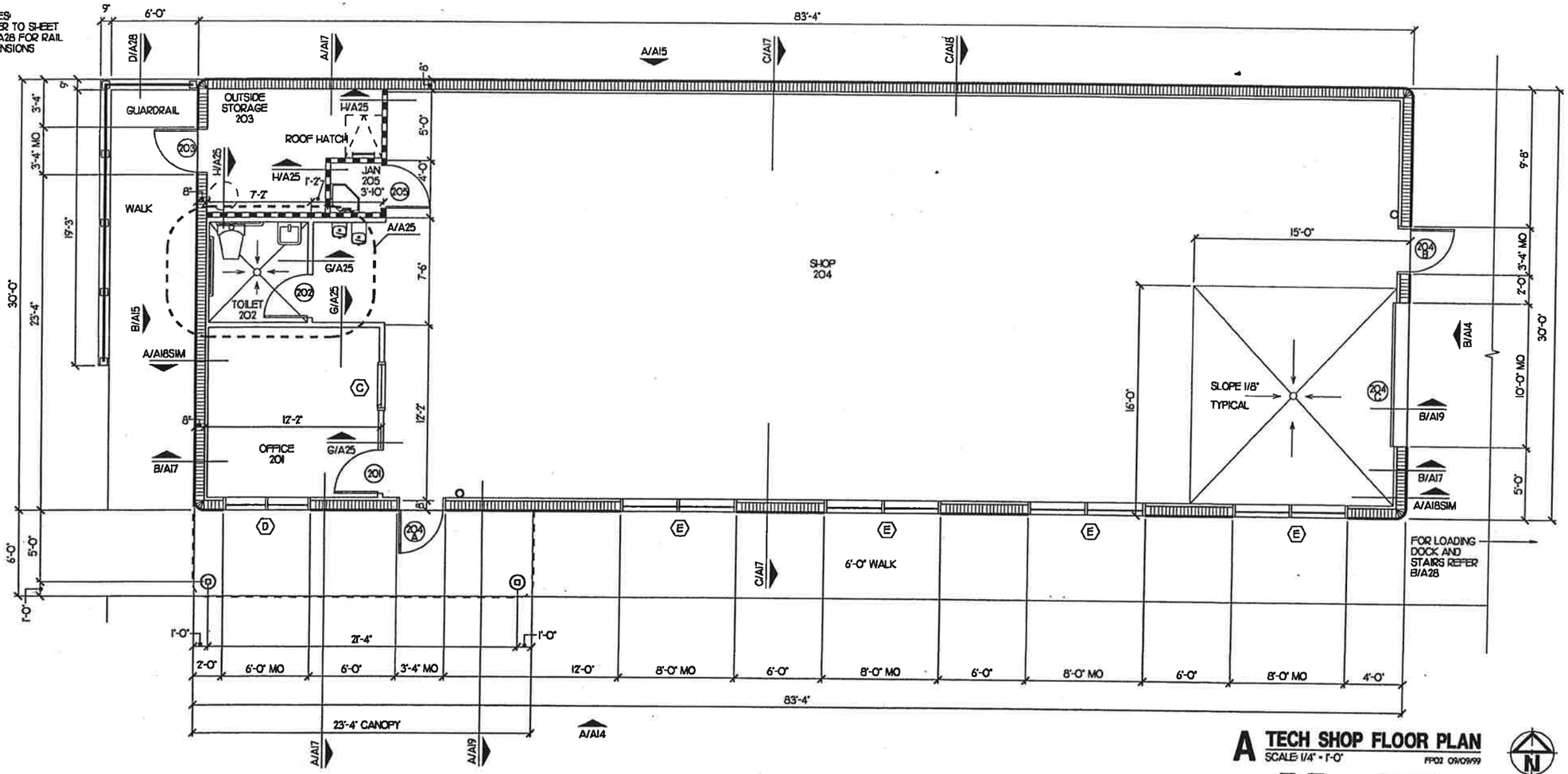
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

PARTIAL BASEMENT PLAN AND STAIR SECTION

A02 01/03/00

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A03

NOTES:
REFER TO SHEET NO. A28 FOR RAIL DIMENSIONS



A TECH SHOP FLOOR PLAN

SCALE: 1/4" = 1'-0" FP02 09/09/99

0 4 8 12

N

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS " 735-88 TOLL PLAZA MODIFY EXISTING " AND " 770-101-106 BUILDING ". ITEMS INDICATED " TECH SHOP " SHALL APPLY TO " 770-101-106 BUILDING " ONLY.

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

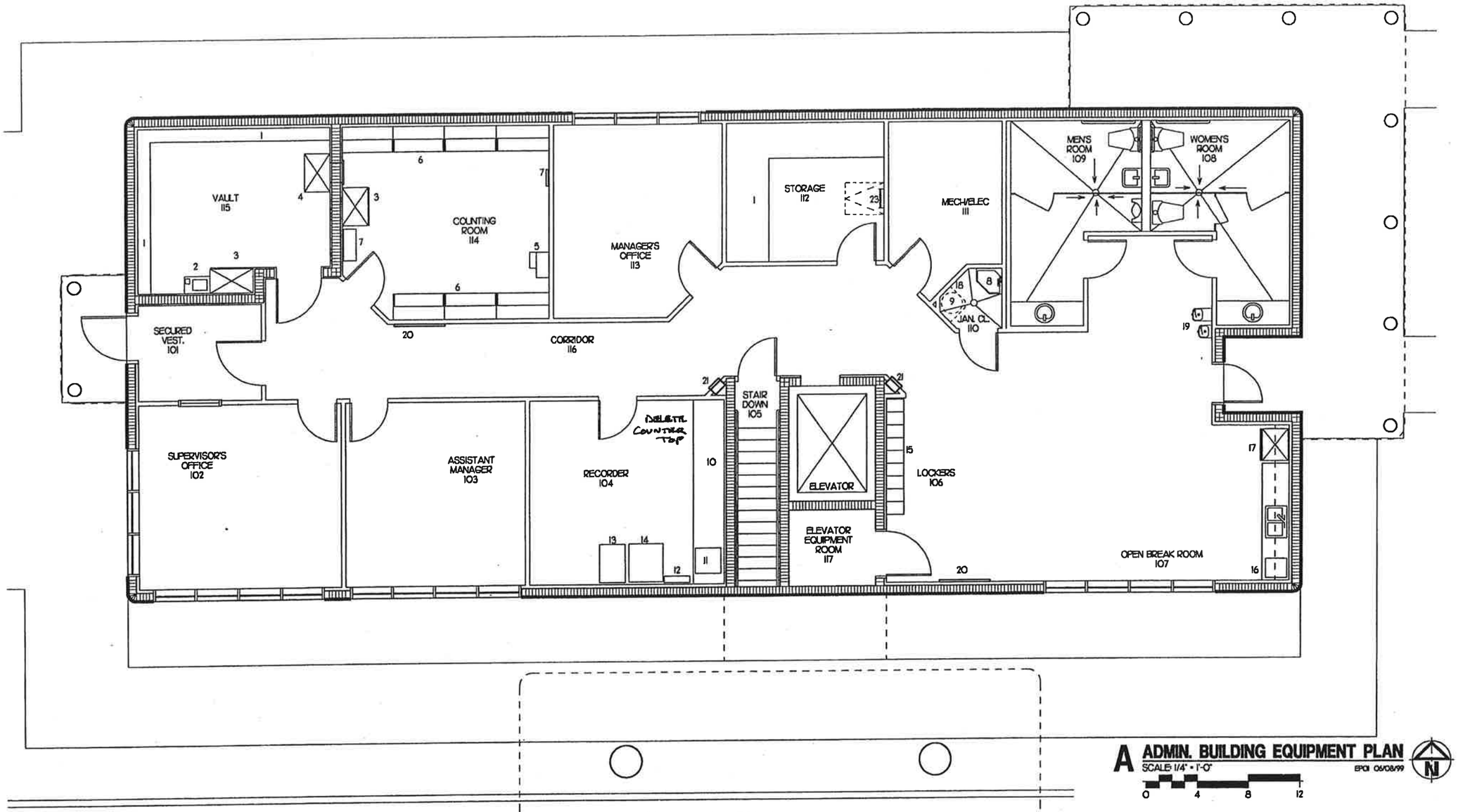
	NAME	DATE		NAME	DATE
DESIGNED BY	E.A.C.	01/24/00	DRAWN BY	E.J.M.	01/24/00
CHECKED BY	E.A.C.	01/24/00	CHECKED BY	E.A.C.	01/24/00
SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

TECH SHOP FLOOR PLAN

A03 01/13/00

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A04



A ADMIN. BUILDING EQUIPMENT PLAN

SCALE: 1/4" = 1'-0" EPOI 05/08/99

0 4 8 12

N

EQUIPMENT NOTES EPOI 01/13/00

1. PLYWOOD SHELVING
2. SCALE BY FDOT
3. CASH LOCKER
4. DEPOSITORY UNIT
5. COIN COUNTER BY FDOT
6. STAINLESS STEEL COUNTER
7. KEY BOX
8. JANITOR SINK
9. ELECTRIC WATER HEATER
10. PLASTIC LAMINATE ON 3/4" PLYWOOD SUBSTRATE
11. C.A. CPU BY F.D.O.T.
12. PANEL
13. FUTURE COMPUTER NIC.
14. FUTURE UPS/BATTERIES NIC.
15. DOUBLE TIER LOCKERS
16. MICROWAVE
17. REFRIGERATOR
18. WATER HEATER SHELF
19. WATER COOLER
20. TACK BOARD
21. RECESSED F.E. AND CABINET
22. SURFACE MOUNTED F.E. ON HOOK
23. WALL LADDER

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS "735-88 TOLL PLAZA MODIFY EXISTING" AND "770-101-106 BUILDING". ITEMS INDICATED "TECH SHOP" SHALL APPLY TO "770-101-106 BUILDING" ONLY.

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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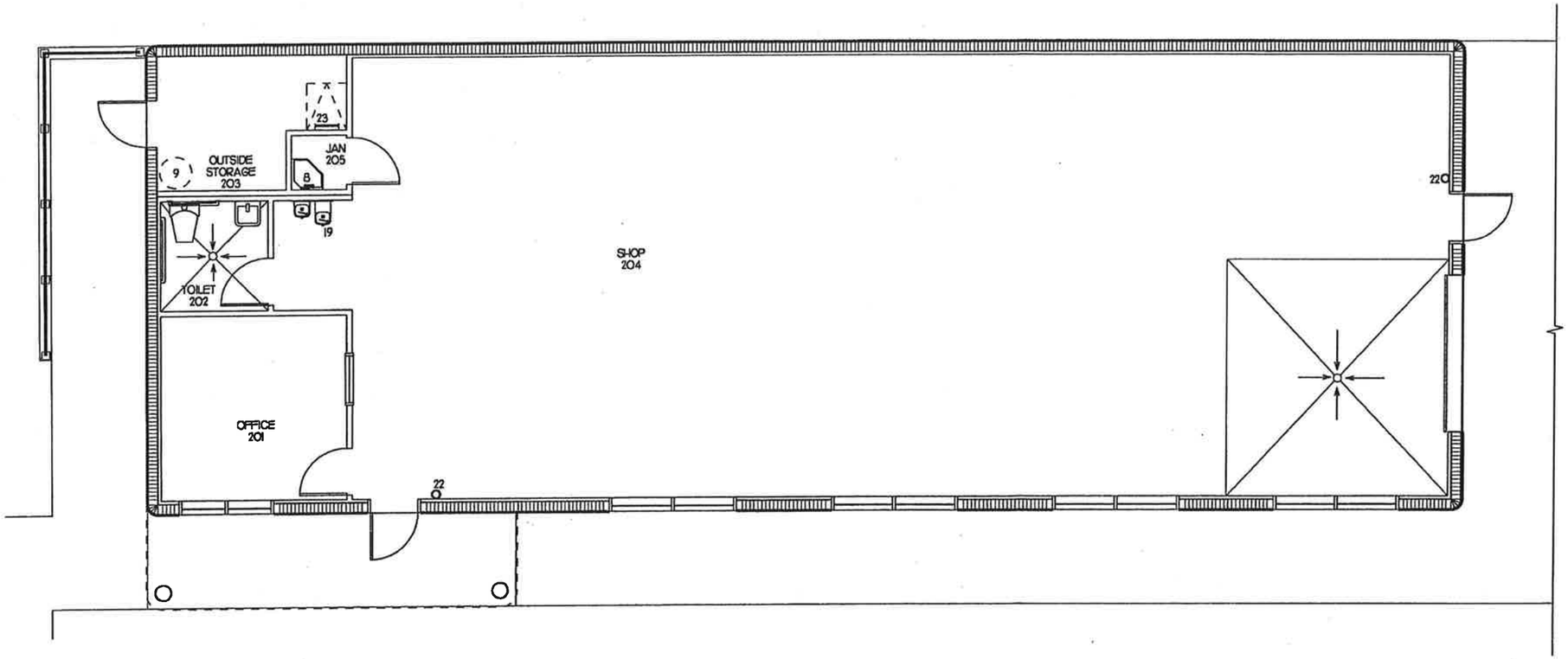
CHECKED BY	E.A.C	01/24/00	CHECKED BY	E.A.C.	01/24/00
SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ADMIN. BUILDING EQUIPMENT FLOOR PLAN

A04 01/3/00

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A05



EQUIPMENT NOTES GNOI 01/13/00

1. PLYWOOD SHELVING
2. SCALE BY FDOT
3. CASH LOCKER
4. DEPOSITORY UNIT
5. COIN COUNTER BY FDOT
6. STAINLESS STEEL COUNTER
7. KEY BOX
8. JANITOR SINK
9. ELECTRIC WATER HEATER
10. PLASTIC LAMINATE ON 3/4" PLYWOOD SUBSTRATE
11. C.A. CPU BY F.D.O.T.
12. PANEL
13. FUTURE COMPUTER NIC.
14. FUTURE UPS/BATTERIES NIC.
15. DOUBLE TIER LOCKERS
16. MICROWAVE
17. REFRIGERATOR
18. WATER HEATER SHELF
19. WATER COOLER
20. TACK BOARD
21. RECESSED F.E. AND CABINET
22. SURFACE MOUNTED F.E. ON HOOK
23. WALL LADDER

A TECH SHOP EQUIPMENT FLOOR PLAN

SCALE: 1/4" = 1'-0" EPO2 06/29/99

0 4 8 12

N

02/04/00

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS " 735-88 TOLL PLAZA MODIFY EXISTING " AND " 770-101-106 BUILDING ": ITEMS INDICATED " TECH SHOP " SHALL APPLY TO " 770-101-106 BUILDING " ONLY.

REVISIONS											
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SUPERVISED BY: EDWARD A. CALDWELL, AIA

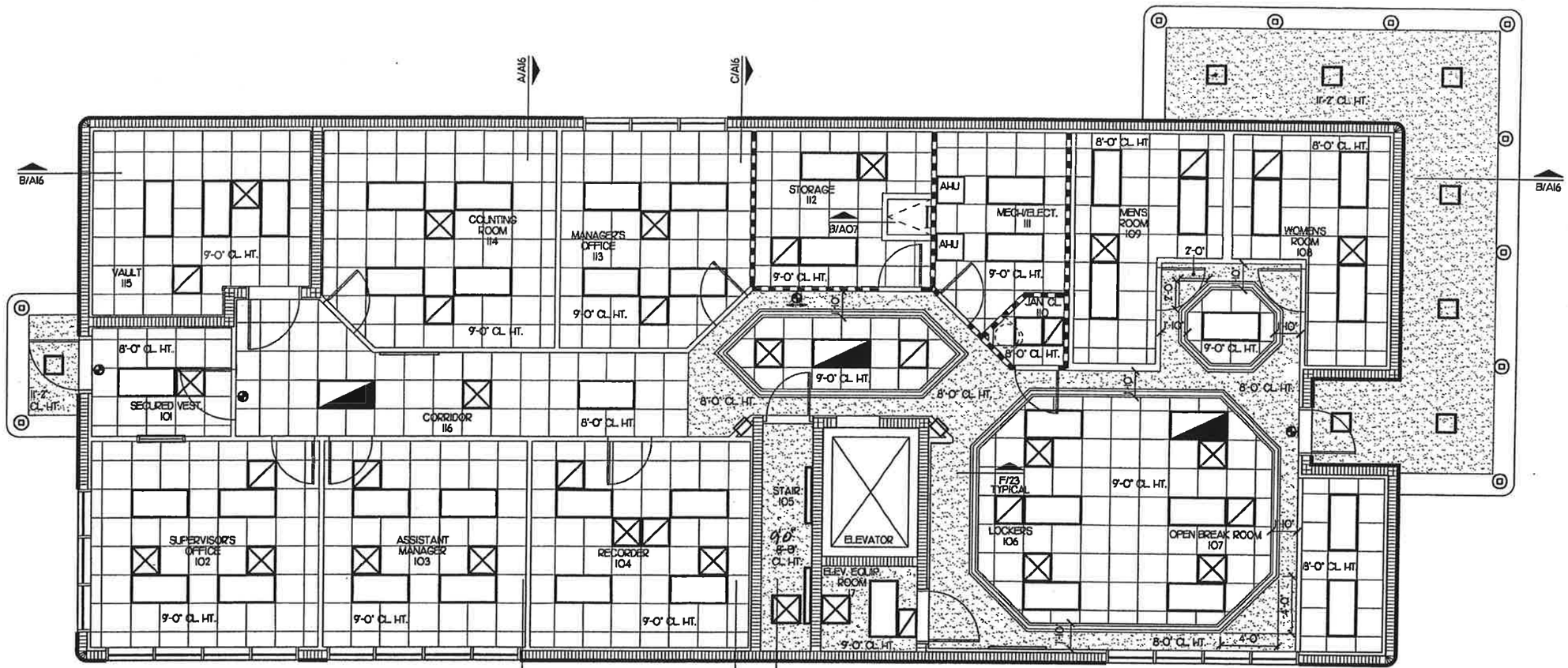
DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners

MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

TECH SHOP EQUIPMENT FLOOR PLAN

05/30/00 SDW

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A06



REFLECTED CEILING PLAN LEGEND

SC06 01/05/99

- 2 X 2 SUSPENDED ACOUSTICAL TILE CEILING
- 2 X 4 FLUORESCENT LIGHT FIXTURE
- 2 X 2 FLUORESCENT LIGHT FIXTURE
- 2 X 2 LIGHT FIX/EMERGENCY SERVICE
- EXIT LIGHT-WALL MOUNTED
- HVAC-SUPPLY GRILLE
- HVAC-RETURN GRILLE
- EF HVAC-EXHAUST FAN GRILLE
- RECESSED EXTERIOR LIGHT FIXTURE
- SUSPENDED GYP. BD. CEILING

NOTE:
ALL PARTITIONS GO TO ROOF STRUCTURE

02/04/00

A ADMIN. BUILDING REFLECTED CEILING PLAN

SCALE: 1/4" = 1'-0"

RC01 01/13/00

0 4 8 12

N

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS " 735-88 TOLL PLAZA MODIFY EXISTING " AND " 770-101-106 BUILDING ". ITEMS INDICATED " TECH SHOP " SHALL APPLY TO " 770-101-106 BUILDING " ONLY.

A06 01/13/00

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	E.A.C.	01/24/00	DRAWN BY	E.J.M.	01/24/00
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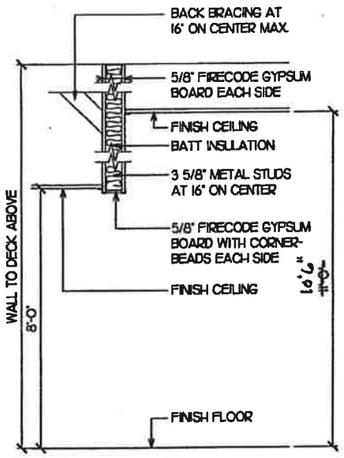
SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

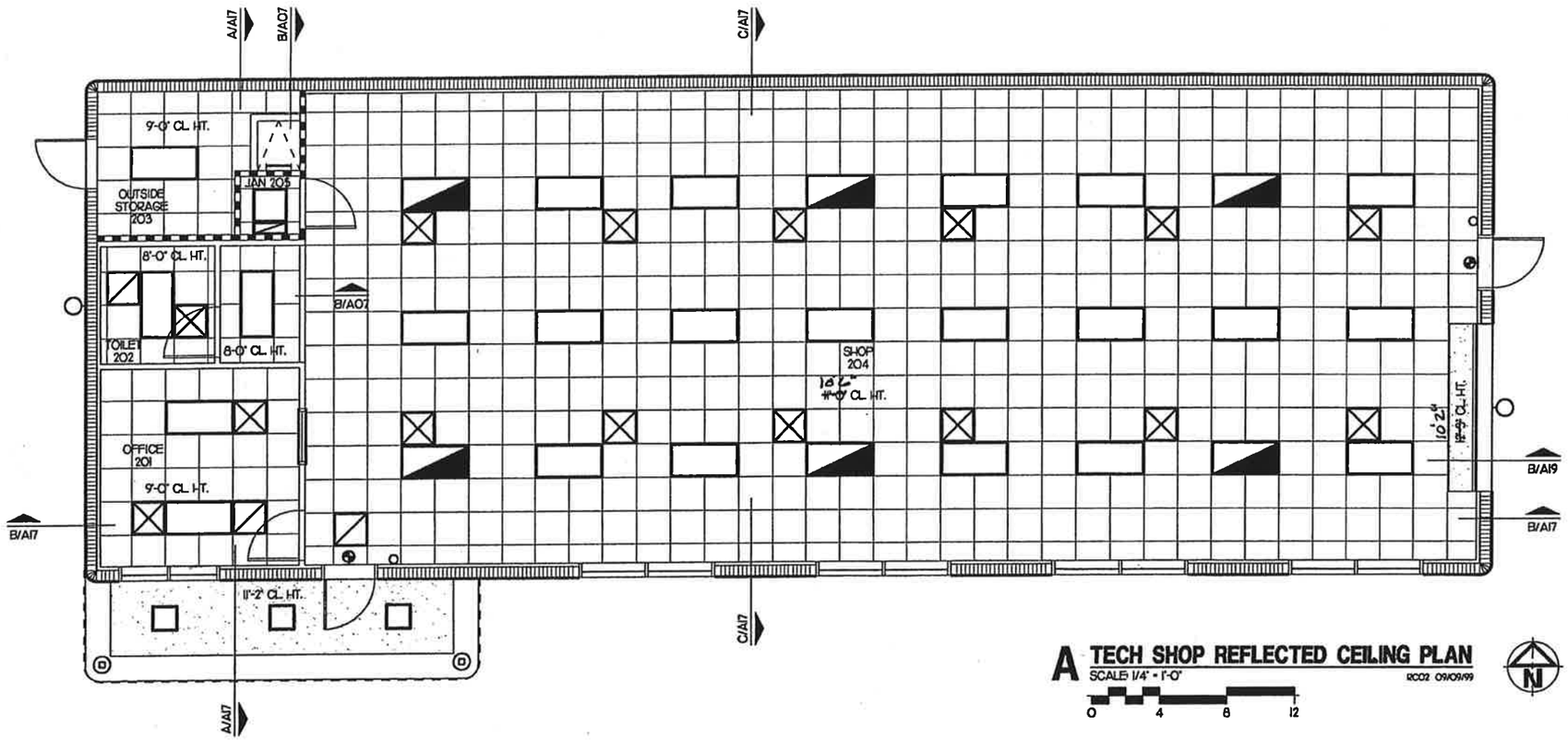
DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ADMIN. BUILDING REFLECTED CEILING PLAN

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A07



B TECH SHOP CURTAIN WALL SECTION
SCALE: 3/4" = 1'-0" PT03 01/3/00
0 1 2 4



A TECH SHOP REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0" RC02 09/09/99
0 4 8 12

REFLECTED CEILING PLAN LEGEND SC06 02/05/99

- 2 X 2 SUSPENDED ACOUSTICAL TILE CEILING
- 2 X 4 FLUORESCENT LIGHT FIXTURE
- 2 X 2 FLUORESCENT LIGHT FIXTURE
- 2 X 2 LIGHT FIX/EMERGENCY SERVICE
- EXIT LIGHT-WALL MOUNTED
- HVAC-SUPPLY GRILLE
- HVAC-RETURN GRILLE
- EF HVAC-EXHAUST FAN GRILLE
- RECESSED EXTERIOR LIGHT FIXTURE
- SUSPENDED GYP. BD. CEILING

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS " 735-88 TOLL PLAZA MODIFY EXISTING " AND " 770-101-106 BUILDING ". ITEMS INDICATED " TECH SHOP " SHALL APPLY TO " 770-101-106 BUILDING " ONLY.

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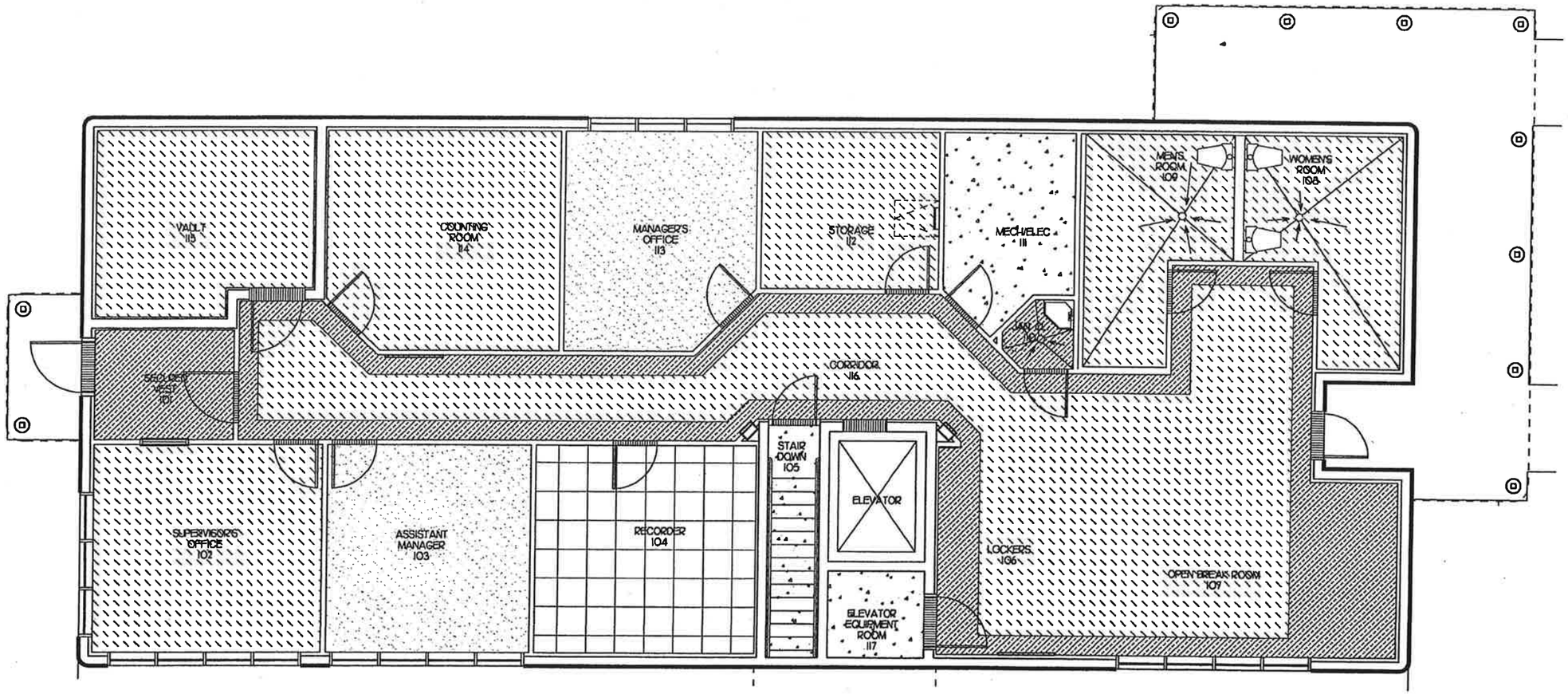
SUPERVISED BY: EDWARD A. CALDWELL, AIA

DAVIS VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

TECH SHOP REFLECTED CEILING PLAN

A07 01/3/00

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A08



FLOOR LEGEND

REF SHT A21 FOR COLORS

- CARPET COLOR "1"
- TERRAZZO COLOR "A"
- TERRAZZO COLOR "C"
- ACCESS FLOORING COLOR "L"
- SEALED CONCRETE COLOR "F"
- DOOR THRESHOLD

N

A ADMIN. BUILDING FLOOR FINISH PLAN

SCALE: 1/4" = 1'-0"

0 4 8 12

FFGI 01/13/00

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS "735-88 TOLL PLAZA MODIFY EXISTING" AND "770-101-106 BUILDING". ITEMS INDICATED "TECH SHOP" SHALL APPLY TO "770-101-106 BUILDING" ONLY.

REVISIONS											
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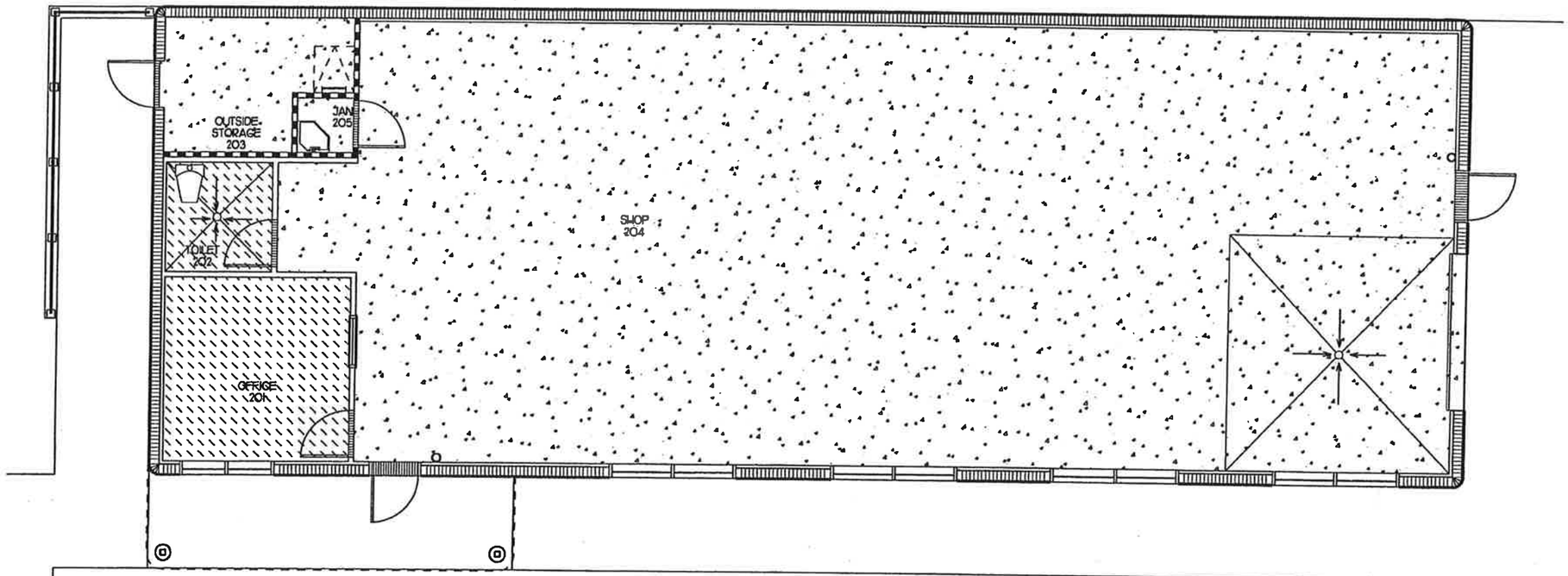
SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ADMINISTRATION BUILDING FLOOR FINISH PLAN

DWG NO. A08

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A09



FLOOR LEGEND

REF SHR A21 FOR COLORS

- CARPET COLOR "H"
- TERRAZZO COLOR "A"
- TERRAZZO COLOR "C"
- ACCESS FLOORING COLOR "L"
- SEALED CONCRETE COLOR "P"
- DOOR THRESHOLD

A TECH SHOP FLOOR FINISH PLAN

SCALE: 1/4" = 1'-0" FF02 01/13/00

0 4 8 12

N

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS " 735-68 TOLL PLAZA MODIFY EXISTING " AND " 770-101-106 BUILDING ". ITEMS INDICATED " TECH SHOP " SHALL APPLY TO " 770-101-106 BUILDING " ONLY.

REVISIONS											
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SUPERVISED BY: EDWARD A. CALDWELL, AIA

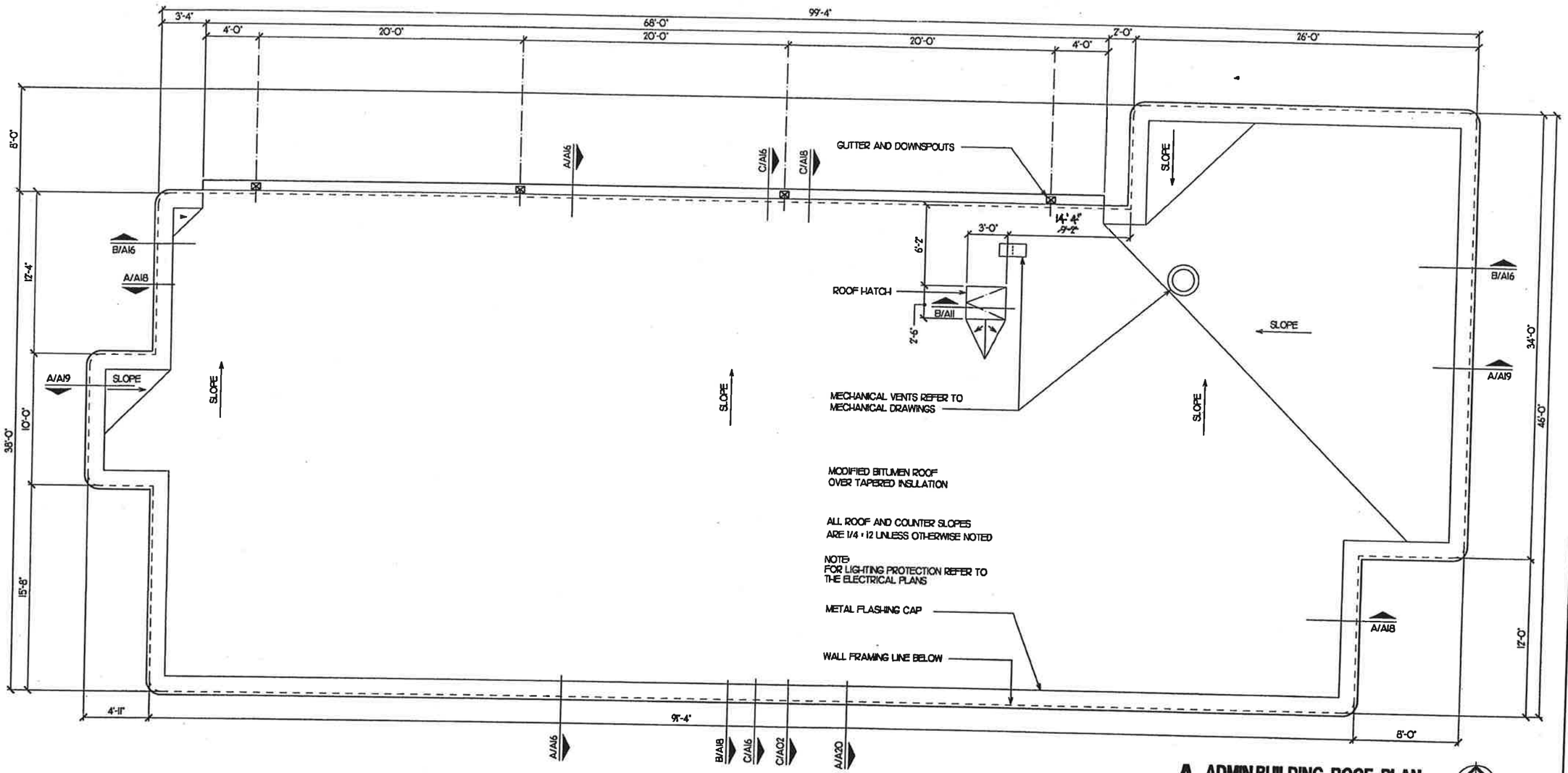
DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners

MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

TECH SHOP FLOOR FINISH PLAN

A09 01/13/00

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A10



A ADMIN.BUILDING ROOF PLAN

SCALE: 1/4" = 1'-0"

RPO1 06/30/99

0 4 8 12

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS " 735-88 TOLL PLAZA MODIFY EXISTING " AND " 770-101-106 BUILDING ". ITEMS INDICATED " TECH SHOP " SHALL APPLY TO " 770-101-106 BUILDING " ONLY.

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CHECKED BY	E.A.C.	01/24/00	CHECKED BY	E.A.C.	01/24/00

SUPERVISED BY: EDWARD A. CALDWELL, AIA

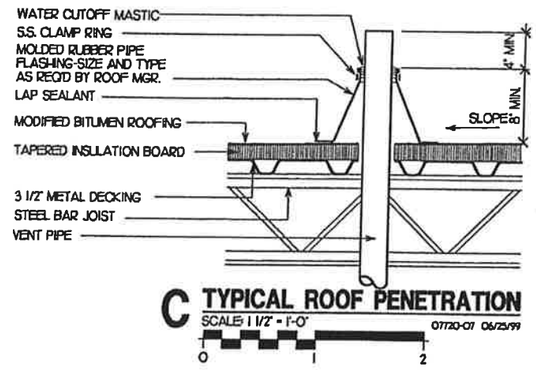
DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners

MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

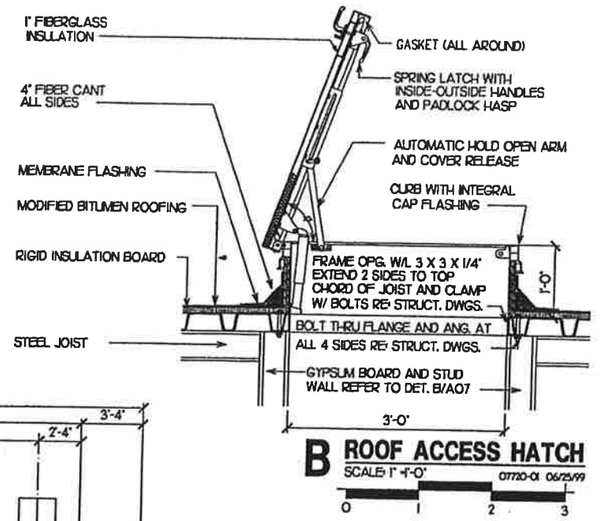
ADMINISTRATION BUILDING ROOF PLAN

A10 01/31/00

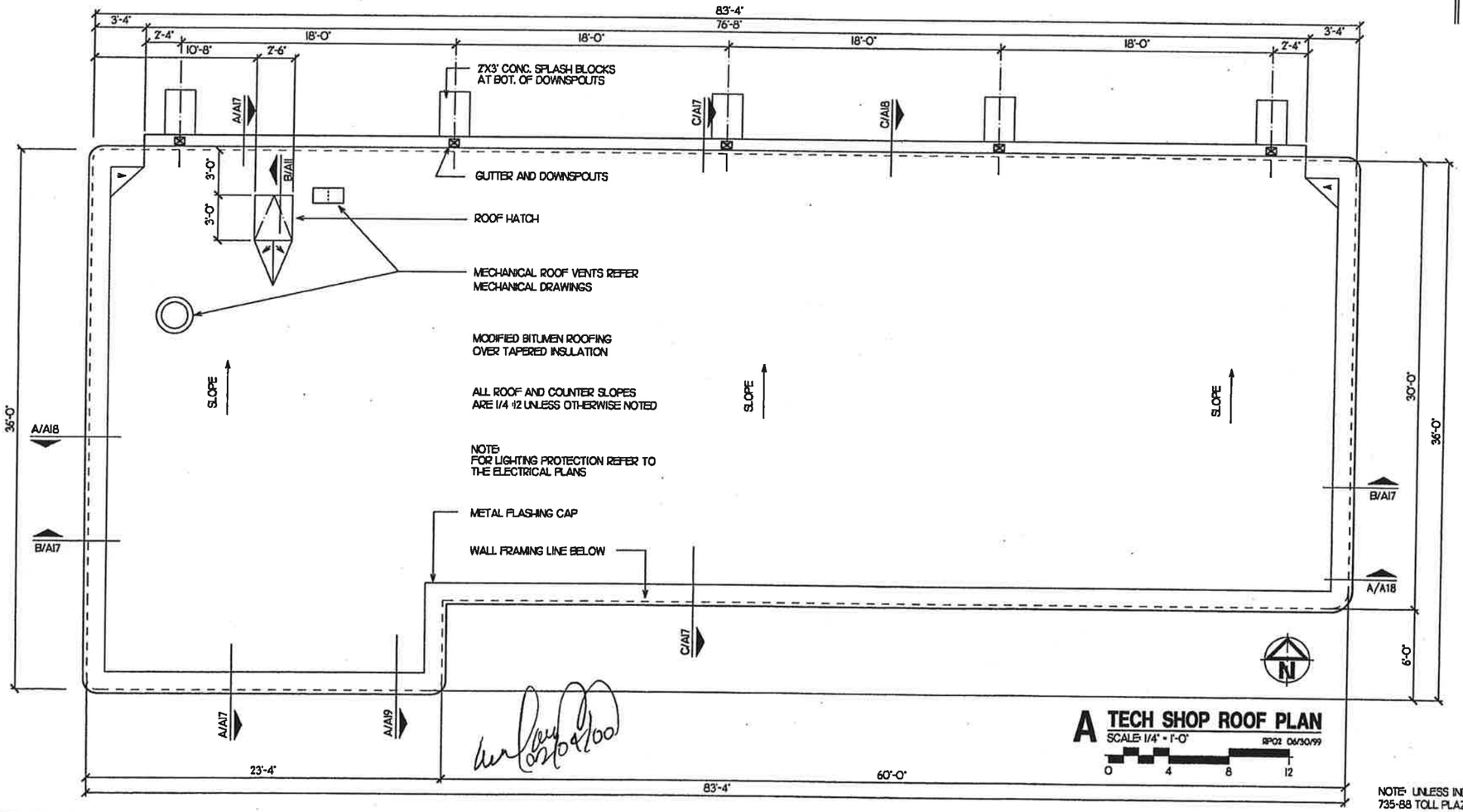
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	All



C TYPICAL ROOF PENETRATION
SCALE: 1 1/2" = 1'-0" 07720-01 06/25/99



B ROOF ACCESS HATCH
SCALE: 1" = 1'-0" 07720-01 06/25/99



A TECH SHOP ROOF PLAN
SCALE: 1/4" = 1'-0" RP02 06/30/99

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS "735-88 TOLL PLAZA MODIFY EXISTING" AND "770-101-106 BUILDING". ITEMS INDICATED "TECH SHOP" SHALL APPLY TO "770-101-106 BUILDING" ONLY.

REVISIONS											
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SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

TECH SHOP ROOF PLAN

SAVE 01/31/00

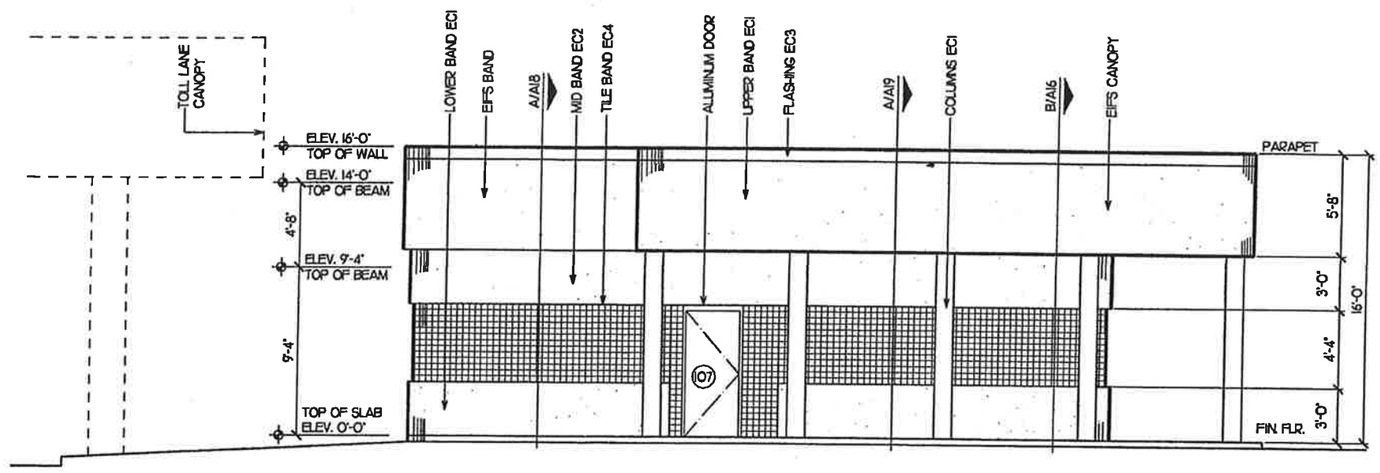
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A12

EXTERIOR COLORS

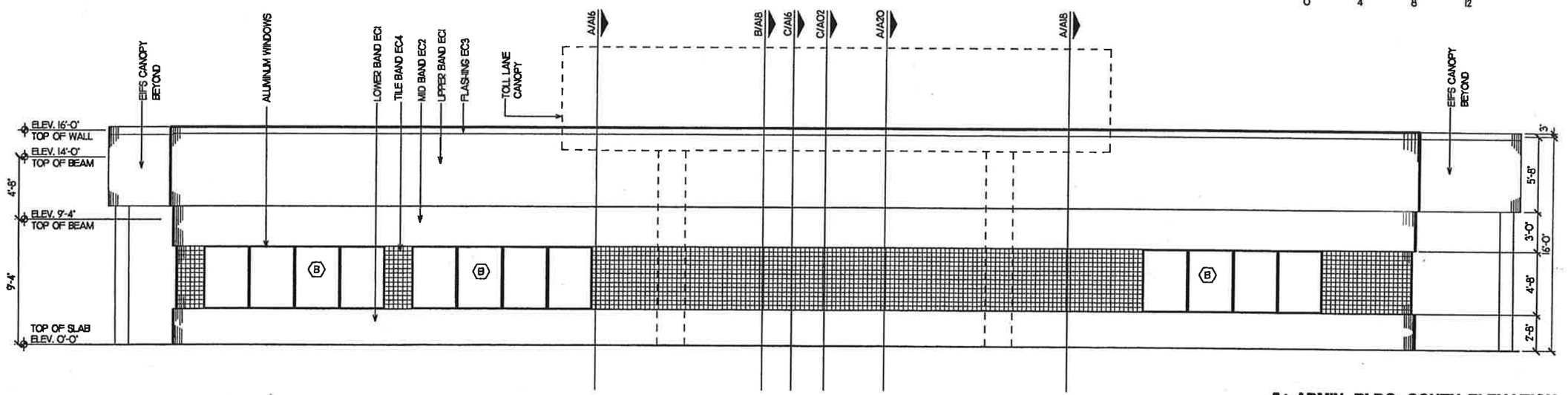
EN02 06/05/99

COLOR: EC1	*26492
COLOR: EC2	*27875
COLOR: EC3	*14325
COLOR: EC4	TILE RE: SPECS

NOTES:
1. COLOR MARKED * ARE BASED ON FEDERAL STANDARD 595B COLORS DATED JULY 1994
2. DOORS, COLOR EC1
3. DOOR FRAMES, COLOR EC2
4. WINDOW FRAMES, COLOR EC2
5. EIFS SURFACES: FLAT FINISH.
6. NON-EIFS SURFACES: SEMI-GLOSS FINISH.



B ADMIN. BLDG. EAST ELEVATION
SCALE: 1/4" = 1'-0"
EE02 01/13/00



A ADMIN. BLDG. SOUTH ELEVATION
SCALE: 1/4" = 1'-0"
EE01 01/13/00

02/04/00

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS * 735-88 TOLL PLAZA MODIFY EXISTING * AND * 770-101-106 BUILDING *. ITEMS INDICATED * TECH SHOP * SHALL APPLY TO * 770-101-106 BUILDING * ONLY.

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
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SUPERVISED BY: EDWARD A. CALDWELL, AIA

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ADMINISTRATION BUILDING ELEVATIONS

A12 01/13/00

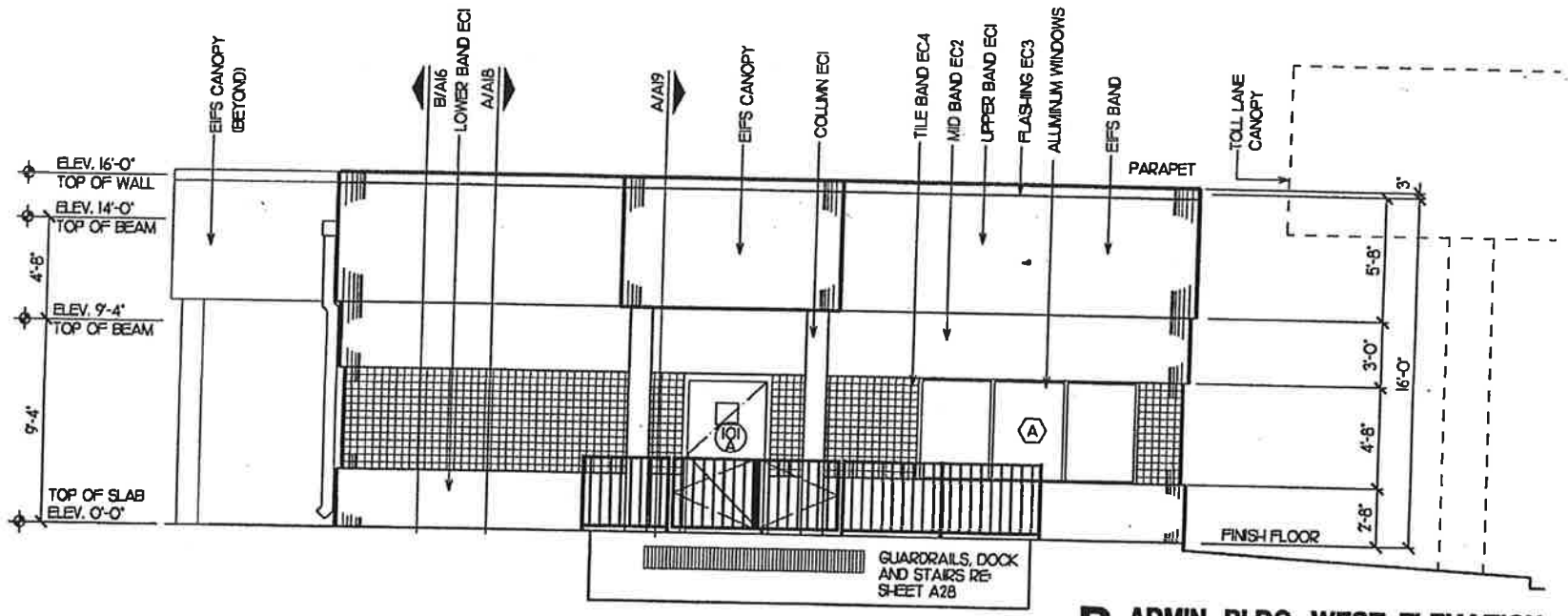
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A13

EXTERIOR COLORS

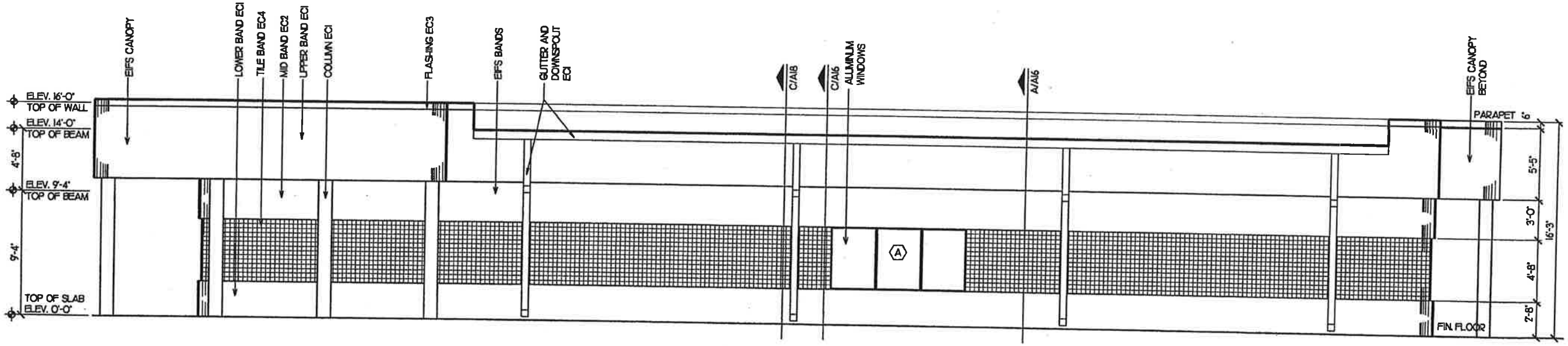
GN02 06/05/99

COLOR: EC1	#26492
COLOR: EC2	#27875
COLOR: EC3	#14325
COLOR: EC4	TILE RE: SPECS

NOTES:
1. COLOR MARKED # ARE BASED ON FEDERAL STANDARD 595B COLORS DATED JULY 1994
2. DOORS, COLOR EC1
3. DOOR FRAMES, COLOR EC2
4. WINDOW FRAMES, COLOR EC2
5. EIFS SURFACES: FLAT FINISH.
6. NON-EIFS SURFACES: SEMI-GLOSS FINISH.



B ADMIN. BLDG. WEST ELEVATION
SCALE: 1/4" = 1'-0"
EE04 01/13/00
0 4 8 12



A ADMIN. BLDG. NORTH ELEVATION
SCALE: 1/4" = 1'-0"
EE03 01/13/00
0 4 8 12

02/04/00

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS "735-88 TOLL PLAZA MODIFY EXISTING" AND "770-101-106 BUILDING". ITEMS INDICATED "TECH SHOP" SHALL APPLY TO "770-101-106 BUILDING" ONLY.

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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SUPERVISED BY: EDWARD A. CALDWELL, AIA

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ADMINISTRATION BUILDING ELEVATIONS

EE05 01/13/00

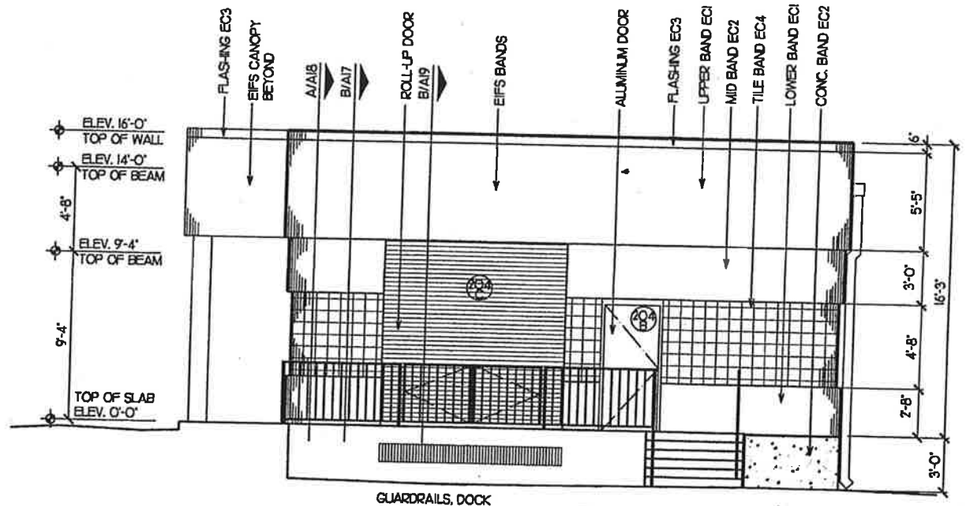
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A14

EXTERIOR COLORS

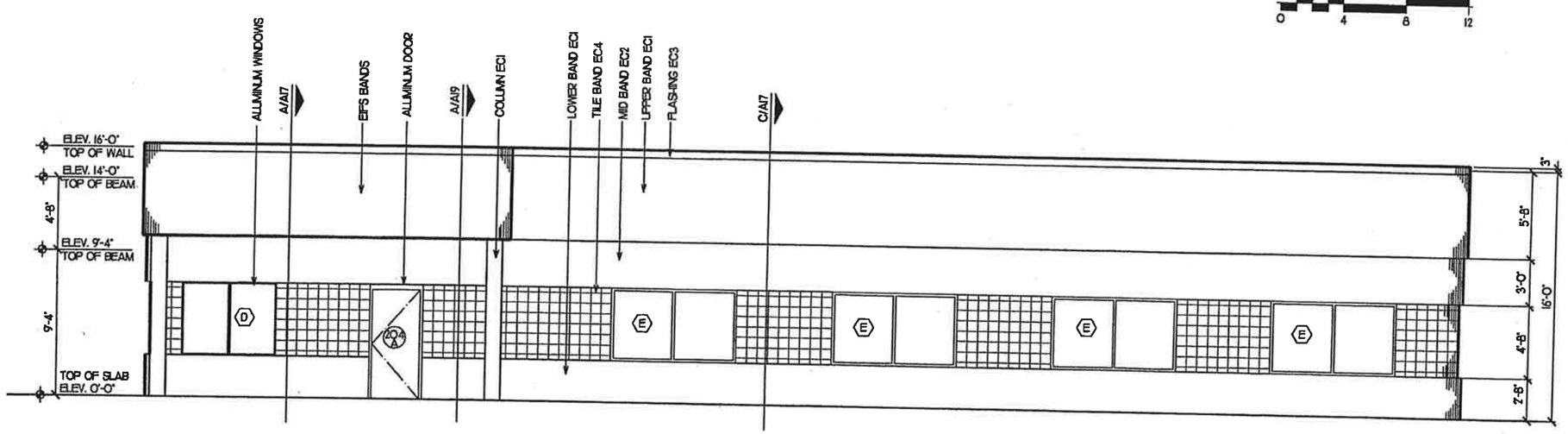
GND2 06/05/99

COLOR: EC1	*26492
COLOR: EC2	*27875
COLOR: EC3	*14325
COLOR: EC4	TILE RE: SPECS

NOTES:
1. COLOR MARKED * ARE BASED ON FEDERAL STANDARD 595B COLORS DATED JULY 1994
2. DOORS, COLOR EC1
3. DOOR FRAMES, COLOR EC2
4. WINDOW FRAMES, COLOR EC2
5. EIFS SURFACES: FLAT FINISH.
6. NON-EIFS SURFACES: SEMI-GLOSS FINISH.



B TECH SHOP EAST ELEVATION
SCALE: 1/4" = 1'-0"
EE06 01/13/00



A TECH SHOP SOUTH ELEVATION
SCALE: 1/4" = 1'-0"
EE05 01/13/00

02/04/00

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS "735-88 TOLL PLAZA MODIFY EXISTING" AND "770-101-106 BUILDING". ITEMS INDICATED "TECH SHOP" SHALL APPLY TO "770-101-106 BUILDING" ONLY.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	E.A.C.	01/24/00	DRAWN BY	E.J.M.	01/24/00
CHECKED BY	E.A.C.	01/24/00	CHECKED BY	E.A.C.	01/24/00

SUPERVISED BY: EDWARD A. CALDWELL, AIA

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

TECH SHOP ELEVATIONS

PWA 05/2000

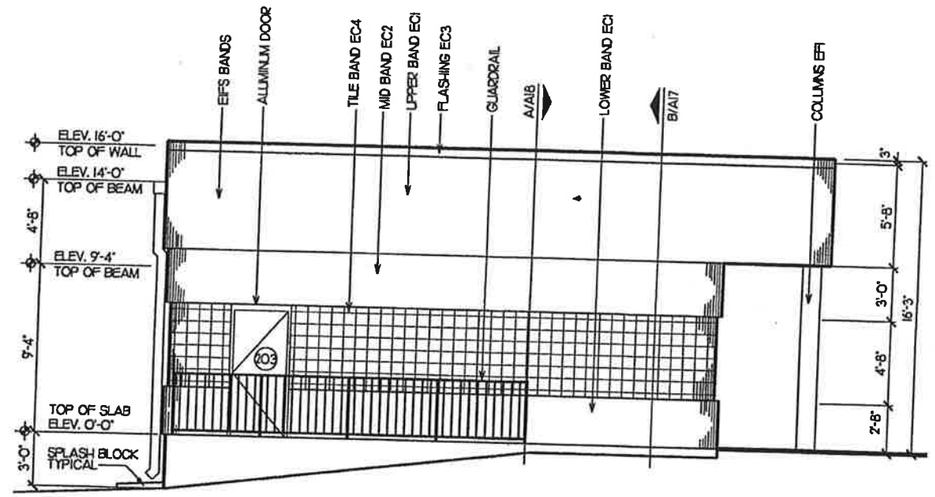
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A15

EXTERIOR COLORS

GN01 06/05/99

COLOR: EC1	*26492
COLOR: EC2	*27875
COLOR: EC3	*14325
COLOR: EC4	TILE RE: SPECS

NOTES:
1. COLOR MARKED * ARE BASED ON FEDERAL STANDARD 595B COLORS DATED JULY 1994
2. DOORS, COLOR EC1
3. DOOR FRAMES, COLOR EC2
4. WINDOW FRAMES, COLOR EC2
5. EIFS SURFACES: FLAT FINISH.
6. NON-EIFS SURFACES: SEMI-GLOSS FINISH.

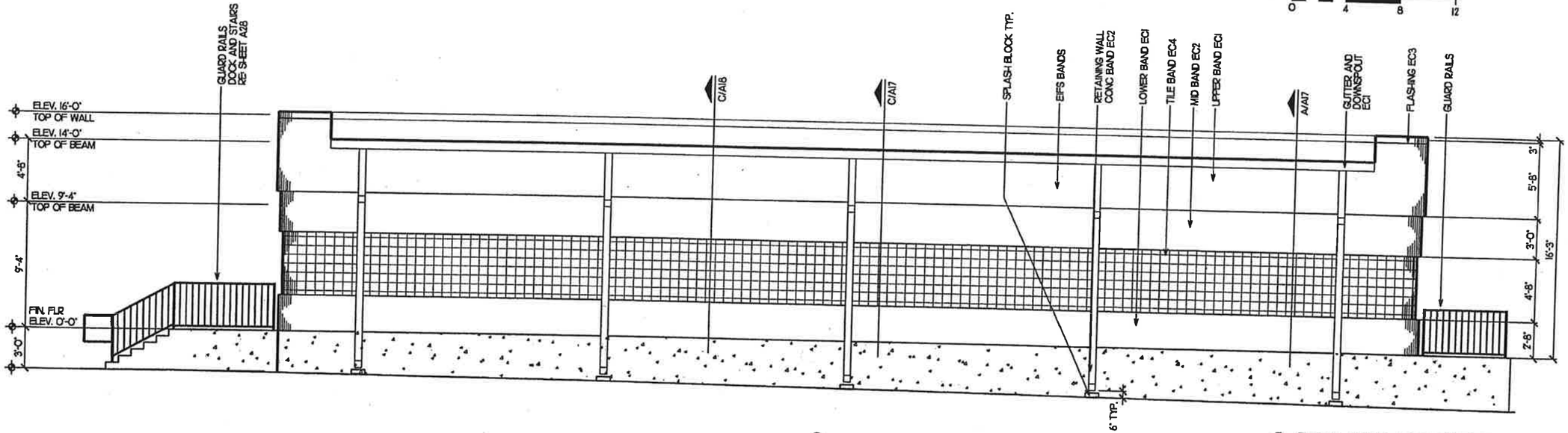


B TECH SHOP WEST ELEVATION

SCALE: 1/4" = 1'-0"

EE08 01/31/00

0 4 8 12



A TECH SHOP NORTH ELEVATION

SCALE: 1/4" = 1'-0"

EE07 06/30/99

0 4 8 12

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS "735-88 TOLL PLAZA MODIFY EXISTING" AND "770-101-106 BUILDING". ITEMS INDICATED "TECH SHOP" SHALL APPLY TO "770-101-106 BUILDING" ONLY.

REVISIONS											
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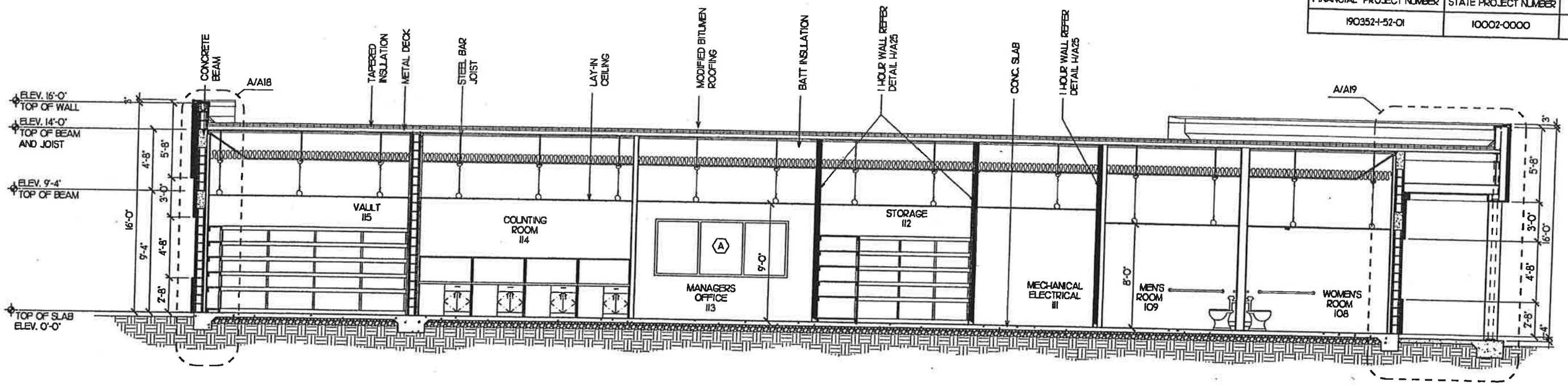
SUPERVISED BY: EDWARD A. CALDWELL, AIA

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

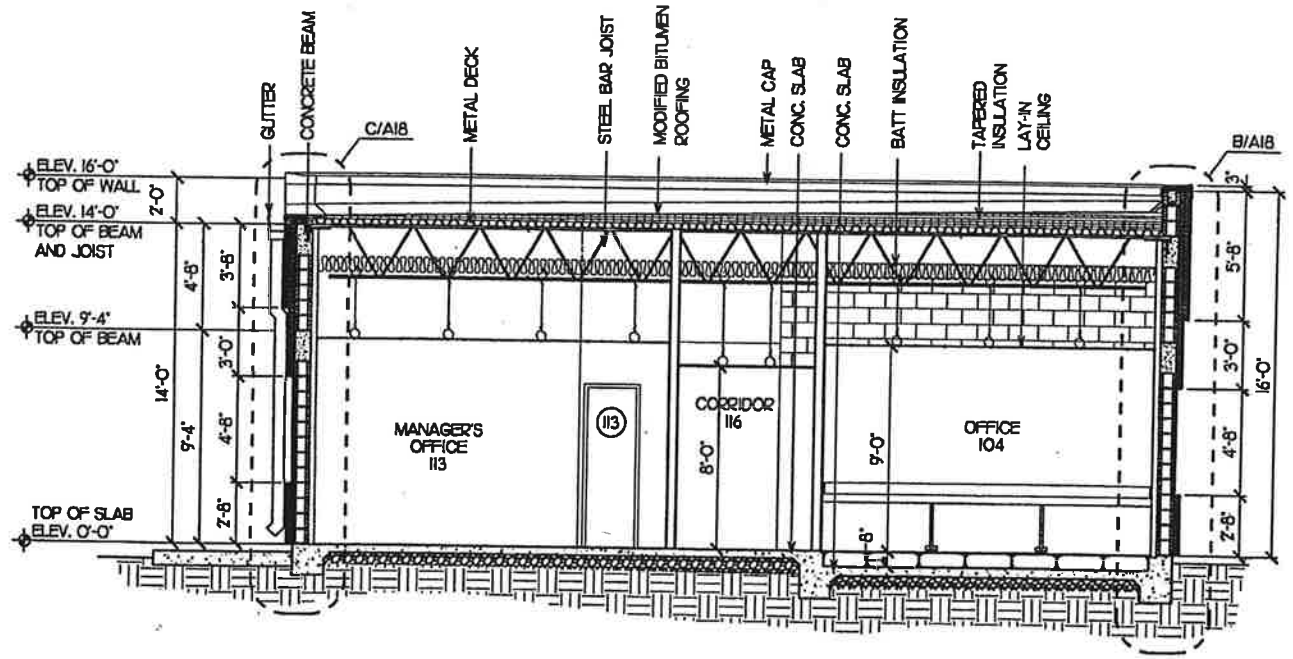
TECH SHOP ELEVATIONS

MAS 01/31/00

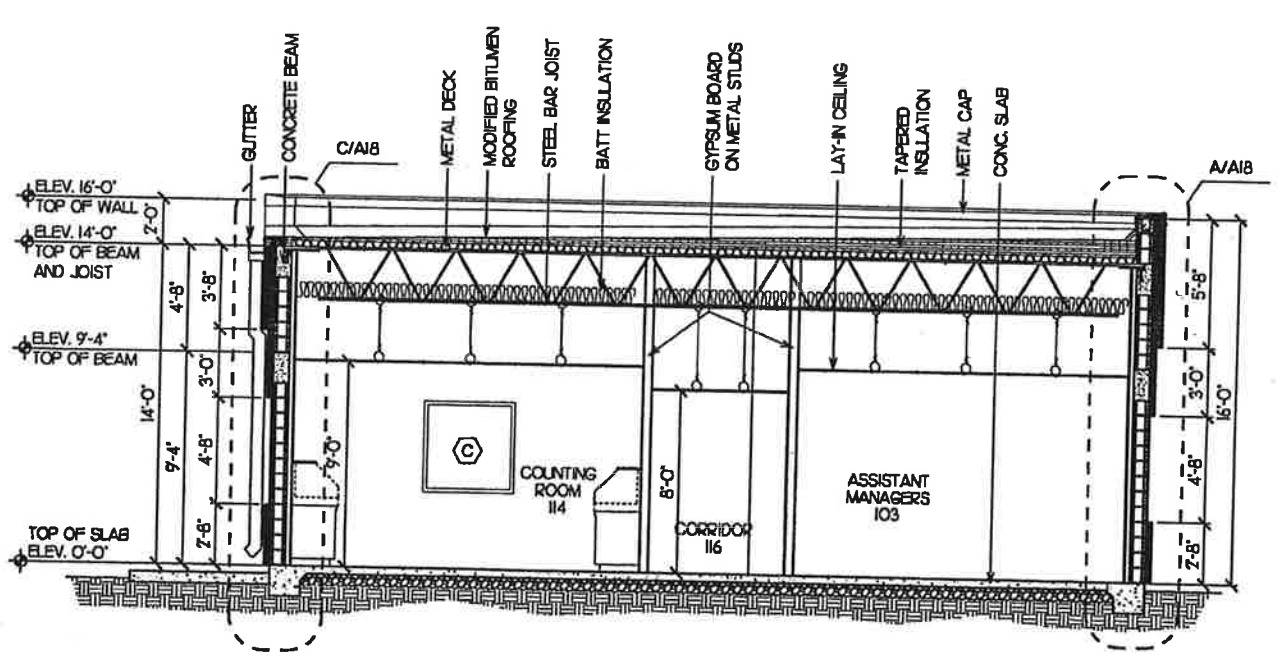
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A16



B ADMIN. BUILDING SECTION
SCALE: 1/4" = 1'-0" BS05 01/13/00
0 4 8 12



C ADMIN. BUILDING SECTION
SCALE: 1/4" = 1'-0" BS06 01/13/00
0 4 8 12



A ADMIN. BUILDING SECTION
SCALE: 1/4" = 1'-0" BS04 01/13/00
0 4 8 12

02/04/00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

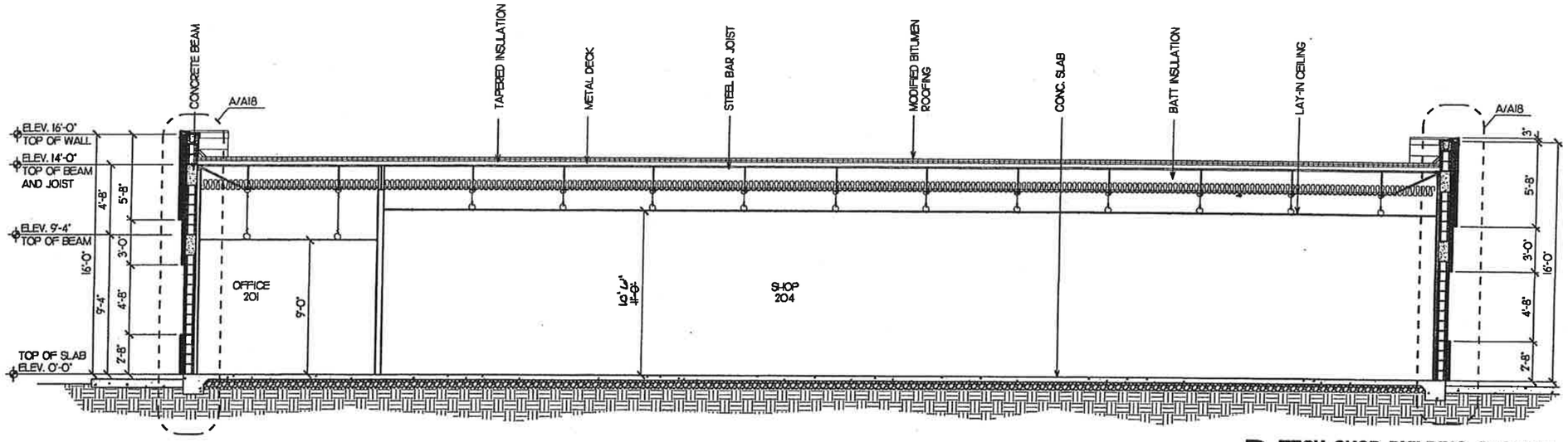
DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS "735-88 TOLL PLAZA MODIFY EXISTING" AND "770-101-106 BUILDING". ITEMS INDICATED "TECH SHOP" SHALL APPLY TO "770-101-106 BUILDING" ONLY.

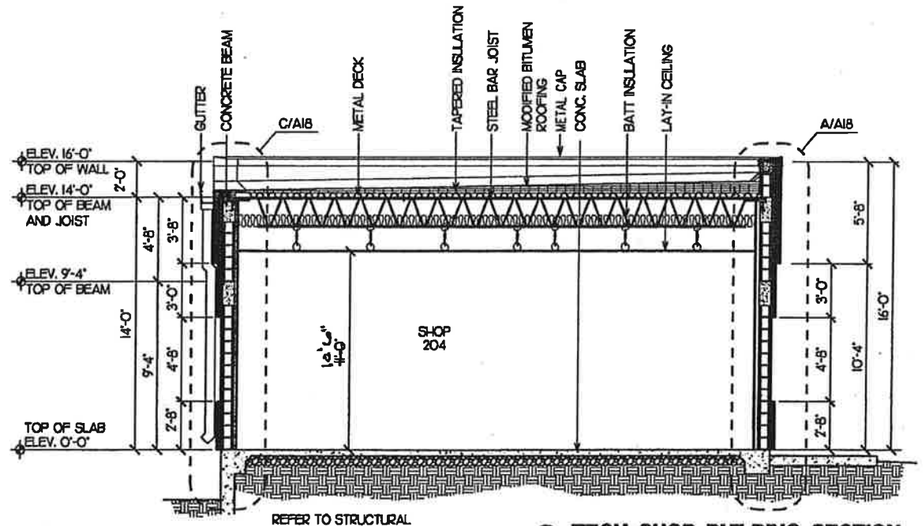
ADMINISTRATION BUILDING SECTIONS

A16 01/13/00

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A17

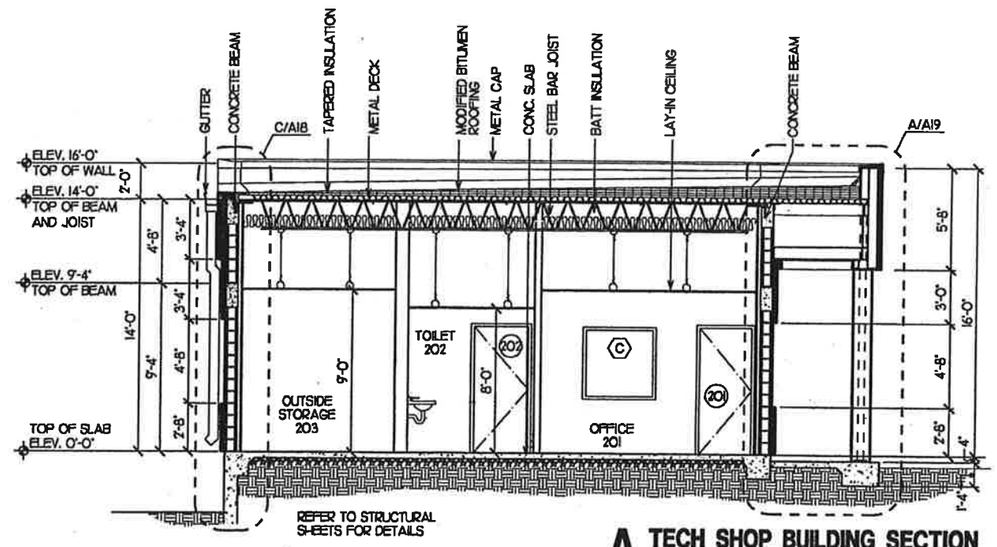


B TECH SHOP BUILDING SECTION
SCALE: 1/4" = 1'-0"
BSO7 01/13/00
0 4 8 12



REFER TO STRUCTURAL STRUCTURAL SHEETS FOR DETAILS

C TECH SHOP BUILDING SECTION
SCALE: 1/4" = 1'-0"
BSO9 01/13/00
0 4 8 12



REFER TO STRUCTURAL SHEETS FOR DETAILS

A TECH SHOP BUILDING SECTION
SCALE: 1/4" = 1'-0"
BSO6 01/13/00
0 4 8 12

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CHECKED BY	E.A.C.	01/24/00	CHECKED BY	E.A.C.	01/24/00

SUPERVISED BY: EDWARD A. CALDWELL, AIA

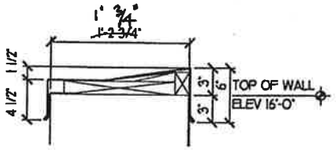
DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

TECH SHOP BUILDING SECTIONS

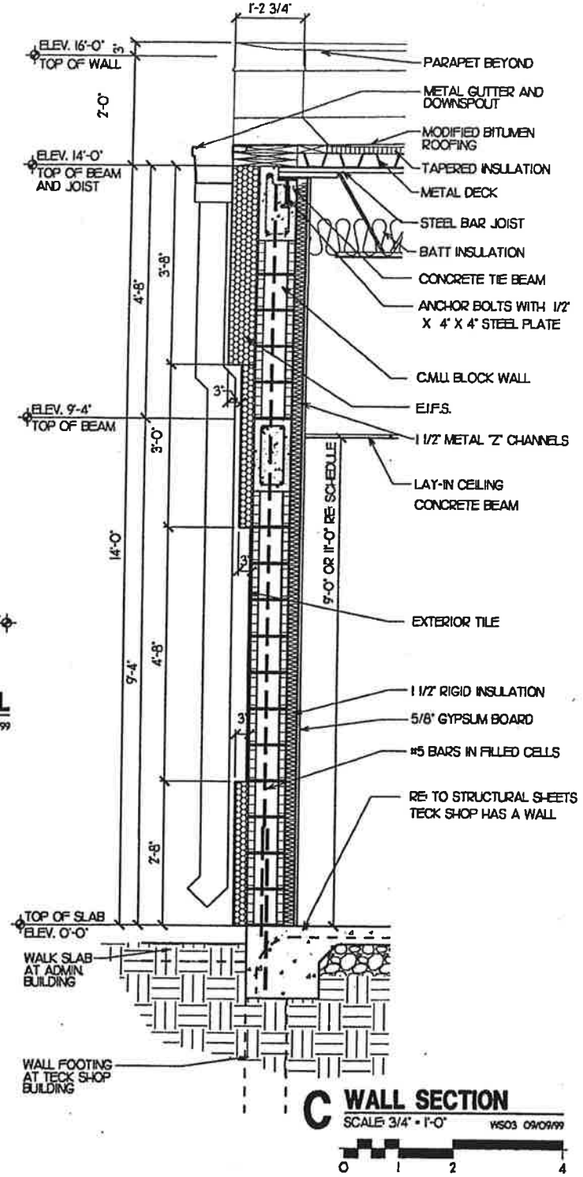
A17 01/13/00

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A18

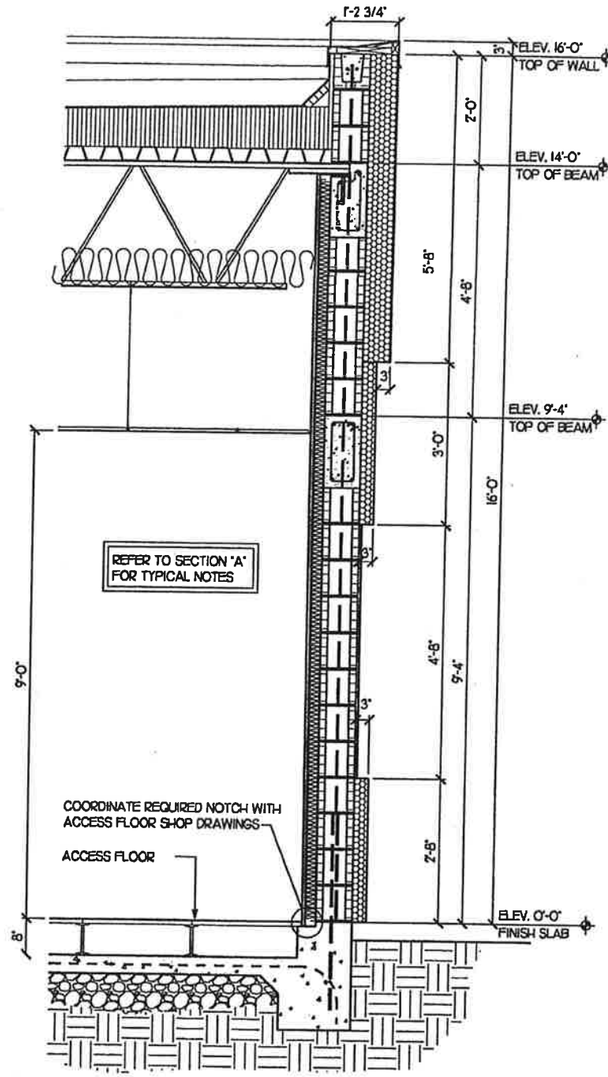
REDUCE 6" FOAM TO 4" AND 3" FOAM TO 2" AT ALL WALLS



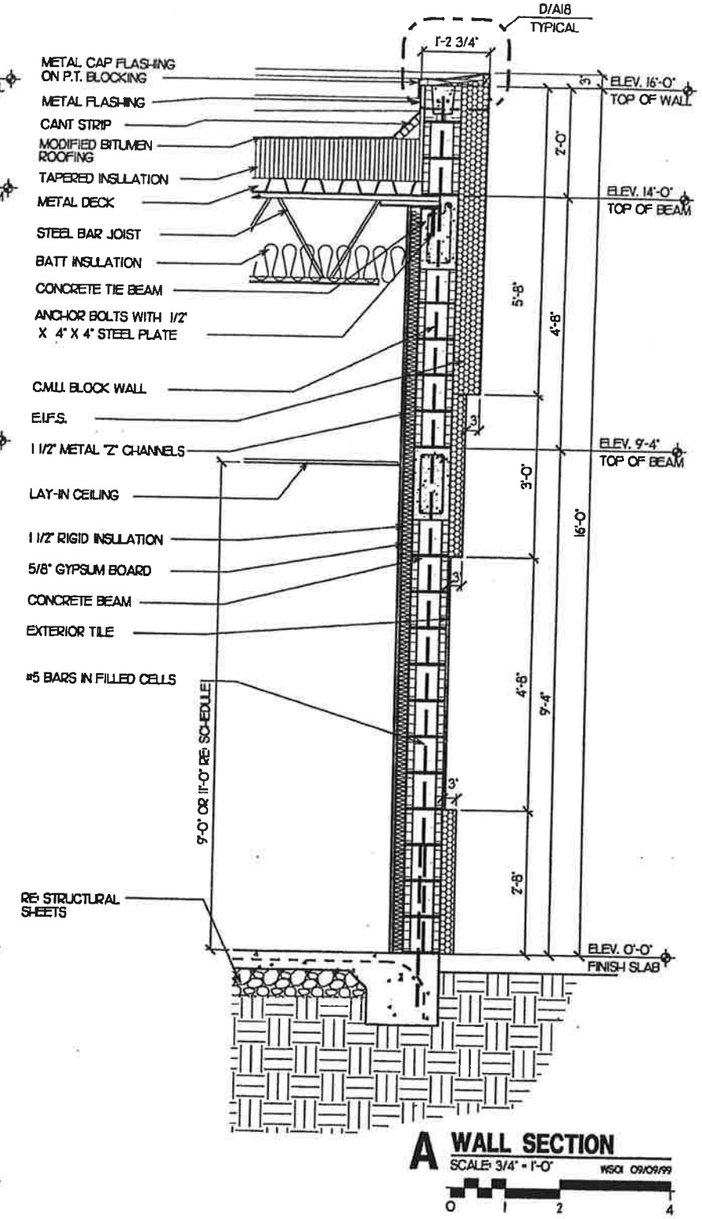
D CAP FLASHING DETAIL
SCALE: 1 1/2" = 1'-0" 03400-44 06/08/99



C WALL SECTION
SCALE: 3/4" = 1'-0" WS03 09/09/99
0 1 2 4



B WALL SECTION
SCALE: 3/4" = 1'-0" WS02 09/09/99
0 1 2 4



A WALL SECTION
SCALE: 3/4" = 1'-0" WS01 09/09/99
0 1 2 4

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS " 735-88 TOLL PLAZA MODIFY EXISTING " AND " 770-101-106 BUILDING ". ITEMS INDICATED " TECH SHOP " SHALL APPLY TO " 770-101-106 BUILDING " ONLY.

02/04/00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	E.A.C.	01/24/00	DRAWN BY	E.J.M.	01/24/00
CHECKED BY	E.A.C.	01/24/00	CHECKED BY	E.A.C.	01/24/00

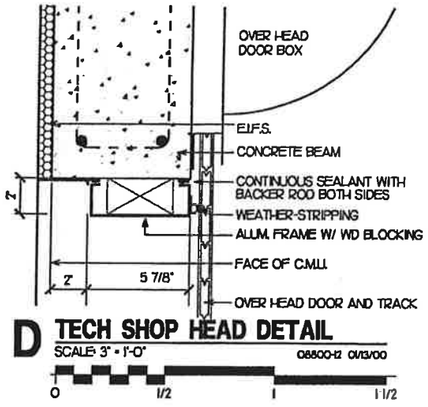
SUPERVISED BY: EDWARD A. CALDWELL, AIA

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

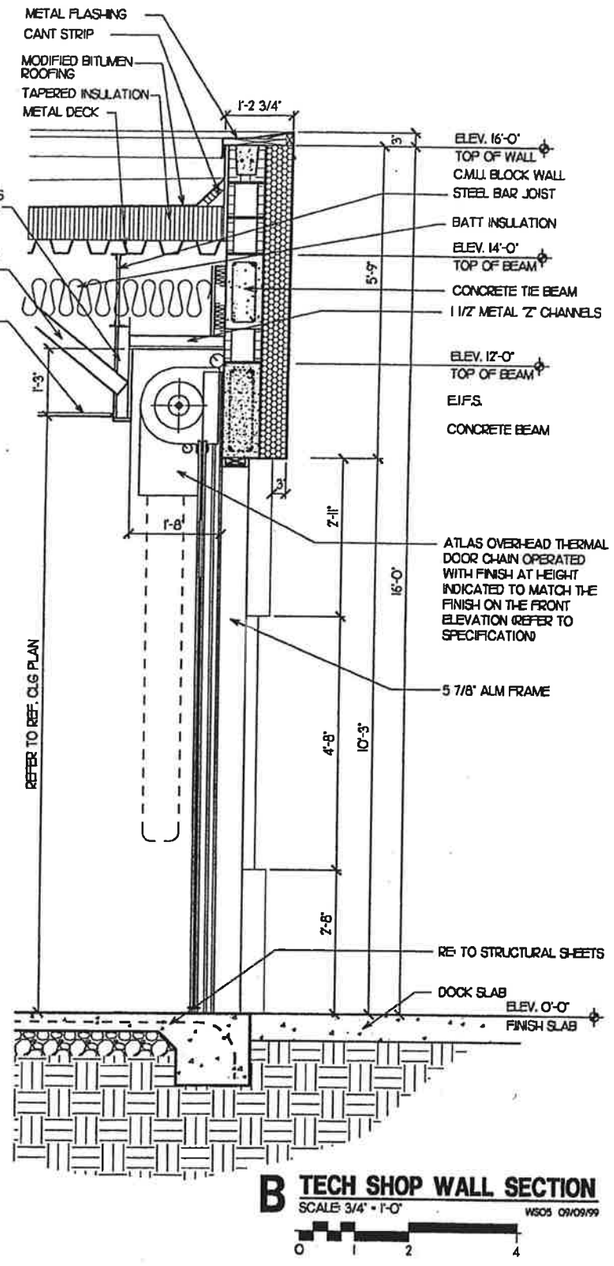
WALL SECTIONS

MAB 01/31/00

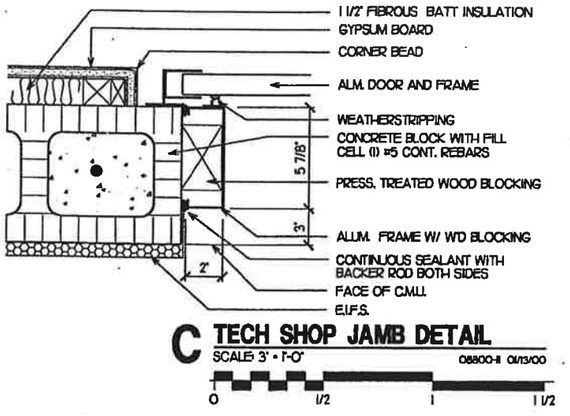
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A19



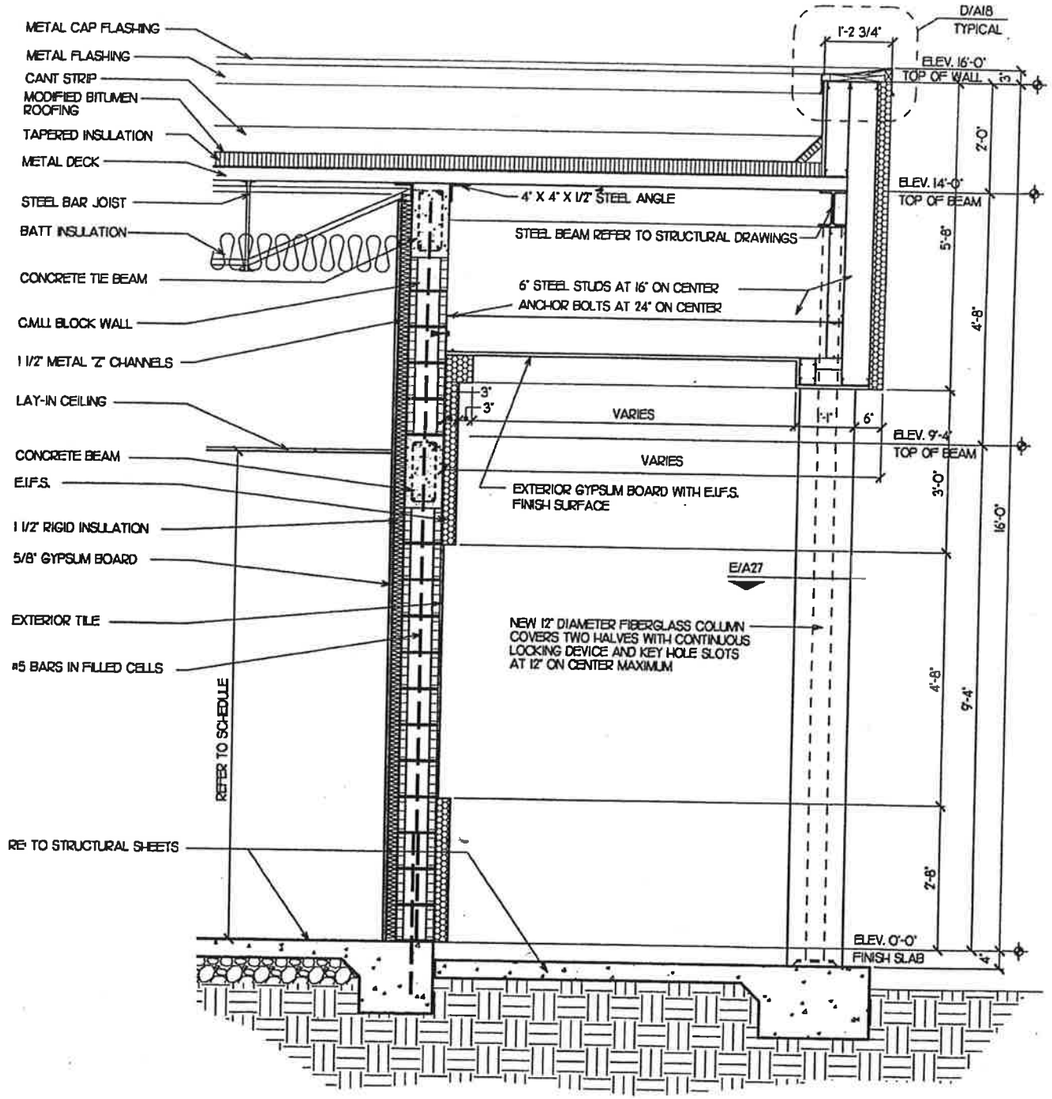
D TECH SHOP HEAD DETAIL
SCALE: 3" = 1'-0" 08500-12 01/13/00



B TECH SHOP WALL SECTION
SCALE: 3/4" = 1'-0" WS05 09/09/99
0 1 2 4



C TECH SHOP JAMB DETAIL
SCALE: 3" = 1'-0" 08500-11 01/13/00
0 1/2 1 1 1/2



A WALL SECTION
SCALE: 3/4" = 1'-0" WS04 01/13/00
0 1 2 4

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS "735-88 TOLL PLAZA MODIFY EXISTING" AND "770-101-106 BUILDING"; ITEMS INDICATED "TECH SHOP" SHALL APPLY TO "770-101-106 BUILDING" ONLY.

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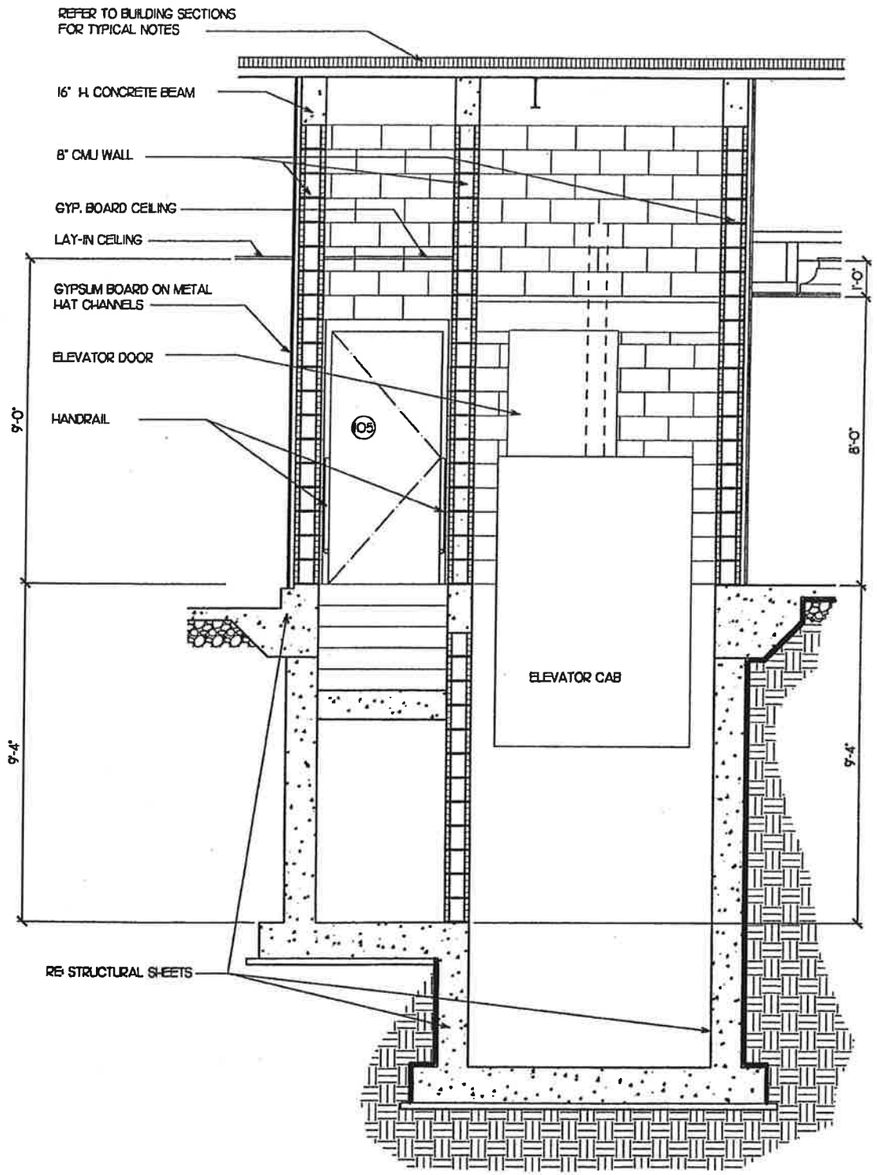
CHECKED BY	E.A.C.	01/24/00	CHECKED BY	E.A.C.	01/24/00
SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

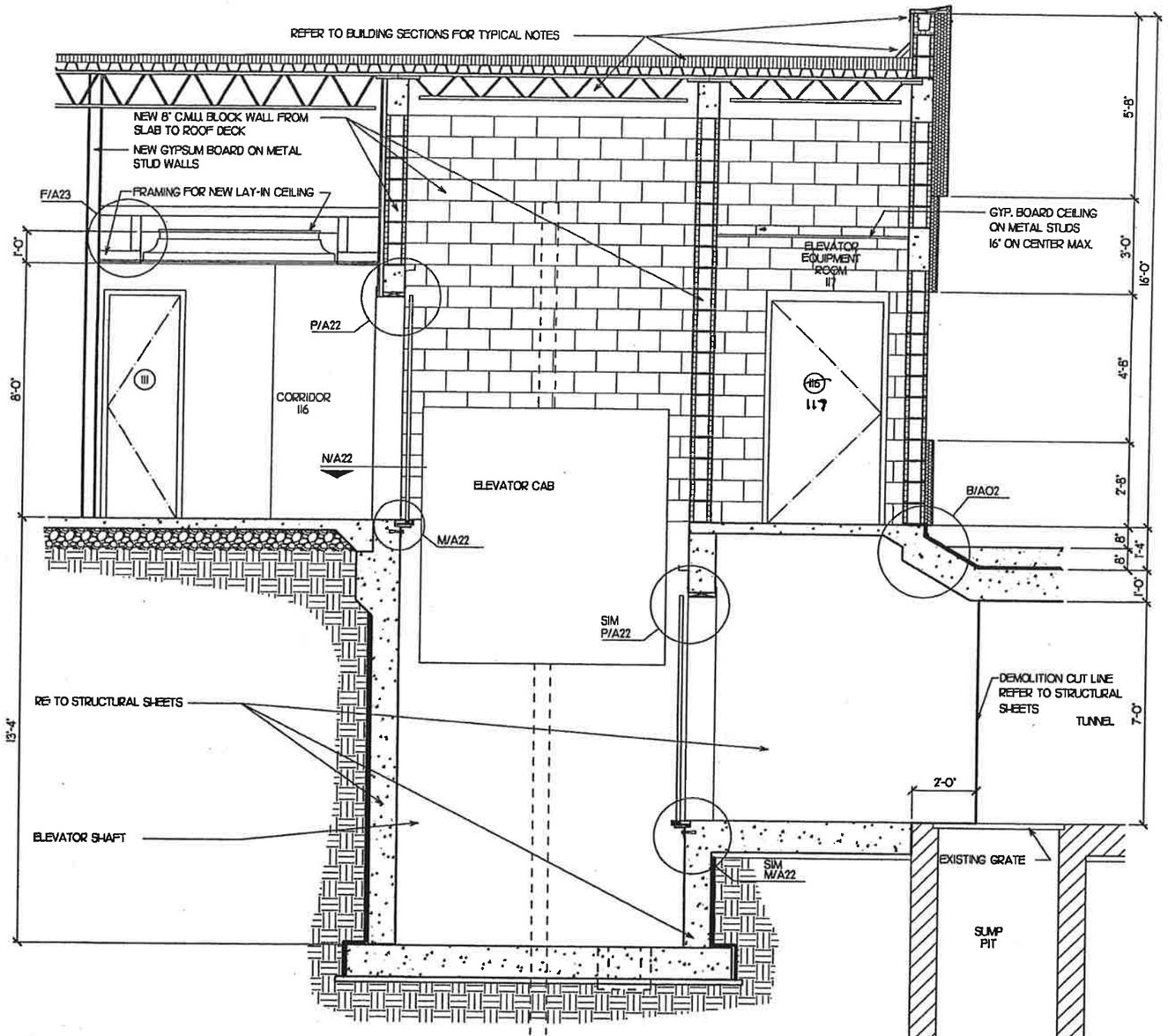
WALL SECTIONS

A19 09/09/99

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A20



B ELEVATOR SECTION
SCALE: 1/2" = 1'-0" BSI 09/09/99
0 2 4 6



A VERTICAL SECTION THRU ELEVATOR
SCALE: 1/2" = 1'-0" BSI 01/13/00
0 2 4 6

02/04/00

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS " 735-88 TOLL PLAZA MODIFY EXISTING " AND " 770-101-106 BUILDING ". ITEMS INDICATED " TECH SHOP " SHALL APPLY TO " 770-101-106 BUILDING " ONLY.

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SUPERVISED BY: EDWARD A. CALDWELL, AIA

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ELEVATOR WALL SECTIONS

CADD 01/13/00

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A21

ROOM FINISH SCHEDULE

FS01 09/09/99

#	ROOM NAME	FLOOR M	FLOOR C	FLOOR F	BASE M	BASE C	BASE F	N.WALL M	N.WALL C	N.WALL F	E.WALL M	E.WALL C	E.WALL F	S.WALL M	S.WALL C	S.WALL F	W.WALL M	W.WALL C	W.WALL F	CEILING M	CEILING C	CEILING F	REMARKS
	ADMINISTRATION BUILDING																						
101	SECURED VESTIBULE	TZ	A	2	TZ	A	2	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	A2	M	6	(2) RE: FIN. SCH. NOTES
102	SUPERVISER'S OFFICE	TZ	C	2	VB	J	6	WC	K	2	WC	K	2	WC	K	2	WC	K	2	A2	M	6	(2) RE: FIN. SCH. NOTES
103	ASSISTANT MANSGER	C	H	2	VB	J	6	WC	K	2	WC	K	2	WC	K	2	WC	K	2	A2	M	6	(2) RE: FIN. SCH. NOTES
104	RECORDER	AF	M	2	VB	J	6	WC	K	2	WC	K	2	WC	K	2	WC	K	2	A2	M	6	(2) RE: FIN. SCH. NOTES
105	STAIRS	SC	P	3	-	-	-	CM	N	4	CM	N	4	CM	N	4	CM	N	4	GB	M	5	(2) RE: FIN. SCH. NOTES
106	LOCKERS	TZ	(1)	2	TZ	B	2	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(3)	(3)	(3)	(1) RE: FIN. SCH. NOTES
107	OPEN BREAKROOM	TZ	(1)	2	TZ	B	2	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(3)	(3)	(3)	(1) RE: FIN. SCH. NOTES
108	WOMENS ROOM	TZ	C	2	TZ	B	2	CT	F	2	CT	F	2	CT	F	2	CT	F	2	A2	M	6	
109	MENS ROOM	TZ	C	2	TZ	B	2	CT	G	2	CT	G	2	CT	G	2	CT	G	2	A2	M	6	
110	JANITOR CLOSET	TZ	A	2	TZ	B	2	CT	F	2	CT	F	2	CT	F	2	CT	F	2	A2	M	6	
111	MECHANICAL/ELECTRICAL	SC	P	3	-	-	-	GB	N	4	GB	N	4	GB	N	4	GB	N	4	A2	M	6	
112	STORAGE	TZ	C	3	VB	J	6	GB	N	4	GB	N	4	GB	N	4	GB	N	4	A2	M	6	
113	MANAGERS OFFICE	C	H	2	VB	J	6	WC	K	2	WC	K	2	WC	K	2	WC	K	2	A2	M	6	
114	COUNTING ROOM	TZ	C	2	TZ	B	2	CT	F	2	CT	F	2	CT	F	2	CT	F	2	A2	M	6	
115	VAULT	TZ	C	3	VB	J	6	GB	N	4	GB	N	4	GB	N	4	GB	N	4	A2	M	6	
116	CORRIDOR	TZ	(1)	2	TZ	B	2	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(3)	(3)	(3)	(1) RE: FIN. SCH. NOTES
117	ELAVATOR EQUIP. ROOM	SC	P	3	-	-	-	CM	N	4	CM	N	4	CM	N	4	CM	N	4	GB	M	5	
	TECH SHOP BUILDING																						
201	OFFICE	TZ	C	2	TZ	B	2	WC	K	2	WC	K	2	WC	K	2	WC	K	2	A2	M	6	
202	TOILET	TZ	C	2	TZ	B	2	CT	G	2	CT	G	2	CT	G	2	CT	G	2	A2	M	6	
203	OUTSIDE STORAGE	SC	P	3	-	-	-	CM	N	4	GB	N	4	GB	N	4	CM	N	4	A2	M	6	
204	SHOP	SC	P	3	VB	J	6	GB	N	4	GB	N	4	GB	N	4	GB	N	4	A2	M	6	
205	JANITOR CLOSET	SC	P	3	VB	J	6	GB	N	4	GB	N	4	GB	N	4	GB	N	4	A2	M	6	

M	MATERIALS	SC01 06/04/99
A2	2X2 SUSPENDED ACOUS. TILE	
AF	ACCESS FLOOR SYSTEM	
AL	ALUMINUM	
C	CARPET	
CM	CONCRETE MASONRY BLOCK	
CT	CERAMIC TILE	
ES	EXPOSED STRUCT. (PAINTED)	
GB	GYPSUM BOARD	
HM	HOLLOW METAL	
SC	SEALED CONCRETE	
TZ	TERRAZZO	
WC	VINYL WALL COVERING	
VB	VINYL BASE	

C	COLOR	SC03 06/04/99
A	TZ S-373	
B	TZ S-375	
C	TZ TS-405	
D	CT VITRESTONE 1905 CORDOVAN	
E	CT VITRESTONE 1918 BLUESTONE	
F	CT VITRESTONE 1901 ROSE NUGGET	
G	CT VITRESTONE 1921 GRAY GRANITE	
H	C TWEED GRADUATE 506 IBIS	
J	VB MARCER COLOR 208-4	
K	WC BOLTA DOUBLETAKE II BB-LP-06	
L	USG-DONN HPL SANDPIPER	
M	FS 5958 "27925" WHITE	
N	FS 5958 "27975" OFF WHITE	
P	FS 5958 "26492" GRAY	

F	FINISH	SC02 06/04/99
1	NO FINISH	
2	CLEAN	
3	NON-SLIP	
4	SATIN	
5	FLAT	
6	FACTORY FINISH	
7	BAKED FLUOROPOLYMER	

DOOR SCHEDULE

DS01 01/10/00

DOOR #	DOORS TYPE	DIMENSIONS WIDTH	HT.	THK.	M	F	FRAMES TYPE	M	F	DETAIL REFERENCES HEAD	JAMB	SILL	LABEL	REMARKS
	ADMINISTRATION BUILDING													
101A	D4	3'-8"	7'-0"	1 3/4"	AL	7	F2	AL	8	G/A22	F/A22	E/A22	-	WIRE GLASS VISION PANEL
101B	D1	3'-8"	7'-0"	1 3/4"	HM	4	F1	HM	4	D/A22	D/A22	B/A22	-	2'-0" X 3'-6" GLASS
102	D2	3'-0"	7'-0"	1 3/4"	HM	4	F1	HM	4	D/A22	D/A22	B/A22	-	
103	D2	3'-0"	7'-0"	1 3/4"	HM	4	F1	HM	4	D/A22	D/A22	B/A22	-	
104	D2	3'-0"	7'-0"	1 3/4"	HM	4	F1	HM	4	D/A22	D/A22	B/A22	-	
105	D4	3'-0"	7'-0"	1 3/4"	HM	4	F2	HM	4	J/A22	H/A22	B/A22	1 HR	WIRE GLASS VISION PANEL
106	NOT USED													
107	D4	3'-0"	7'-0"	1 3/4"	AL	7	F2	ALUM	7	G/A22	F/A22	E/A22	-	WIRE GLASS VISION PANEL
108	D2	3'-0"	7'-0"	1 3/4"	HM	4	F1	HM	4	D/A22	D/A22	B/A22	-	
109	D2	3'-0"	7'-0"	1 3/4"	HM	4	F1	HM	4	D/A22	D/A22	B/A22	-	
110	D2	3'-0"	7'-0"	1 3/4"	HM	4	F1	HM	4	C/A22	C/A22	B/A22	1 HR	
111	D2	3'-0"	7'-0"	1 3/4"	HM	4	F1	HM	4	C/A22	C/A22	B/A22	1 HR	
112	D2	3'-0"	7'-0"	1 3/4"	HM	4	F1	HM	4	C/A22	C/A22	B/A22	1 HR	
113	D2	3'-0"	7'-0"	1 3/4"	HM	4	F1	HM	4	D/A22	D/A22	B/A22	-	
114	D2	3'-0"	7'-0"	1 3/4"	HM	4	F1	HM	4	D/A22	D/A22	B/A22	-	
115	SPECS	3'-8"	7'-0"				RE: APPROVED SHP. DWGS.							(*) BALLISTIC DOOR / FRAME
116	NOT USED													
117	D2	3'-0"	7'-0"	1 3/4"	HM	4	F1	HM	4	J/A22	H/A22	-	1 HR	
	TECH SHOP BUILDING													
201	D3	3'-0"	7'-0"	1 3/4"	HM	4	F1	HM	4	D/A22	D/A22	B/A22	-	WIRE GLASS VISION PANEL
202	D2	3'-0"	7'-0"	1 3/4"	HM	4	F1	HM	4	D/A22	D/A22	B/A22	-	
203	D2	3'-0"	7'-0"	1 3/4"	AL	7	F2	ALUM	7	*G/A22	*F/A22	*E/A22	-	(*) DETAILS SIMULAR
204A	D2	3'-0"	7'-0"	1 3/4"	AL	7	F2	ALUM	7	G/A22	F/A22	E/A22	-	
204B	D2	3'-0"	7'-0"	1 3/4"	AL	7	F2	ALUM	7	G/A22	F/A22	E/A22	-	
204C	D5	8'-0"	10'-4"	1"	AL	7	AL	AL	7	D/A19	C/A19		-	INSULATED ROLL UP DOOR
205	D2	3'-0"	7'-0"	1 3/4"	HM	4	F1	HM	4	C/A22	C/A22		1 HR	

WINDOW SCHEDULE

SC05 06/03/99

WIN. NO.	WINDOWS TYPE	DIMENSIONS HT.	WIDTH	THK.	M	F	DETAIL REFERENCES HEAD	JAMB	SILL	REMARKS
-	A	4'-4"	10'-0"	4 1/2"	AL	7	L/A22	L/A22	K/A22	ADMINISTRATION BUILDING
-	B	4'-4"	13'-4	4 1/2"	AL	7	L/A22	L/A22	K/A22	ADMINISTRATION BUILDING
-	C	4'-0"	4'-0"	4 1/2"	HM	4	A/A22	A/A22	A/A22	ADMINISTRATION BUILDING AND TECH SHOP BUILDING
-	D	4'-4"	6'-0"	4 1/2"	AL	7	L/A22	L/A22	K/A22	TECH SHOP BUILDING
-	E	4'-4"	8'-0"	4 1/2"	AL	7	L/A22	L/A22	K/A22	TECH SHOP BUILDING

3'4" 3'4"

FINISH SCHEDULE NOTES

GN03 06/05/99

1. REFER TO FLOOR FINISH PLANS FOR MATERIALS, PATERNS AND COLORS.

2. REFER TO INTERIOR ELEVATIONS FOR MATERIALS PATERNS AND COLORS.

3. REFER TO REFLECTIVE CEILING PLANS FOR MATERIALS PATERNS COLORS AND HEIGHTS.

4. FS COLORS ARE FROM THE FEDERAL STANDARD 595B COLORS DECK 7690-01-2210 DATED JULY 1994.

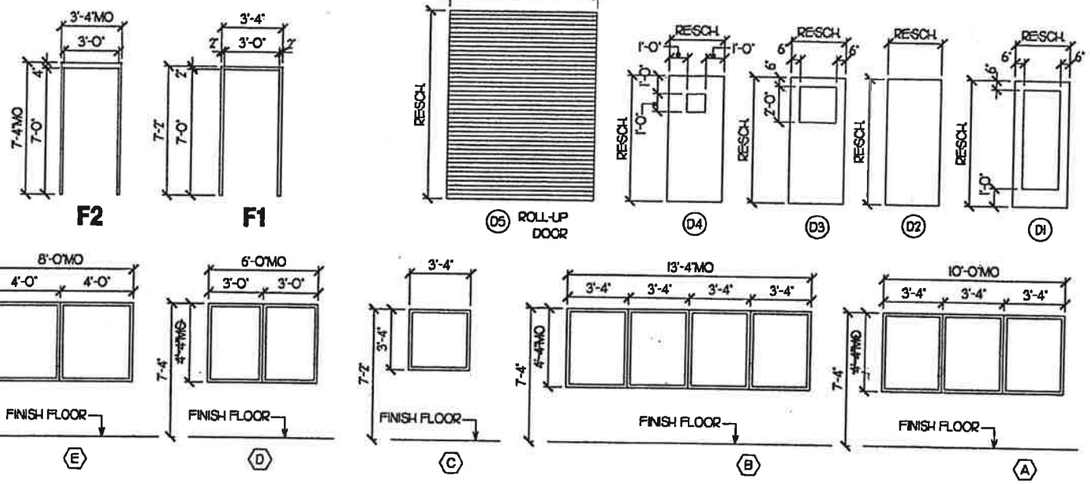
5. CERAMIC TILE COLORS ARE BASED ON THE DAL-TILE CORPORATION 'VITRESTONE' GRANITE SERIES.

6. TRAZZO NUMBERS ARE BASED ON COLOR CHARTS PROVIDED BY THE NATIONAL TRAZZO AND MOSAIC ASSOCIATION,INC.

7. INTERIOR AND EXTERIOR DOORS: COLOR 'P', FINISH '4'

8. INTERIOR AND EXTERIOR DOOR FRAMES: COLOR 'N', FINISH '4'

9. INTERIOR AND EXTERIOR WINDOW FRAMES: COLOR 'N', FINISH '4'



4' 8" TYP.

DOOR, FRAME AND WINDOW TYPES

SCALE: NTS

DS02 06/05/99

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS " 735-88 TOLL PLAZA MODIFY EXISTING " AND " 770-101-106 BUILDING ". ITEMS INDICATED " TECH SHOP " SHALL APPLY TO " 770-101-106 BUILDING " ONLY.

REVISIONS												
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

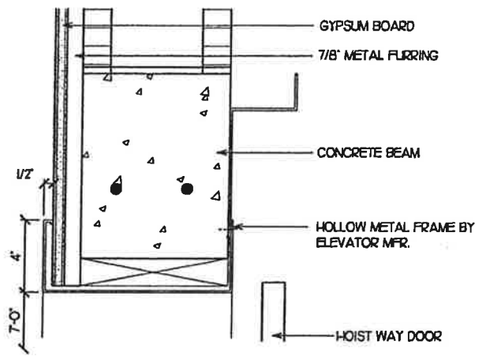
	NAME	DATE		NAME	DATE
DESIGNED BY	E.A.C.	01/24/00	DRAWN BY	E.J.M.	01/24/00
CHECKED BY	E.A.C	01/24/00	CHECKED BY	E.A.C.	01/24/00
SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

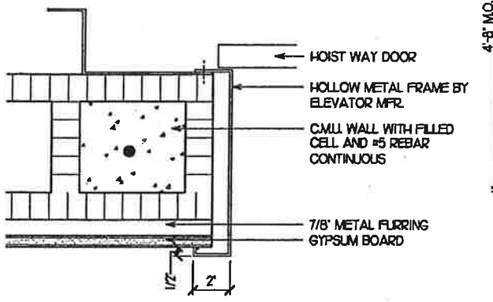
DOOR SCHEDULE, FINISH SCHEDULE

*A21 01/03/00

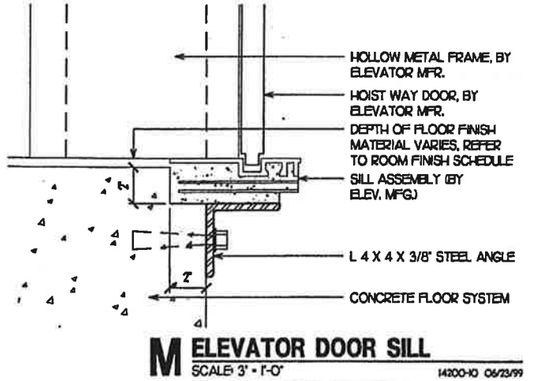
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A22



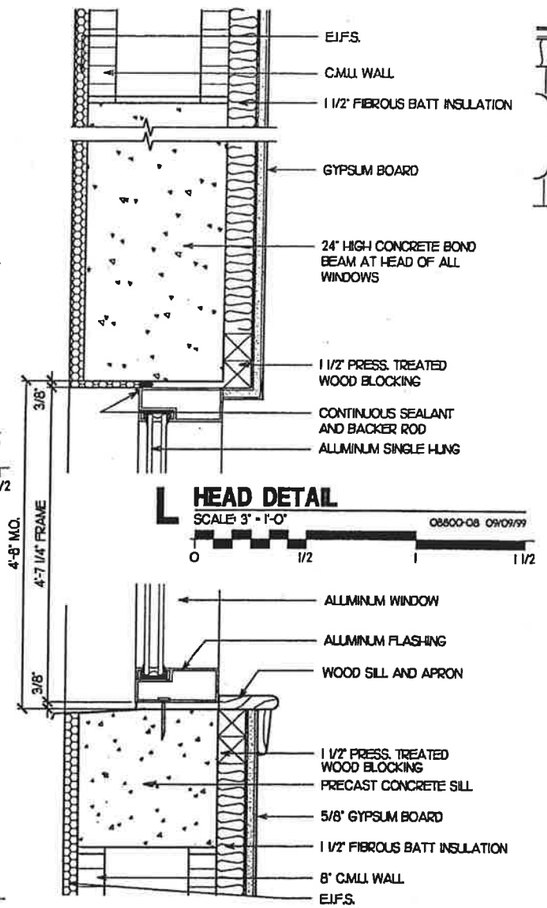
P ELEVATOR DOOR HEAD
SCALE: 3" = 1'-0" 14200-11 09/09/99



N ELEVATOR DOOR JAMB
SCALE: 3" = 1'-0" 14200-12 09/09/99

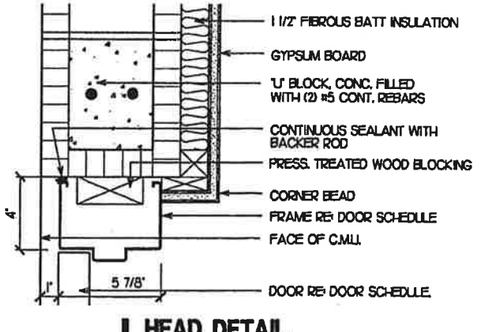


M ELEVATOR DOOR SILL
SCALE: 3" = 1'-0" 14200-10 06/23/99

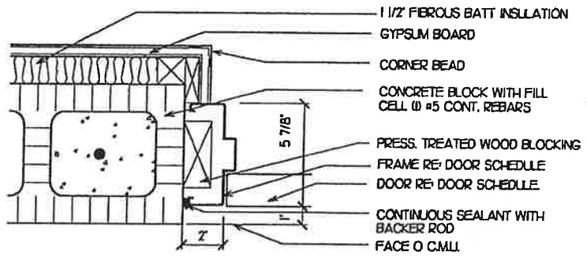


L HEAD DETAIL
SCALE: 3" = 1'-0" 08600-08 09/09/99

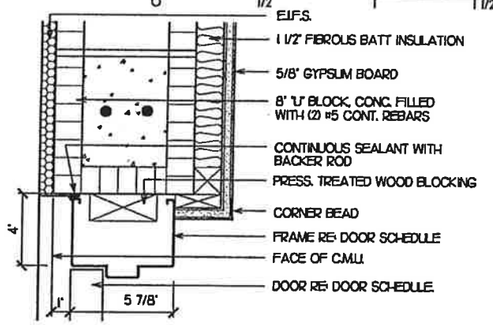
K SILL DETAIL
SCALE: 3" = 1'-0" 08600-07 09/09/99



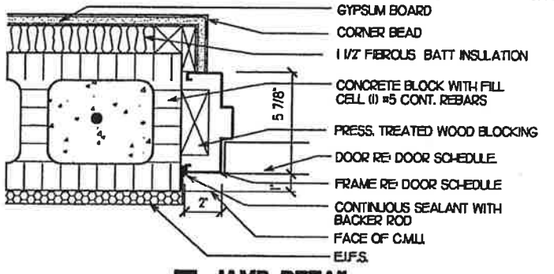
J HEAD DETAIL
SCALE: 3"=1'-0" 08600-05 09/09/99



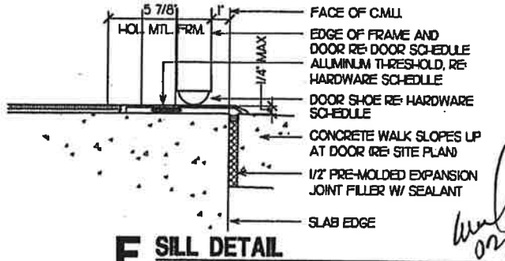
H JAMB DETAIL
SCALE: 3" = 1'-0" 08600-10 09/09/99



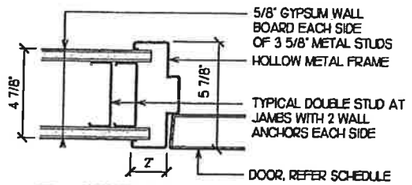
G HEAD DETAIL
SCALE: 3" = 1'-0" 08600-04 09/09/99



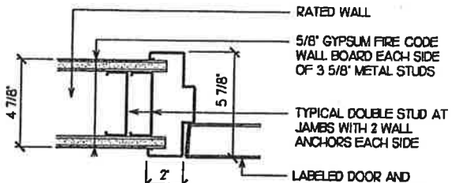
F JAMB DETAIL
SCALE: 3" = 1'-0" 08600-09 09/09/99



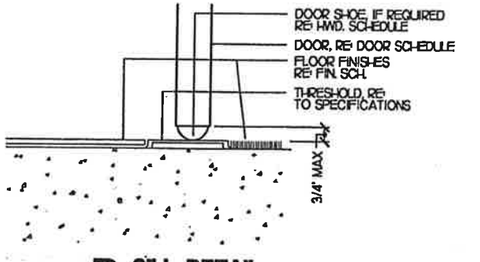
E SILL DETAIL
SCALE: 3" = 1'-0" 08600-03 06/08/99



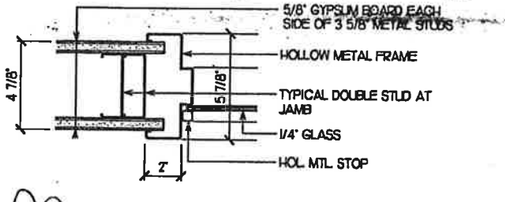
D JAMB DETAIL (HEAD SIMILAR)
SCALE: 3" = 1'-0" 08110-08 09/09/99



C JAMB DETAIL (HEAD SIMILAR)
SCALE: 3" = 1'-0" 08110-01 09/09/99



B SILL DETAIL
SCALE: 3" = 1'-0" 08600-01 02/09/99



A JAMB DETAIL (HEAD SIMILAR)
SCALE: 3" = 1'-0" 08430-04 02/09/99

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS " 735-88 TOLL PLAZA MODIFY EXISTING " AND " 770-101-106 BUILDING ". ITEMS INDICATED " TECH SHOP " SHALL APPLY TO " 770-101-106 BUILDING " ONLY.

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	E.A.C.	01/24/00	DRAWN BY	E.J.M.	01/24/00
CHECKED BY	E.A.C.	01/24/00	CHECKED BY	E.A.C.	01/24/00

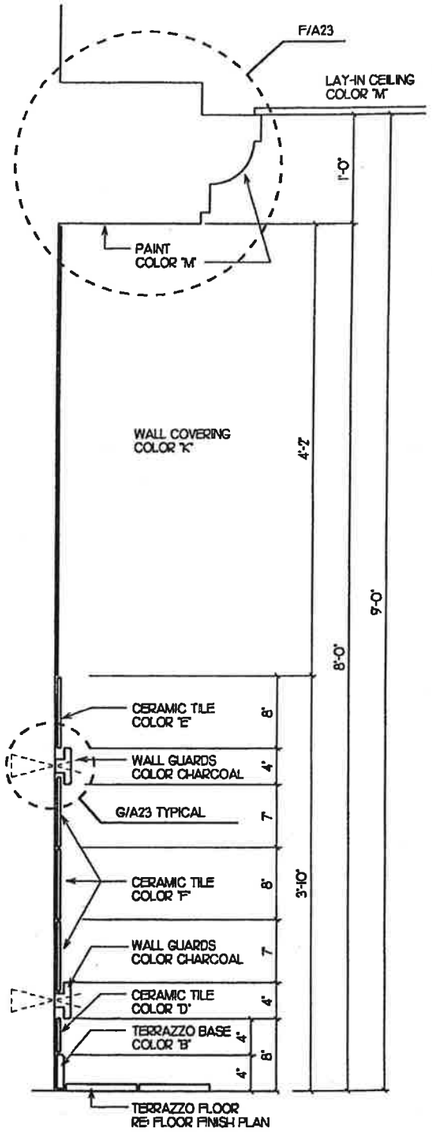
SUPERVISED BY: EDWARD A. CALDWELL, AIA

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

DOOR AND WINDOW DETAILS

#A22 06/30/00

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A23

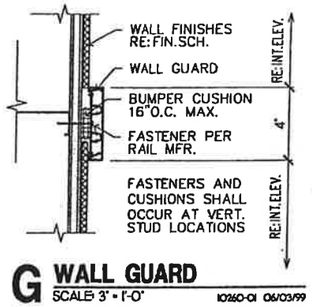


NOTE: REFER TO SHEET A21 FOR COLORS

H WALL BANDS TYP.

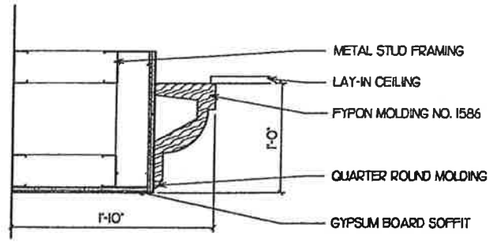
SCALE: 1 1/2" = 1'-0" W508 06/05/99

0 1 2



G WALL GUARD

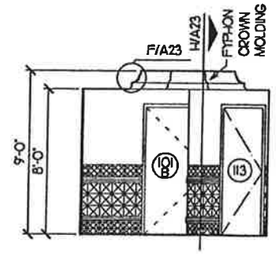
SCALE: 3" = 1'-0" 10260-01 06/03/99



F CEILING CROWN MOLDING

SCALE: 1 1/2" = 1'-0" 06400-50 02/09/99

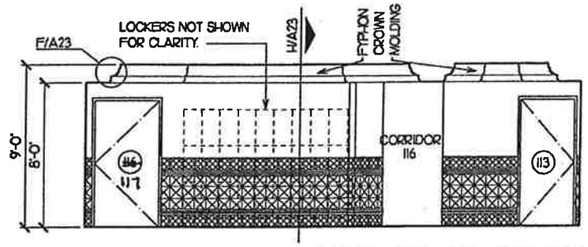
0 1 2



E ELEVATION CORRIDOR 116

SCALE: 1/4" = 1'-0" E05 01/10/00

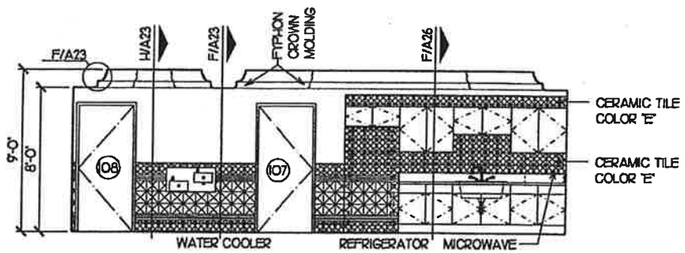
0 4 8 12



D ELEVATION ROOMS 106 AND 107

SCALE: 1/4" = 1'-0" E04 01/10/00

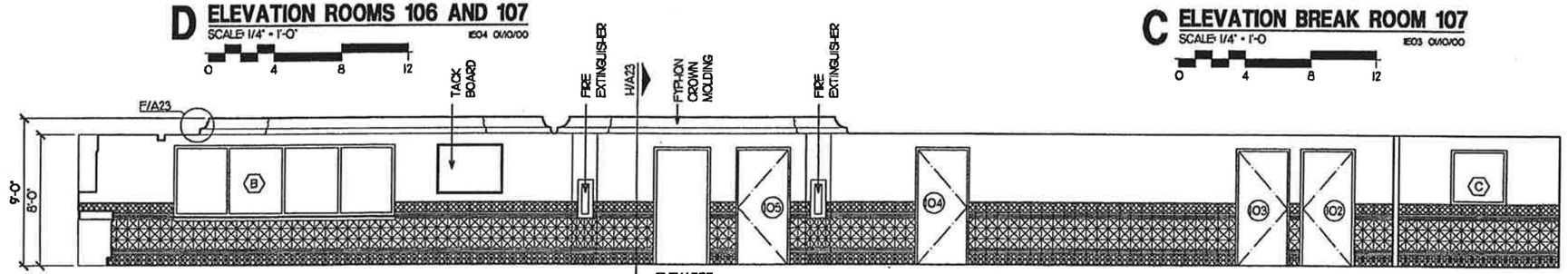
0 4 8 12



C ELEVATION BREAK ROOM 107

SCALE: 1/4" = 1'-0 E03 01/10/00

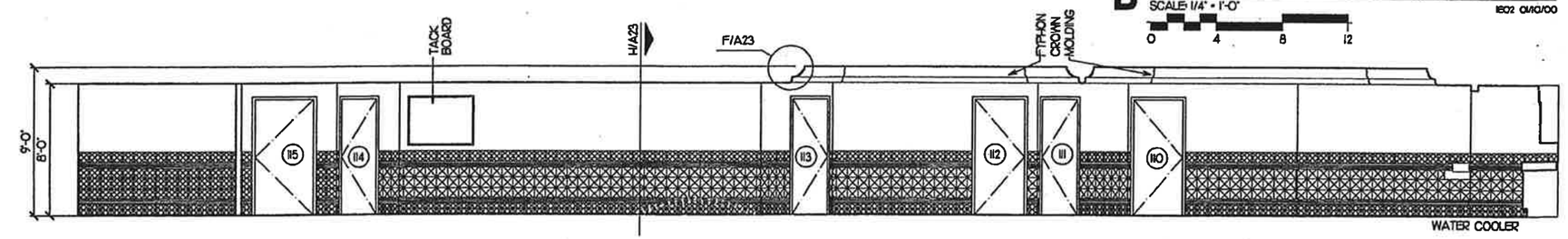
0 4 8 12



B ELEVATION ROOMS 101, 106, 107 AND 116

SCALE: 1/4" = 1'-0" E02 01/10/00

0 4 8 12



A ELEVATION ROOMS 101, 116, 106 AND 107

SCALE: 1/4" = 1'-0" E01 01/10/00

0 4 8 12

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS " 735-88 TOLL PLAZA MODIFY EXISTING " AND " 770-101-106 BUILDING ". ITEMS INDICATED " TECH SHOP " SHALL APPLY TO " 770-101-106 BUILDING " ONLY.

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	E.A.C.	01/24/00	DRAWN BY	E.J.M.	01/24/00
CHECKED BY	E.A.C.	01/24/00	CHECKED BY	E.A.C.	01/24/00

SUPERVISED BY: EDWARD A. CALDWELL, AIA

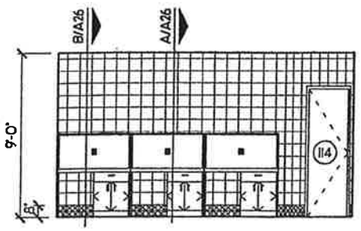
DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners

MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

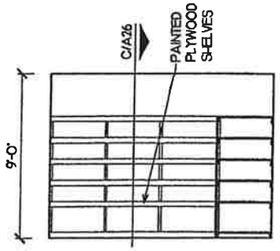
INTERIOR ELEVATIONS

#A23 01/10/00

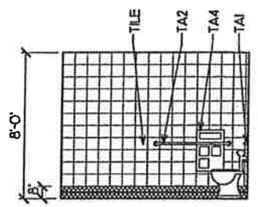
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A24



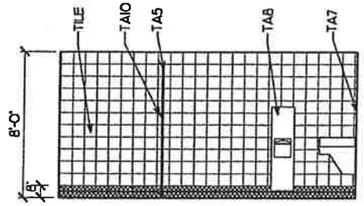
R COUNTING ROOM 114
SCALE: 1/4" = 1'-0" IE9 06/03/99



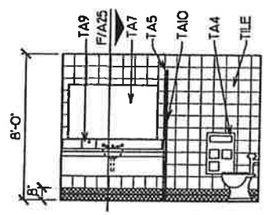
L ELEVATION ROOM 112
SCALE: 1/4" = 1'-0" IE5 06/04/99



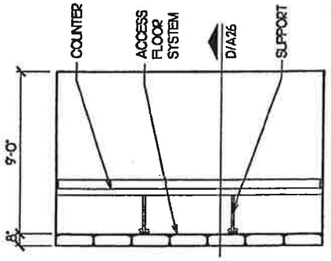
G ELEVATION ROOM 109
SCALE: 1/4" = 1'-0" IE1 06/03/99



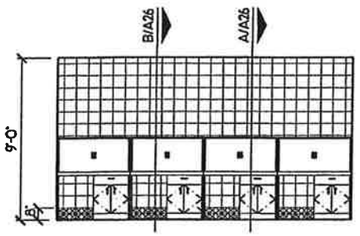
C ELEVATION ROOM 108
SCALE: 1/4" = 1'-0" IE07 06/03/99



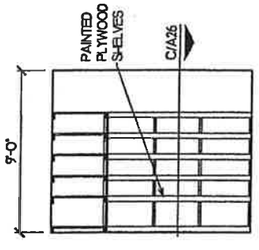
B ELEVATION ROOM 108
SCALE: 1/4" = 1'-0" IE06 06/03/99



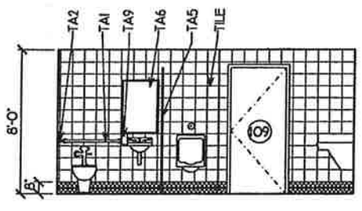
U RECORDER 104
SCALE: 1/4" = 1'-0" IE22 06/03/99



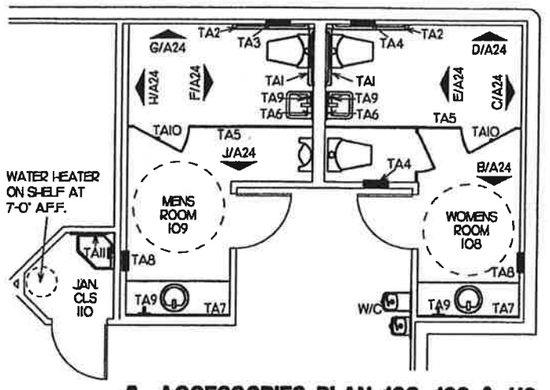
P COUNTING ROOM 114
SCALE: 1/4" = 1'-0" IE8 06/03/99



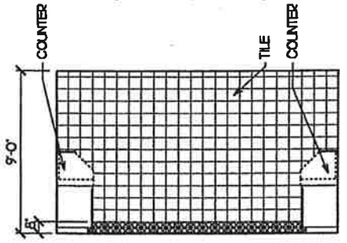
K ELEVATION ROOM 112
SCALE: 1/4" = 1'-0" IE4 06/04/99



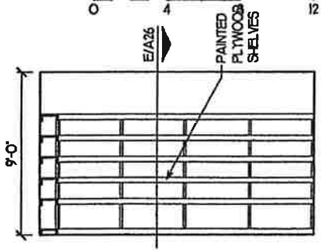
F ELEVATION ROOM 109
SCALE: 1/4" = 1'-0" IE10 06/03/99



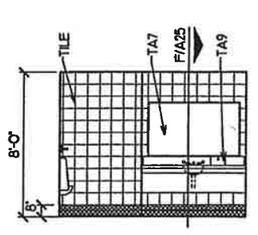
A ACCESSORIES PLAN 108, 109 & 110
SCALE: 1/4" = 1'-0" PP01 06/03/99



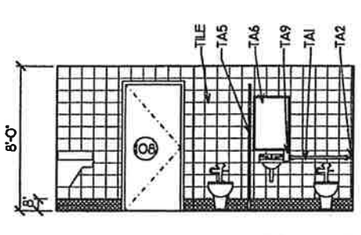
T COUNTING ROOM 114
SCALE: 1/4" = 1'-0" IE21 06/03/00



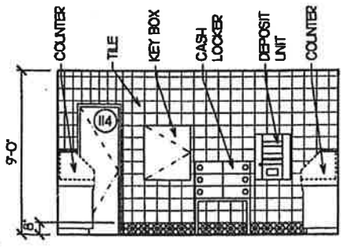
N ELEVATION VAULT 115
SCALE: 1/4" = 1'-0" IE17 06/04/99



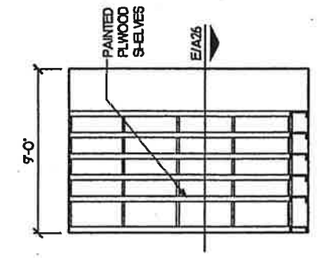
J ELEVATION ROOM 109
SCALE: 1/4" = 1'-0" IE13 06/03/99



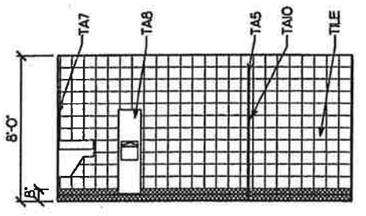
E ELEVATION ROOM 108
SCALE: 1/4" = 1'-0" IE09 06/03/99



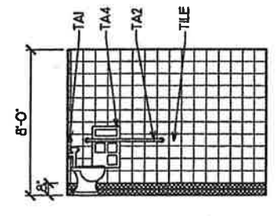
S COUNTING ROOM 114
SCALE: 1/4" = 1'-0" IE20 06/03/99



M ELEVATION VAULT 115
SCALE: 1/4" = 1'-0" IE16 06/23/99



H ELEVATION ROOM 109
SCALE: 1/4" = 1'-0" IE12 06/03/99



D ELEVATION ROOM 108
SCALE: 1/4" = 1'-0" IE08 06/03/99

TOILET ACCESSORIES SCHEDULE

SC04 06/04/99

MARK	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	REMARKS
TA1	GRAB BAR	BOBRICK	6206 X 36	TOP AT 36" A.F.F.
TA2	GRAB BAR	BOBRICK	6206 X 48	TOP AT 36" A.F.F.
TA3	RECESSED TOILET SEAT COVER AND TOILET TISSUE DISPENSER	BOBRICK	B-3474	TOP AT 45" A.F.F.
TA4	TOILET SEAT COVER DISPENSER, SANITARY NAPKIN DISPOSAL AND TOILET TISSUE DISPENSER	BOBRICK	B-3574	TOP AT 45" A.F.F.
TA5	TOILET PARTITION	-	-	-
TA6	MIRROR	BOBRICK	B-290 2436	BOTTOM AT 40" A.F.F.
TA7	MIRROR	BOBRICK	B-290 6036	BOTTOM AT 40" A.F.F.
TA8	RESESSED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE	BOBRICK	B-38034	TOP AT 60" A.F.F.
TA9	SOAP DISPENSER	BOBRICK	B-4036	TOP AT 40" A.F.F.
TA10	COAT HOOK	BOBRICK	B-233	54" A.F.F.
TA11	MOP RACK	BOBRICK	B-223X36	36" LONG 60" A.F.F.

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS "735-88 TOLL PLAZA MODIFY EXISTING" AND "770-101-106 BUILDING". ITEMS INDICATED "TECH SHOP" SHALL APPLY TO "770-101-106 BUILDING" ONLY.

#A24 06/03/00

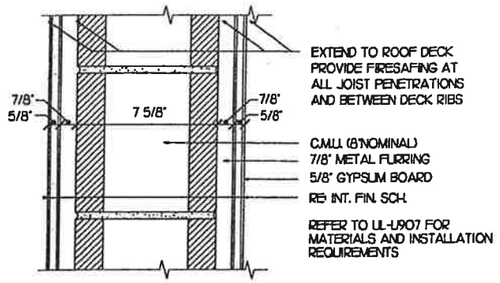
REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	E.A.C.	01/24/00	DRAWN BY	E.J.M.	01/24/00
CHECKED BY	E.A.C.	01/24/00	CHECKED BY	E.A.C.	01/24/00
SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

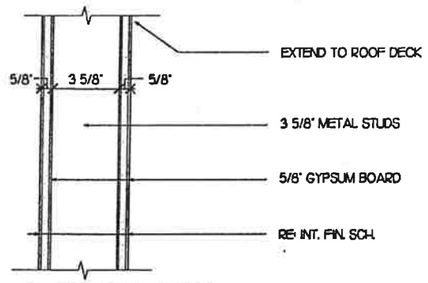
DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ENLARGED PLANS AND ELEVATIONS

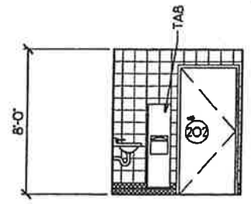
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A25



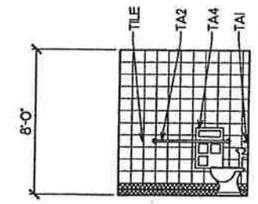
K 1 HOUR PARTITION
SCALE: 3" = 1'-0" WT04 05/23/99



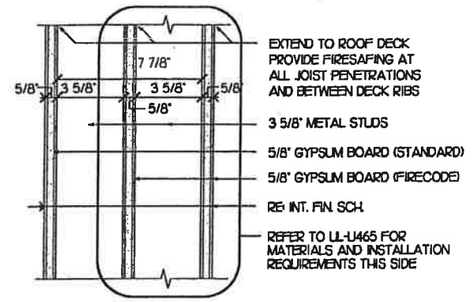
G TYPICAL WALL
SCALE: 3" = 1'-0" WT01 05/04/99



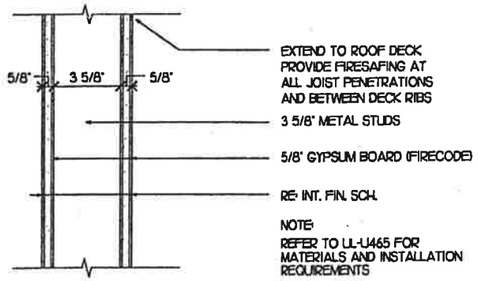
E TECH SHOP ROOM 202
SCALE: 1/4" = 1'-0" IE26 01/13/00



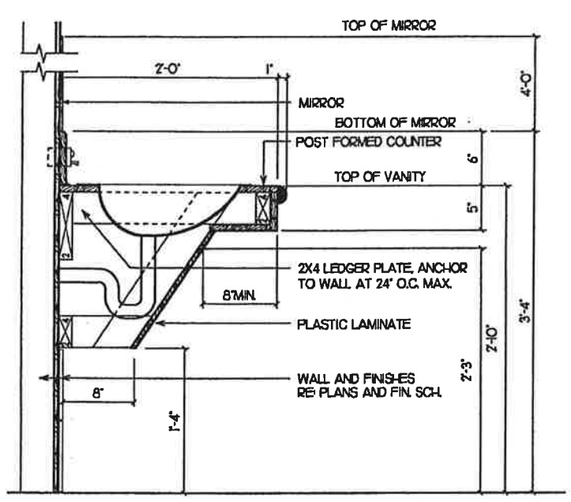
C TECH SHOP ROOM 202
SCALE: 1/4" = 1'-0" IE24 01/13/00



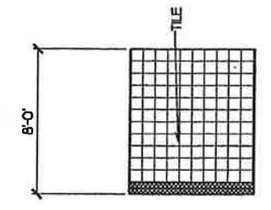
J 1 HOUR PARTITION
SCALE: 3" = 1'-0", UL-U465 WT03 05/23/99



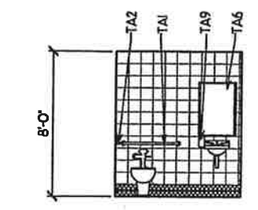
H 1 HOUR PARTITION
SCALE: 3" = 1'-0" WT02 05/04/99



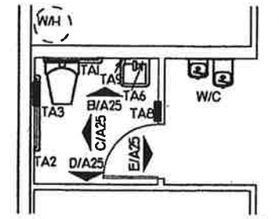
F VANITY COUNTER DETAIL
SCALE: 1 1/2" = 1'-0" 06400-12 02/09/99



D TECH SHOP ROOM 202
SCALE: 1/4" = 1'-0" IE25 01/13/00



B TECH SHOP ROOM 202
SCALE: 1/4" = 1'-0" IE23 01/13/00



A TECH SHOP ROOM 202
SCALE: 1/4" = 1'-0" PP03 01/13/00

02/04/00

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS " 735-88 TOLL PLAZA MODIFY EXISTING " AND " 770-101-106 BUILDING ". ITEMS INDICATED " TECH SHOP " SHALL APPLY TO " 770-101-106 BUILDING " ONLY.

A25 01/13/00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

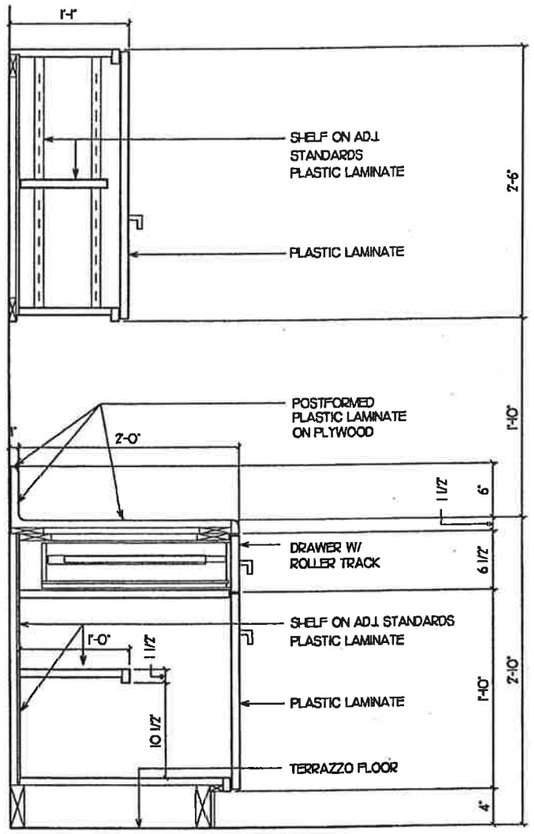
	NAME	DATE		NAME	DATE
DESIGNED BY	E.A.C.	01/24/00	DRAWN BY	E.J.M.	01/24/00
CHECKED BY	E.A.C.	01/24/00	CHECKED BY	E.A.C.	01/24/00

SUPERVISED BY: EDWARD A. CALDWELL, AIA

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ENLARGED PLAN AND ELEVATIONS

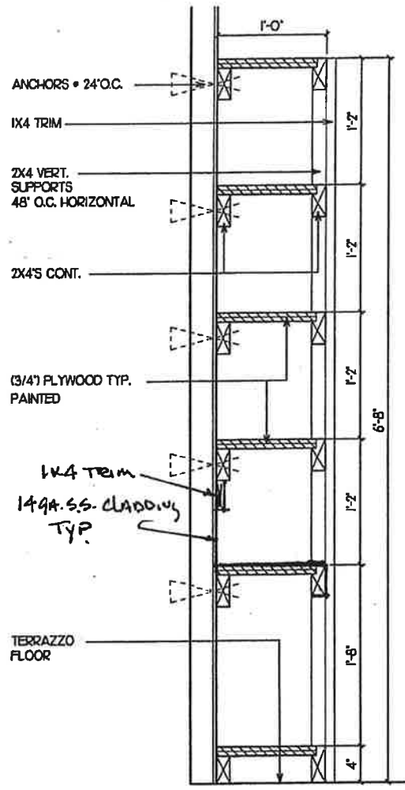
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A26



F CASE WORK SECTION

SCALE: 1 1/2" = 1'-0" 06400-13 05/24/99

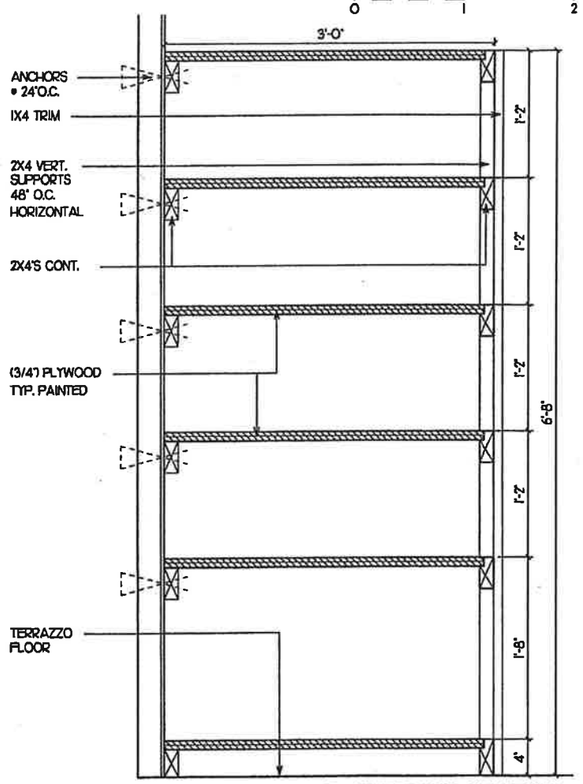
0 1 2



E SHELVING SECTION

SCALE: 1 1/2" = 1'-0" 06400-16 02/09/99

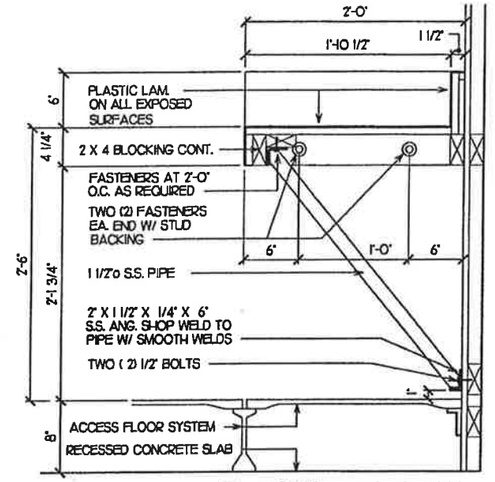
0 1 2



C SHELVING SECTION

SCALE: 1 1/2" = 1'-0" 06400-17 05/24/99

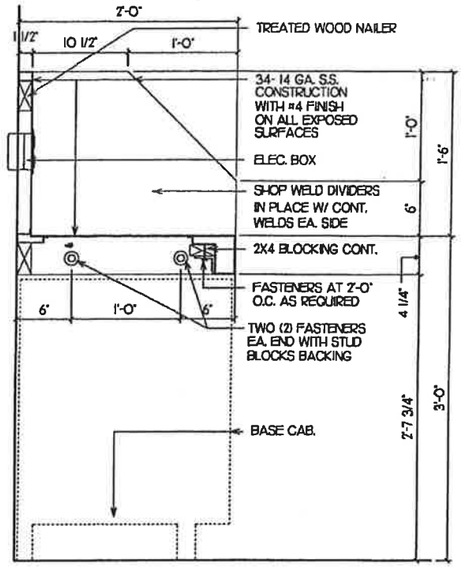
0 1 2



D COUNTER SECTION

SCALE: 1 1/2" = 1'-0" 06400-31 05/24/99

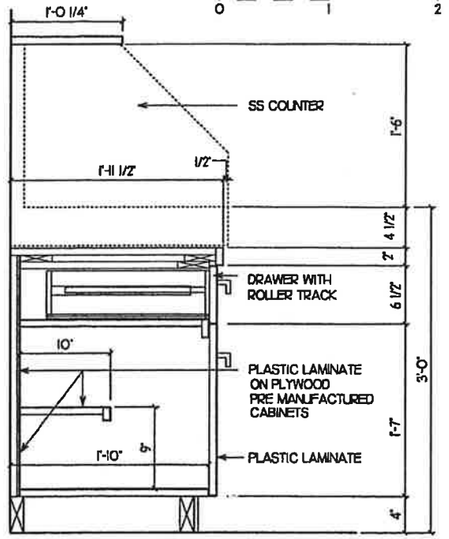
0 1 2



B COUNTER SECTION

SCALE: 1 1/2" = 1'-0" 06400-15 05/24/99

0 1 2



A CASEWORK SECTION

SCALE: 1 1/2" = 1'-0" 06400-14 05/24/99

0 1 2

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS " 735-88 TOLL PLAZA MODIFY EXISTING " AND " 770-101-106 BUILDING ". ITEMS INDICATED " TECH SHOP " SHALL APPLY TO " 770-101-106 BUILDING " ONLY.

=A26 01/03/00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	E.A.C.	01/24/00	DRAWN BY	E.M.	01/24/00
CHECKED BY	E.A.C.	01/24/00	CHECKED BY	E.A.C.	01/24/00

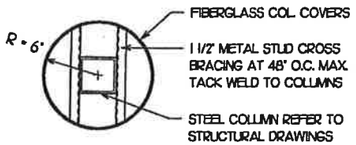
SUPERVISED BY: EDWARD A. CALDWELL, AIA

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners

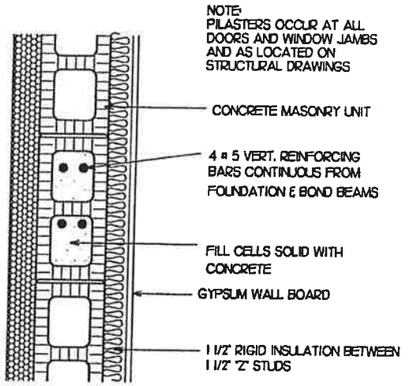
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

CABINET DETAILS

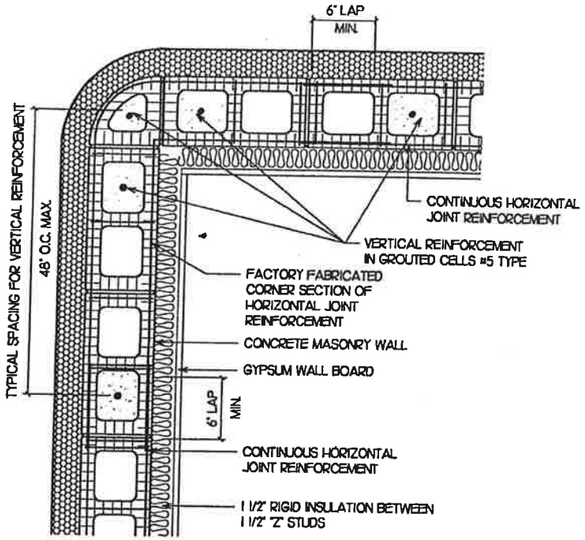
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A27



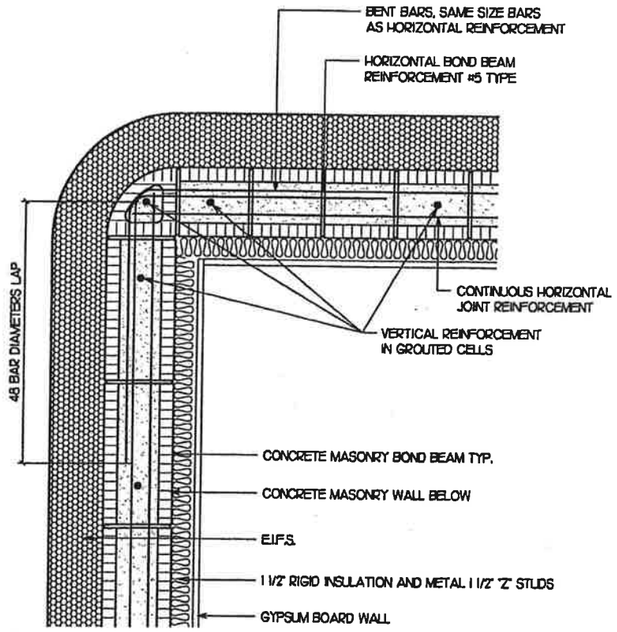
E COLUMN SECTION
SCALE: 1 1/2" = 1'-0" DTOI 06/30/99



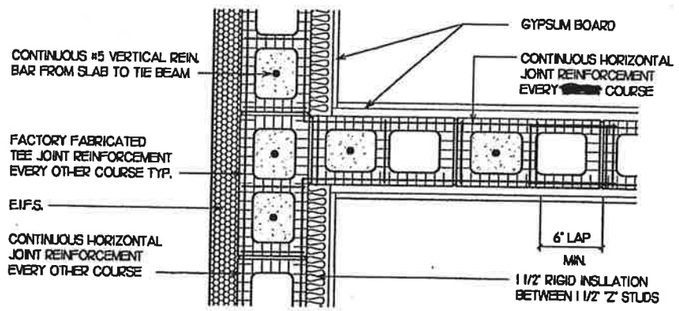
D C.M.U. PILASTER
SCALE: 1 1/2" = 1'-0" 04200-02 06/24/99



B WALL CORNER JOINT REINFORCEMENT
SCALE: 1 1/2" = 1'-0" 04100-03 06/23/99



C BOND BEAM CORNER
SCALE: 1 1/2" = 1'-0" 04100-04 06/23/99



A C.M.U. WALL INTERSECTION
SCALE: 1 1/2" = 1'-0" 04100-02 06/23/99

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS " 735-88 TOLL PLAZA MODIFY EXISTING " AND " 770-101-106 BUILDING ". ITEMS INDICATED " TECH SHOP " SHALL APPLY TO " 770-101-106 BUILDING " ONLY.

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

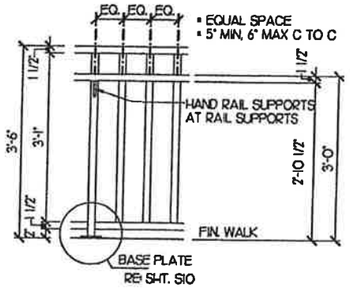
	NAME	DATE		NAME	DATE
DESIGNED BY	E.A.C.	01/24/00	DRAWN BY	E.J.M.	01/24/00
CHECKED BY	E.A.C.	01/24/00	CHECKED BY	E.A.C.	01/24/00
SUPERVISED BY:	EDWARD A. CALDWELL, AIA				

DAVIS VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

WALL SECTIONS AND DETAILS

A27 01/03/00

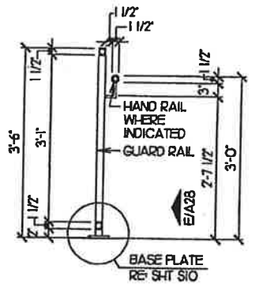
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	A28



E GUARD RAIL ELEVATION

SCALE: 3/4" = 1'-0" 02520-19 06/29/99

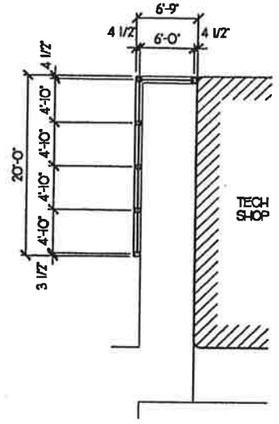
0 1 2 4



D GUARD RAIL SECTION

SCALE: 3/4" = 1'-0" 02520-18 06/29/99

0 1 2 4

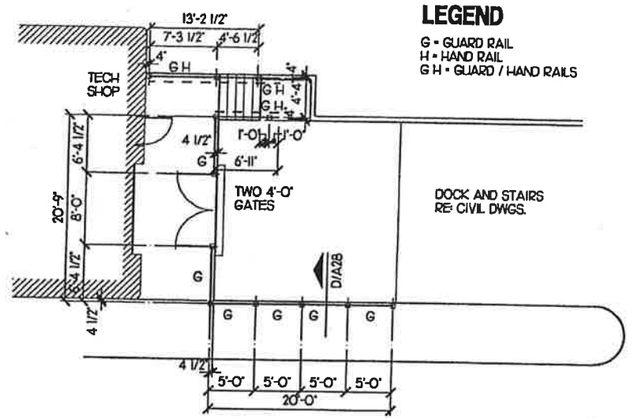


C TECH SHOP GUARDRAILS

SCALE: 1/8" = 1'-0" PP05 01/13/00

0 8 16 32

N

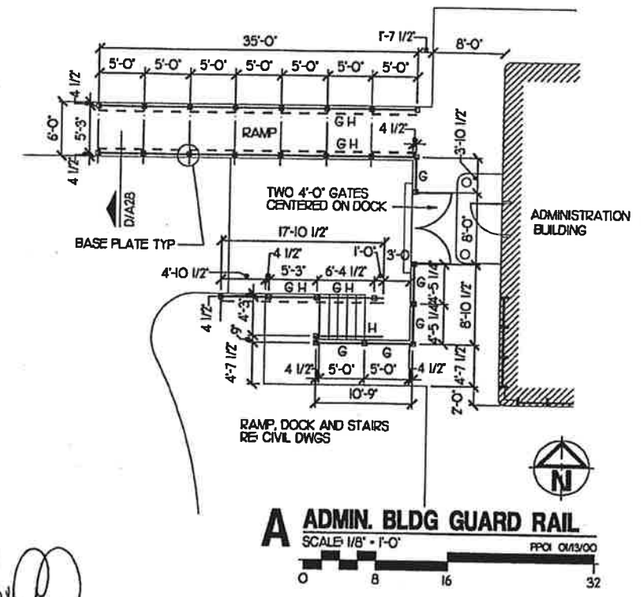


B TECH SHOP GUARDRAILS

SCALE: 1/8" = 1'-0" PP04 01/13/00

0 8 16 32

N



A ADMIN. BLDG GUARD RAIL

SCALE: 1/8" = 1'-0" PP01 01/13/00

0 8 16 32

N

NOTE: UNLESS INDICATED OTHERWISE, ALL ITEMS SHALL APPLY TO BOTH BIDS " 735-88 TOLL PLAZA MODIFY EXISTING " AND " 770-101-106 BUILDING ". ITEMS INDICATED " TECH SHOP " SHALL APPLY TO " 770-101-106 BUILDING " ONLY.

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	E.A.C.	01/24/00	DRAWN BY	E.J.M.	01/24/00
CHECKED BY	E.A.C	01/24/00	CHECKED BY	E.A.C.	01/24/00

SUPERVISED BY: EDWARD A. CALDWELL, AIA

DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners

MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

LOADING DOCK DETAILS AT ADMIN. BUILDING

"A28 01/13/00

FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	C01

GENERAL NOTES

1. ALL STATIONING SHOWN IN PLANS IS IN REFERENCE TO ℄ CONSTRUCTION.
2. IT IS NOT THE INTENT OF THESE PLANS TO SHOW ALL TEMPORARY DRAINAGE AND INCIDENTAL CONSTRUCTION NECESSARY TO MAINTAIN TRAFFIC. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE TEMPORARY DRAINAGE, AS REQUIRED.
3. THE CONTRACTOR SHALL PROVIDE EROSION CONTROL/SEDIMENTATION BARRIER (HAY BALES OR SILT FENCE) TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS, AND WATERWAYS. IN ADDITION, THE CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL ON THE GROUND IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT THE SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR BY VEHICLE TRAFFIC, THE CONTRACTOR SHALL REMOVE AND CLEAN SAID EARTH FROM THE OFF-SITE AREAS TO THE SATISFACTION OF THE ENGINEER AND/OR LOCAL AUTHORITIES.

UTILITY NOTES

1. UTILITY COMPANIES SHALL BE CONTACTED BY THE CONTRACTOR AT LEAST 48 HOURS PRIOR TO CONSTRUCTION BY CALLING SUNSHINE STATE ONE CALL AT 1-800-432-4770.
2. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY AND AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES AFFECTING HIS WORK. ANYTHING NOT SHOWN ON THESE DRAWINGS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND SHALL NOT CONSTITUTE AN EXTRA, UNLESS APPROVED BY THE ENGINEER.
3. WATER AND SANITARY SEWER UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HILLSBOROUGH COUNTY WATER AND WASTEWATER TECHNICAL MANUAL (HCWWTM) FOR SUBDIVISION AND SITE DEVELOPMENT PROJECTS.
4. WATER MAIN MATERIAL SHALL BE 3" PVC MEETING SPECIFICATION ASTM D2241, CL1120 OR 1220, SDR21. WATER MAIN FITTINGS SHALL BE SCHEDULE 80 PVC WITH SOLVENT WELDED OR THREADED JOINTS AND CONFORM TO THE REQUIREMENTS OF ASTM D2467, AND D2464, RESPECTIVELY (HCWWTM SEC. 3.9 & SEC. 3.14).
5. SANITARY SEWER MATERIAL SHALL BE 8" PVC MEETING SPECIFICATION ASTM D3034, SDR35 OR SDR 26. SANITARY SEWER FITTINGS SHALL BE MADE OF PVC MATERIAL HAVING A CELL CLASSIFICATION OF 12454B, 12454C OR 13354B AS DEFINED IN ASTM D1784 (HCWWTM SEC. 4.5).
6. SEE PLUMBING PLANS FOR ADDITIONAL WATER AND SANITARY SEWER INFORMATION.

TRAFFIC CONTROL PLAN NOTES

1. TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEX 600 SERIES.
2. NO LANE CLOSURES WILL BE PERMITTED DURING PEAK TRAFFIC PERIODS. WHEN IT IS NECESSARY TO CLOSE TOLL COLLECTION TRAFFIC LANES IN ORDER TO FACILITATE CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL SCHEDULE HIS ACTIVITIES SO AS NOT TO IMPEDE TRAFFIC MOVEMENT OR TOLL COLLECTION OPERATION. NO CONSTRUCTION OPERATIONS AFFECTING FLOW SHALL OCCUR DURING PEAK HOURS. ALL LANES SHALL BE RESTORED FOR OPERATION DURING PEAK HOURS, INCLUDING REMOVAL OF BARRICADES, DEBRIS AND EQUIPMENT. PEAK HOURS ARE FROM 6:30 A.M. TO 10:00 A.M. AND 4:00 P.M. TO 6:30 P.M. ON WEEKDAYS. THE CONTRACTOR MAY WORK ALL HOURS ON SATURDAYS AND SUNDAYS WITH THE EXCEPTION OF SPECIAL EVENT(S) DAYS OR HOURS AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL SUBMIT A WEEKLY CONSTRUCTION ACTIVITY SCHEDULE CLEARLY SHOWING TIME AND DATE OF ANTICIPATED LANE CLOSINGS. A MINIMUM 48 HOUR NOTICE WILL BE REQUIRED TO CLOSE A TRAFFIC LANE. SAID LANE CLOSURE SHALL BE COORDINATED WITH THE TOLL PLAZA MANAGER AND APPROVED BY THE ENGINEER. CLOSE COORDINATION BETWEEN THE CONTRACTOR AND THE TOLL PLAZA MANAGER IS REQUIRED AT ALL TIMES IN ORDER TO DEAL WITH UNFORESEEN PROBLEMS OR EMERGENCIES.
3. TEMPORARY CONCRETE BARRIER WALL WITH TYPE C STEADY BURNING LIGHTS AND TEMPORARY INERTIAL ATTENUATOR SHALL BE USED TO DURING TEMPORARY TUNNEL STAIR CONSTRUCTION (SEE SKETCH BELOW). PROVIDE A VMS ON THE WESTBOUND CROSSTOWN PRIOR TO THE U.S HWY. 301 OFF RAMP EXIT. THE VMS SHALL READ:

MESSAGE 1	MESSAGE 2
PLAZA	OVRSZ
CONST	LOADS
AHEAD	USE EXIT

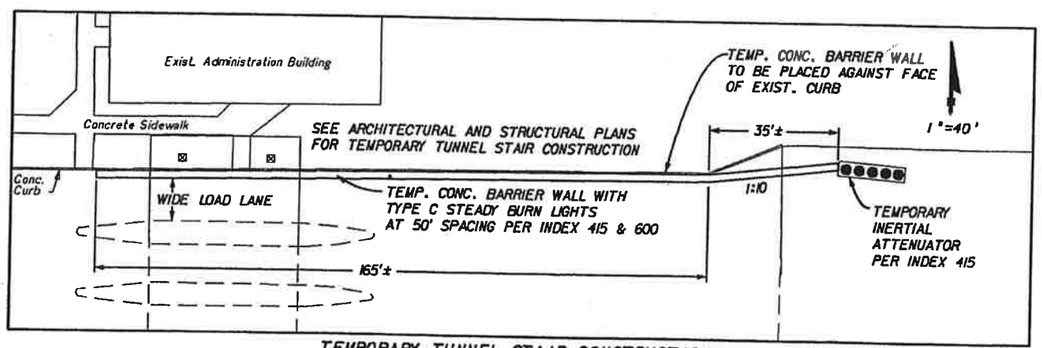
VMS TIMING
MESSAGE 1 =2.0 SECONDS
MESSAGE 2 =2.0 SECONDS

PROVIDE A VMS ON SOUTHBOUND AND NORTHBOUND U.S. HIGHWAY 301 PRIOR TO THE WESTBOUND CROSSTOWN ENTRANCE RAMPS, NORTHBOUND 78TH STREET PRIOR TO THE WESTBOUND CROSSTOWN ENTRANCE RAMP ON 78TH STREET, AND EASTBOUND AND WESTBOUND SR 60 (ADAMO DR.) PRIOR TO THE WESTBOUND CROSSTOWN ENTRANCE RAMP ON SR 60. THE VMS'S SHALL READ:

MESSAGE 1	MESSAGE 2
NO	ON
OVRSZ	EXPWY
LOADS	W-BND

VMS TIMING
MESSAGE 1 =2.0 SECONDS
MESSAGE 2 =2.0 SECONDS

THE VMS SHALL ONLY BE USED WHEN THE WIDE LOAD LANE AT THE PLAZA IS CLOSED OR REDUCED. MOTORIST SHALL BE ABLE TO SEE THE VMS A MINIMUM OF 900 FEET PRIOR TO THE LOCATION OF THE SIGN.



TEMPORARY TUNNEL STAIR CONSTRUCTION
TRAFFIC CONTROL PLAN

Brian Tanberg 2/4/00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	GD	01/00	DRAWN BY	GD	01/00
CHECKED BY	BRT	01/00	CHECKED BY	BRT	01/00

SUPERVISED BY: BRIAN R. TANBERG, P.E.

DAVID VOLKERT & ASSOCIATES, INC. Engineers • Architects • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

GENERAL NOTES

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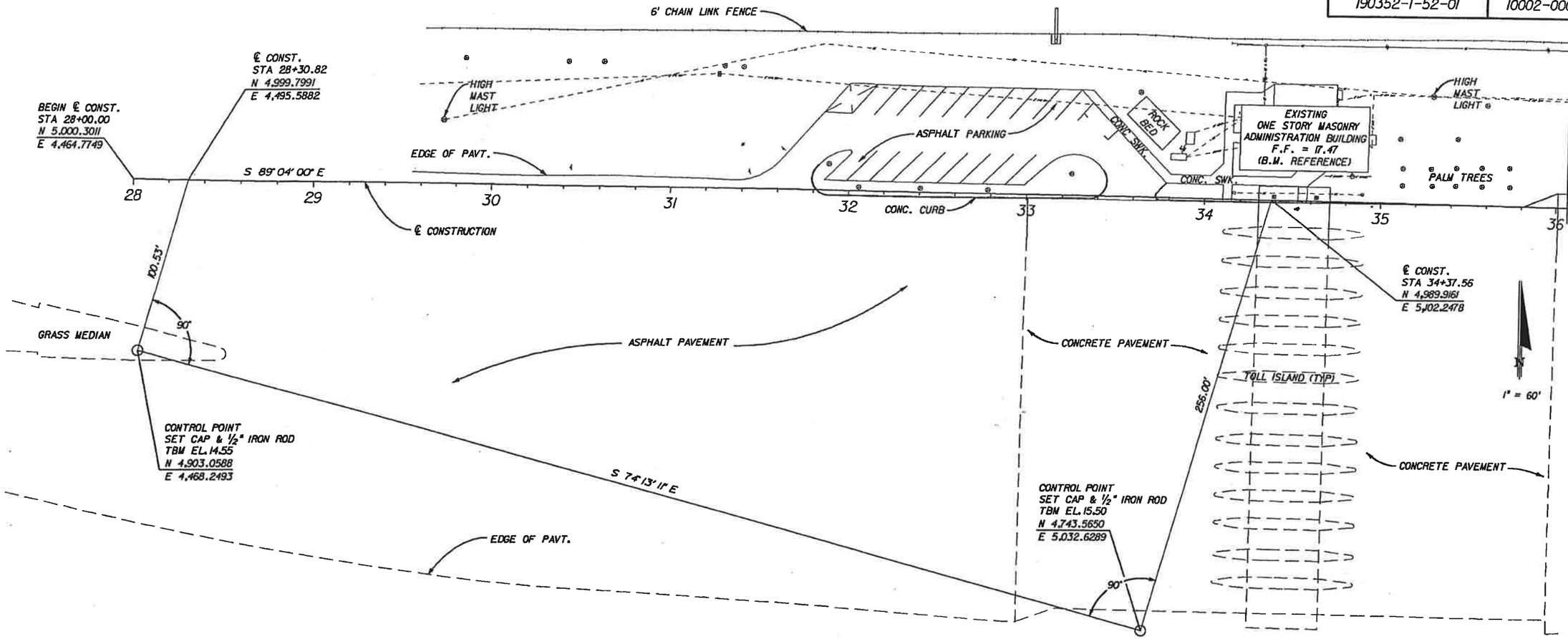
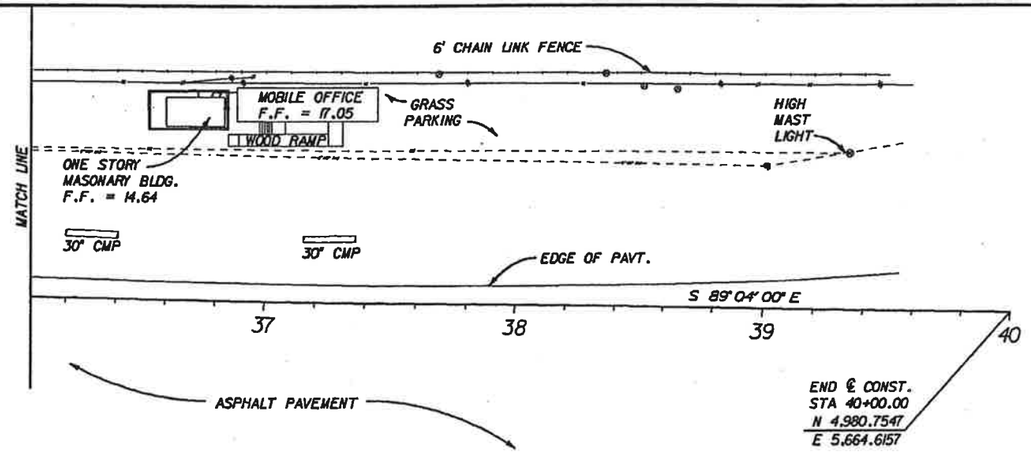
FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	C02





NOTES:

1. HORIZONTAL COORDINATE SYSTEM IS ASSUMED.
2. ALL ELEVATIONS REFERENCED FROM FINISHED FLOOR ELEVATION OF 17.47 AT EXISTING ADMINISTRATION BUILDING.

Brian Tanberg 2/4/00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	GD	01/00	DRAWN BY	GD	01/00
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ALIGNMENT & CONTROL POINTS

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FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	C03

LEGEND

- PROPOSED CONCRETE SIDEWALK
- PROPOSED PAVEMENT
- +76.40 / -42.65 — PROPOSED PLUS STATION/OFFSET LOCATION NOTE: NEG. OFFSET IS LEFT OF ℄ CONST. LOCATIONS ARE EDGE OF PAVT. AT RETURN LIMITS AND ANGLE BREAKS
- Point of Elev. 13.83 — PROPOSED ELEVATION WITH LEADER
- 13.83 Point of Elev. — PROPOSED ELEVATION WITHOUT LEADER
- PROPOSED RAMP WALL

SEE GRADING PLAN FOR FINSHED GRADE ELEVATIONS AND DRAINAGE STRUCTURE INFORMATION. SEE STANDARD INDEX NOS. 001 & 002 FOR ADDITIONAL ABBREVIATIONS AND SYMBOLS.

1" = 20'

6' TALL CHAIN LINK FENCE

15" RCP

M.E.S. INV. = 9.37

Jurisdictional Line

DRAINAGE SWALE

℄ SWALE

3" MAIN WATER VALVE

5" PINE

WEST POND

DUMPSTER AREA (N.I.C.)

CAMERA TO BE REMOVED BY OTHERS

WOOD POWER POLE W/ CAMERAS & SECURITY LIGHT

FDOT TYPE D CURB (TYP)

"NO LEFT TURN" SIGN

"STOP" SIGN

5" OAK

7" OAK

9" OAK

ASPHALT PARKING

ASPHALT PAVEMENT

6" CONCRETE BUMPER GUARD (TYP)

4" WHITE STRIPE (TYP)

4" BLUE STRIPE (EA. SIDE OF HC SPACE)

HANDICAPPED PAVT. SYMBOL SEE INDEX 17346

6" OAK

PROPOSED RAMP WALL (SEE STRUCTURAL PLANS FOR DETAILS)

LOADING RAMP

CANOPY LINE

MATCH LINE

SAWCUT AND MATCH EXIST.

MATCH TO EXIST. CURB

MATCH EXIST. CONC. PAVT.

CONC. CURB

CONC. SWK.

℄ CONSTRUCTION

S 89° 04' 00" E

ASPHALT PAVEMENT

CONCRETE PAVEMENT

Brian Tanberg 2/4/00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
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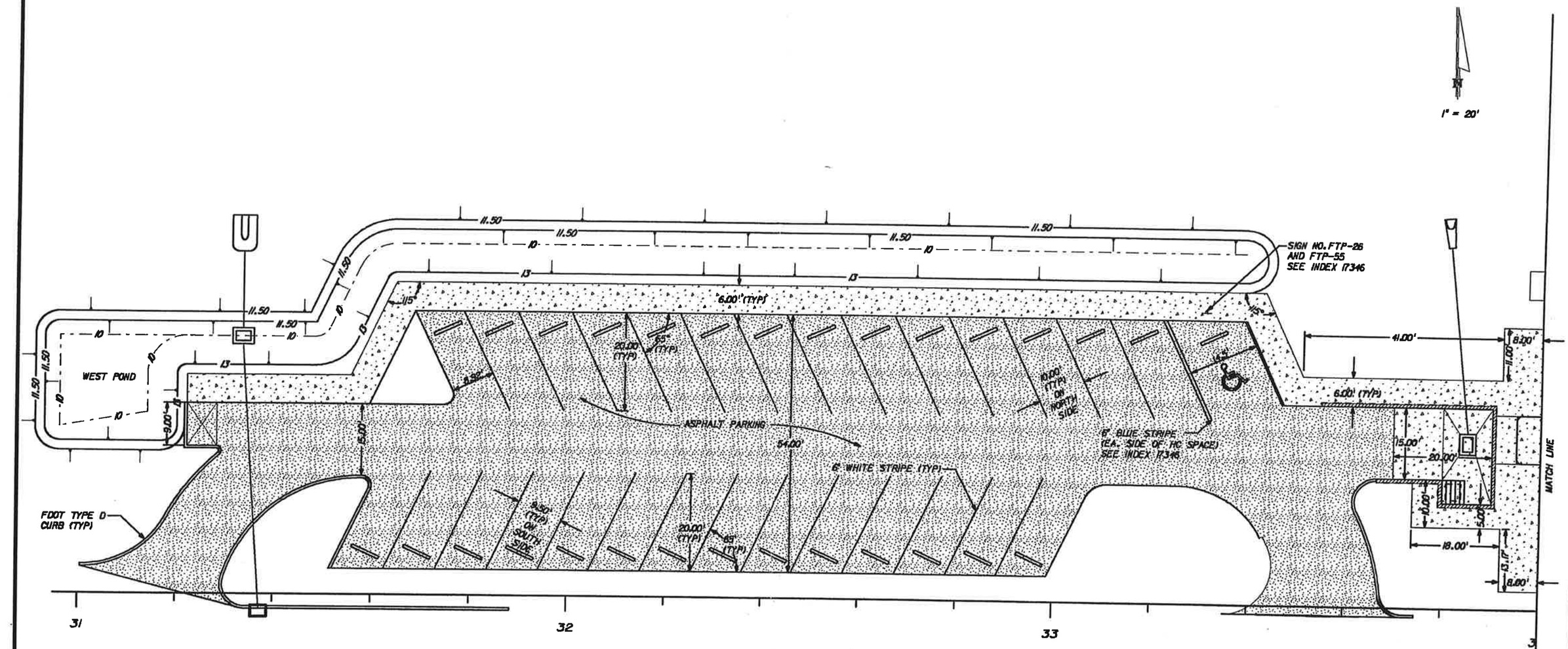
SITE PLAN

s:\eab\planrd01.dgn Fri Feb 4 10:28:18 2000

FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	C03

1" = 20'



REVISED STRIPING
PLAN 11/27/01

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	GD	01/00	DRAWN BY	GD	01/00
CHECKED BY	BRT	01/00	CHECKED BY	BRT	01/00

SUPERVISED BY: BRIAN R. TANBERG, P.E.

DAVID VOLKERT & ASSOCIATES, INC. Engineers • Architects • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

SITE PLAN

S:\eab\plan\rdlrev.dgn Mon Nov 26 16:47:22 2001

FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	C04

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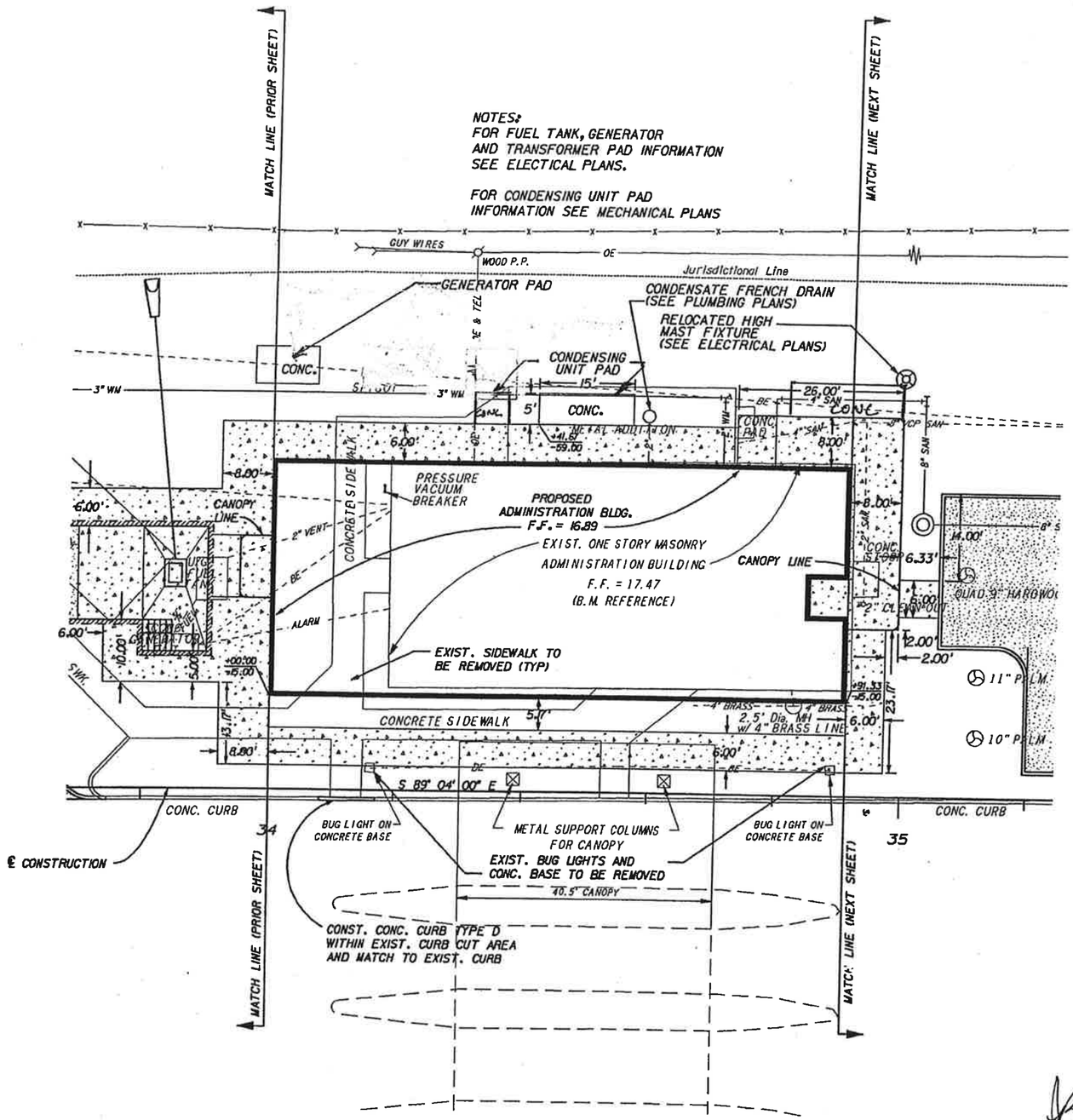


Brian Tanberg
2/4/00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

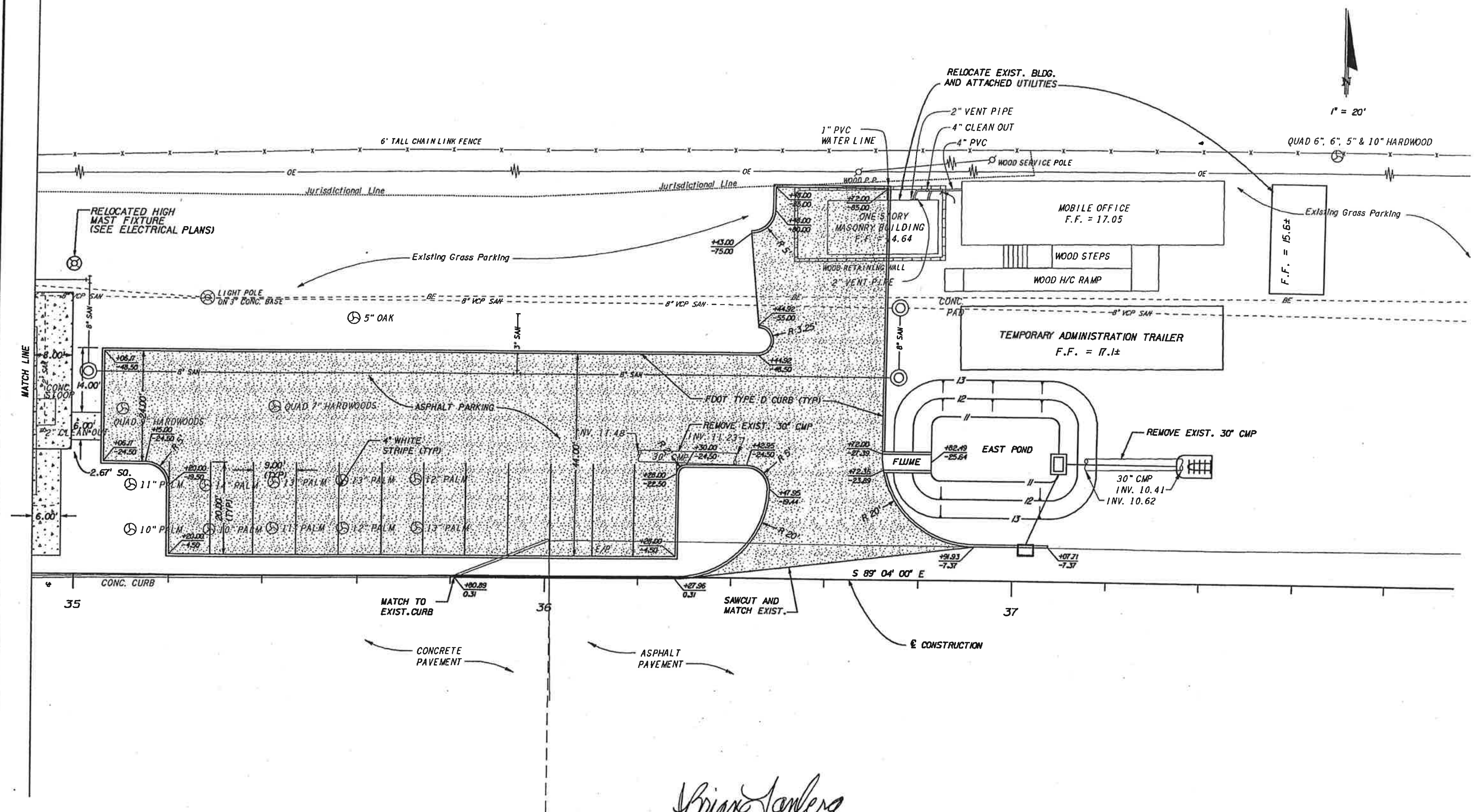
	NAME	DATE		NAME	DATE
DESIGNED BY	GD	01/00	DRAWN BY	GD	01/00
CHECKED BY	BRT	01/00	CHECKED BY	BRT	01/00
SUPERVISED BY:	BRIAN R. TANBERG, P.E.				

DAVID VOLKERT & ASSOCIATES, INC. Engineers • Architects • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

SITE PLAN

s:\roadplan\rd02.dgn Fri Feb 4 10:32:56 2000

FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	C05



N
1" = 20'
RELOCATE EXIST. BLDG. AND ATTACHED UTILITIES
2" VENT PIPE
4" CLEAN OUT
4" PVC
1" PVC WATER LINE
6' TALL CHAIN LINK FENCE
QUAD 6", 6", 5" & 10" HARDWOOD
WOOD SERVICE POLE
WOOD P.P.
OE
Jurisdictional Line
RELOCATED HIGH MAST FIXTURE (SEE ELECTRICAL PLANS)
Existing Grass Parking
ONE STORY MASONRY BUILDING F.F. = 14.64
WOOD RETAINING WALL
2" VENT PIPE
MOBILE OFFICE F.F. = 17.05
WOOD STEPS
WOOD H/C RAMP
F.F. = 15.6±
LIGHT POLE ON 3' CONC. BASE
8" VCP SAN
BE
CONC. PAD
5" OAK
TEMPORARY ADMINISTRATION TRAILER F.F. = 17.1±
MATCH LINE
CONC. STOOP
2" CLEAN-OUT
QUAD 3" HARDWOODS
QUAD 7" HARDWOODS
ASPHALT PARKING
FDOT TYPE D CURB (TYP)
4" WHITE STRIPE (TYP)
9.00' (TYP)
20.00' (TYP)
24.00'
44.00'
14.00'
8.00'
6.00'
2.67' SQ.
INV. 11.48
REMOVE EXIST. 30" CMP INV. 11.23
30" CMP
R 5
R 3.25'
R 20
11" PALM
13" PALM
12" PALM
10" PALM
EAST POND
FLUME
13
12
11
REMOVE EXIST. 30" CMP
30" CMP INV. 10.41
INV. 10.62
E/P
CONC. CURB
S 89° 04' 00" E
MATCH TO EXIST. CURB
SAWCUT AND MATCH EXIST.
℄ CONSTRUCTION
35
36
37
CONCRETE PAVEMENT
ASPHALT PAVEMENT

Brian Tanberg
2/4/00

s:\ved\planrd03.dgn Fri Feb 4 10:32:43 2000

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	GD	01/00	DRAWN BY	GD	01/00
CHECKED BY	BRT	01/00	CHECKED BY	BRT	01/00
SUPERVISED BY:	BRIAN R. TANBERG, P.E.				

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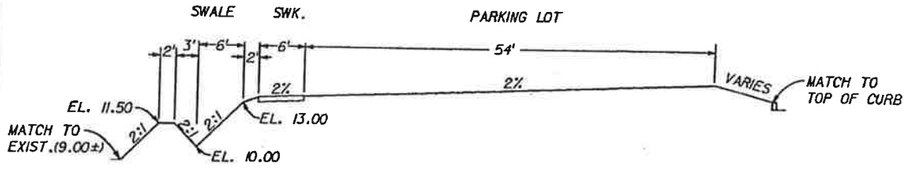
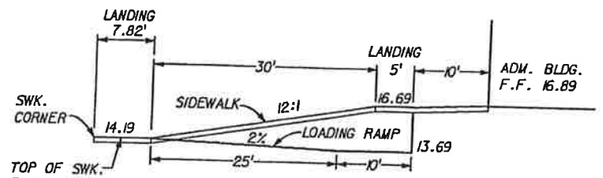
SITE PLAN

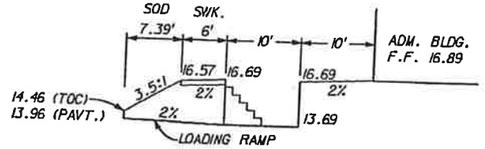
FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	C06



PARKING LOT & SWALE (A C06)
SCALE H:1"=20' V:1"=10'



LOADING RAMP & SIDEWALK (B C06)
SCALE H:1"=20' V:1"=10'



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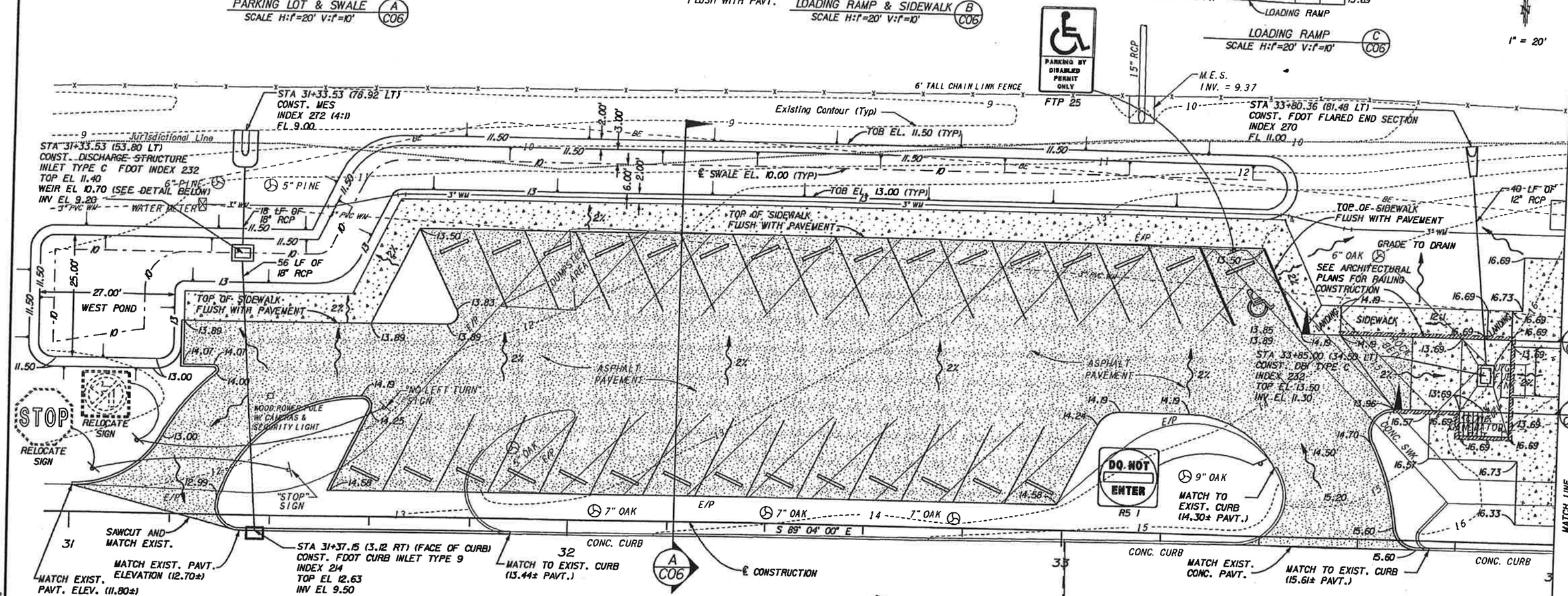
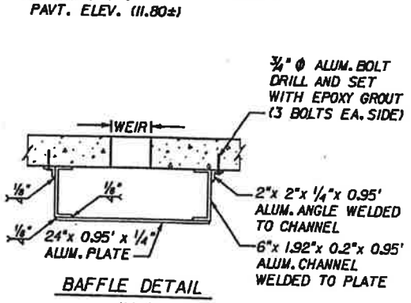
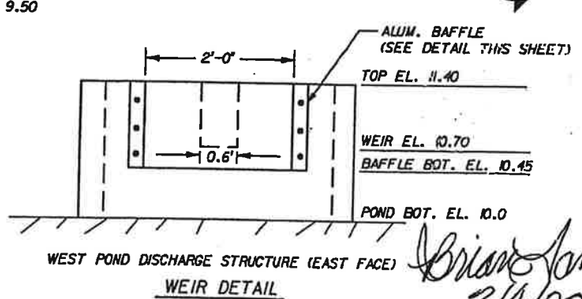
SCALE H:1"=20' V:1"=10'

1" = 20'





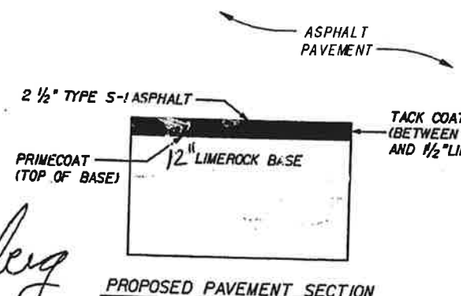
BAFFLE DETAIL
N.T.S.



WEST POND DISCHARGE STRUCTURE (EAST FACE)

WEIR DETAIL
N.T.S.

Brian Tanberg 2/4/00



PROPOSED PAVEMENT SECTION
N.T.S.

CONCRETE PAVEMENT

NOTES:
1. ELEVATIONS ARE SHOWN AT RETURN LIMITS (PC & PT), AND CORNERS. ELEVATIONS ARE FINISHED GRADE.
2. SEE SITE PLAN FOR HORIZONTAL LOCATIONS.
3. PROPOSED TOP OF CURB (TOC) ELEVATIONS ARE 6" ABOVE PAVEMENT ELEVATION AND ARE NOT SHOWN.
4. SEE STRUCTURAL PLANS FOR 12" RCP THROUGH RAMP WALL.
5. SIGN CODES REFER TO 1998 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND STANDARD INDEX 17355.

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	GD	01/00	DRAWN BY	GD	01/00
CHECKED BY	BRT	01/00	CHECKED BY	BRT	01/00

SUPERVISED BY: BRIAN R. TANBERG, P.E.

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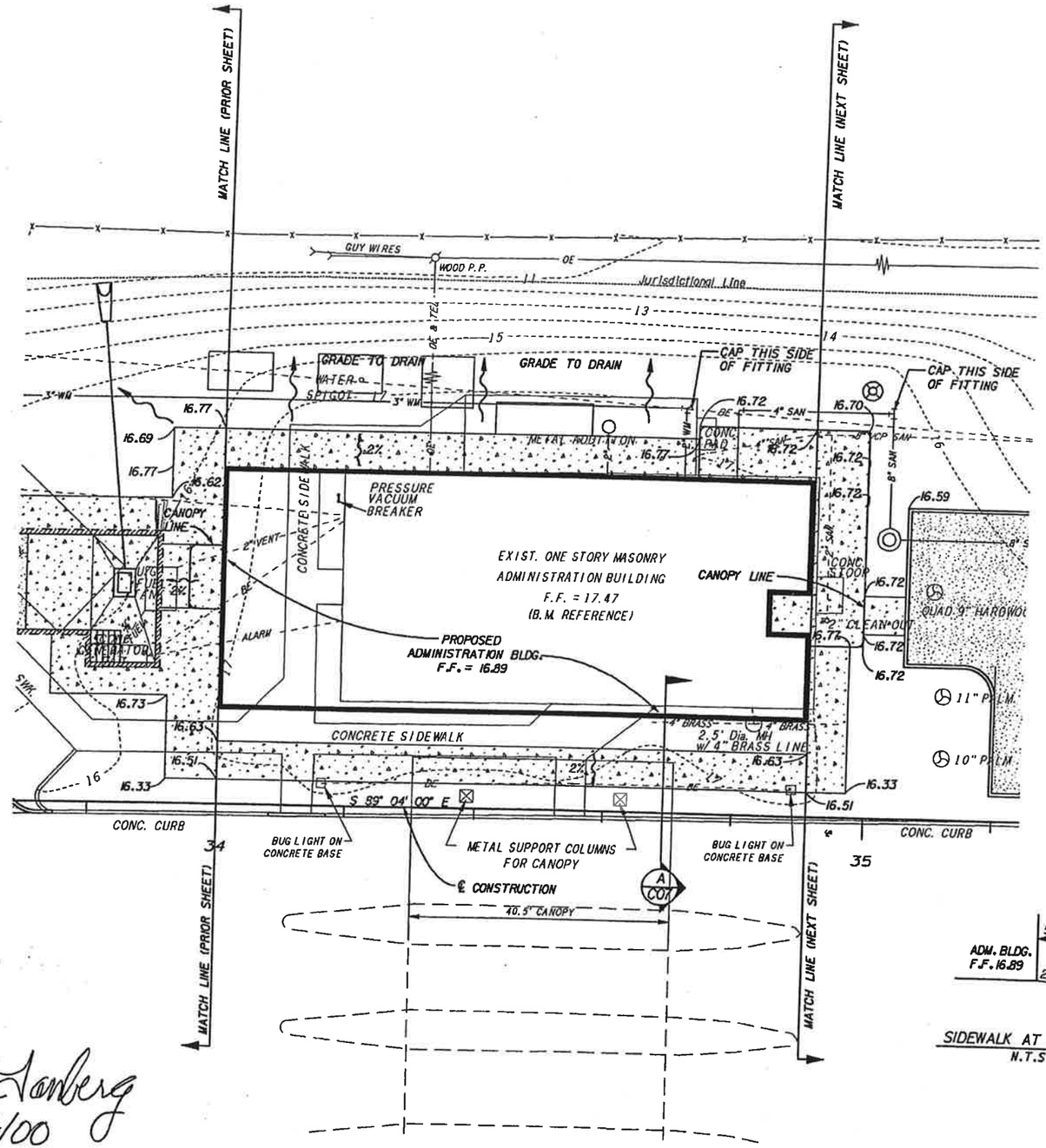
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

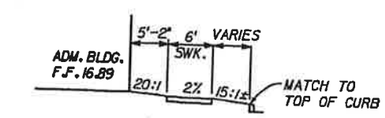
GRADING PLAN

s:\Kaab\grades01.dgn Fri Feb 4 10:33:35 2000

FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	C07

1" = 20'





SIDEWALK AT ADMIN. BLDG. A C07
N.T.S

Brian Tanberg
2/4/00

s:\roadway\grades02.dgn Fri Feb 4 10:34:00 2000

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	GD	01/00	DRAWN BY	GD	01/00
CHECKED BY	BRT	01/00	CHECKED BY	BRT	01/00

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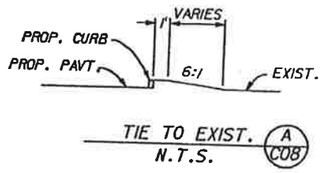
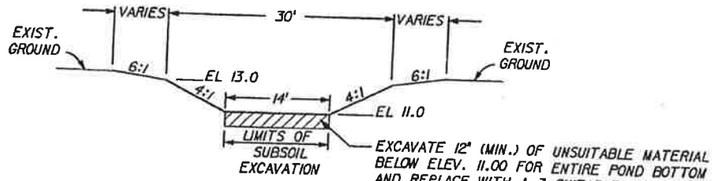
GRADING PLAN

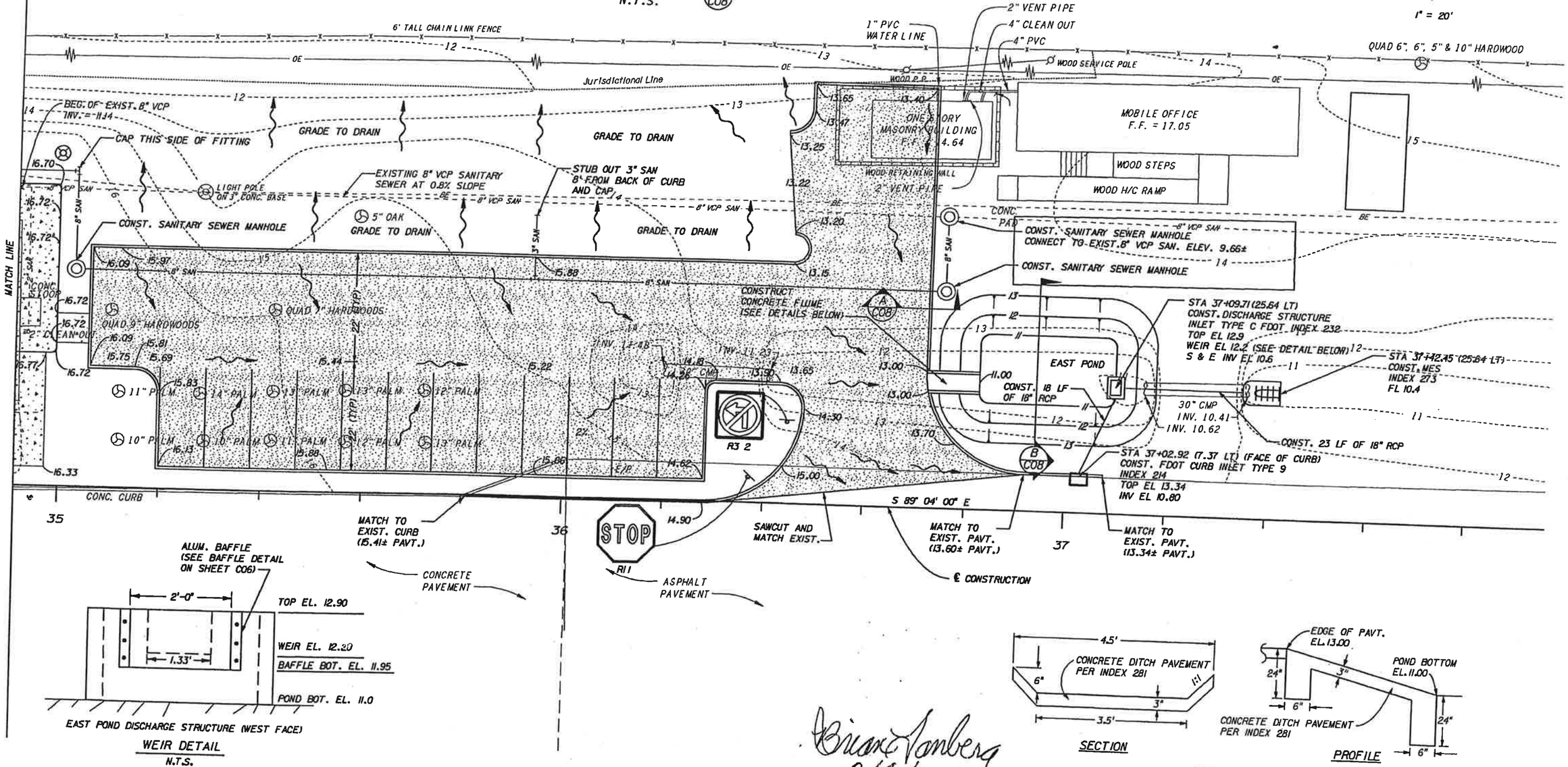
FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	C08



TIE TO EXIST. (A C08)
N.T.S.



EAST POND SECTION (B C08)
N.T.S.



WEIR DETAIL
N.T.S.

SECTION

PROFILE

FLUME DETAILS
N.T.S.

Brian Tanberg 2/4/00

REVISIONS												
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
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CHECKED BY	BRT	01/00	CHECKED BY	BRT	01/00

SUPERVISED BY: BRIAN R. TANBERG, P.E.

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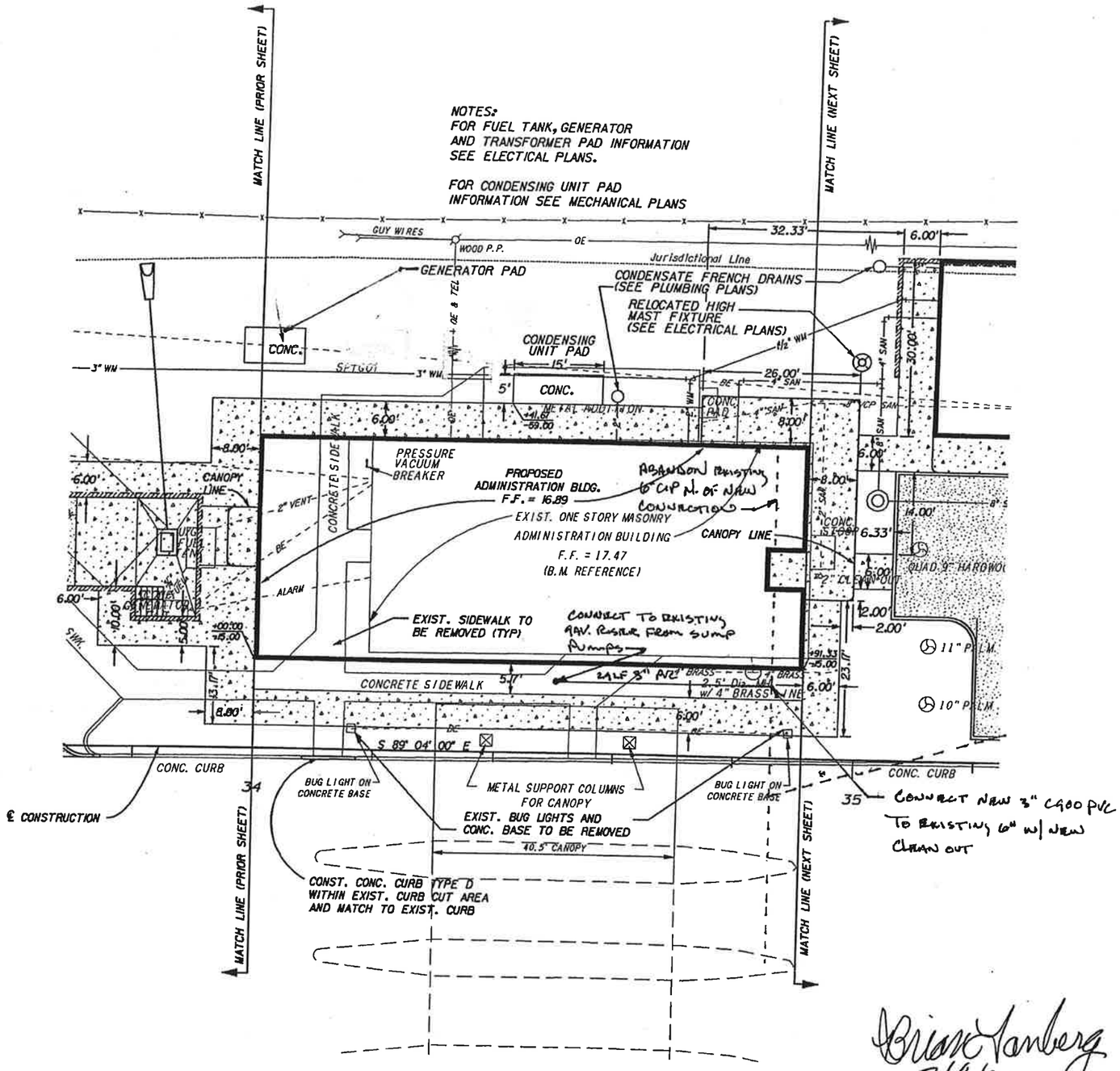
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

GRADING PLAN

S:\Veab\grades03.dgn Fri Feb 4 10:14:46 2000

FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	C09

1" = 20'



Brian Tanberg
2/4/00

REVISIONS											
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	NAME	DATE		NAME	DATE
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CHECKED BY	BRT	01/00	CHECKED BY	BRT	01/00

SUPERVISED BY: BRIAN R. TANBERG, P.E.

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SITE PLAN WITH OPTIONAL TECH SHOP

s:\vcad\plan\c04.dgn Fri Feb 4 10:35:24 2000

FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	C10

SEE STRUCTURAL PLANS FOR RETAINING WALL AND RAMP WALL DETAILS

6' TALL CHAIN LINK FENCE

PROPOSED RETAINING WALL

PROPOSED RAMP WALL

PROPOSED TECH. SHOP F.F.EL. = 16.50

Existing Grass Parking

LIGHT POLE ON 3' CONC. BASE

5" OAK

CANOPY LINE

LOADING RAMP

RAMP CENTERED ON SIDEWALK

ASPHALT PARKING

CONC. LOOP

2" CLEAN-OUT

2.67' SQ.

QUAD 7" HARDWOODS

QUAD HARDWOODS

11" PALM

10" PALM

12" PALM

13" PALM

4" WHITE STRIPE (TYP)

CONC. CURB

MATCH TO EXIST. CURB

CONCRETE PAVEMENT

ASPHALT PAVEMENT

FDOT TYPE D CURB (TYP)

CONNECT NEW 10" SDR 35 PVC PIPE TO EXISTING 10" PVC

CONSTRUCT WALL OF 10" SDR 35 PVC DRAIN PIPE

REMOVE EXIST. 30" CMP

30" CMP INV. 10.41 INV. 10.62

FLUME

EAST POND

WOOD R.P.

WOOD SERVICE POLE

1" PVC WATER LINE

2" VENT PIPE

4" CLEAN OUT

4" PVC

RELOCATE EXIST. BLDG. AND ATTACHED UTILITIES

ONE STORY MASONRY BUILDING F.F. = 14.64

WOOD RETAINING WALL

MOBILE OFFICE F.F. = 17.05

WOOD STEPS

WOOD H/C RAMP

TEMPORARY ADMINISTRATION TRAILER F.F. = 17.1±

CONC. PAD

Existing Grass Parking

F.F. = 15.6±

QUAD 6", 6", 5" & 10" HARDWOOD

1" = 20'

S 89° 04' 00" E

℄ CONSTRUCTION

MATCH LINE

35

36

37

Brian Tanberg
2/4/00

s:\eab\plan\rd05.dgn Fri Feb 4 10:34:22 2000

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	GD	01/00	DRAWN BY	GD	01/00
CHECKED BY	BRT	01/00	CHECKED BY	BRT	01/00

SUPERVISED BY : BRIAN R. TANBERG, P.E.

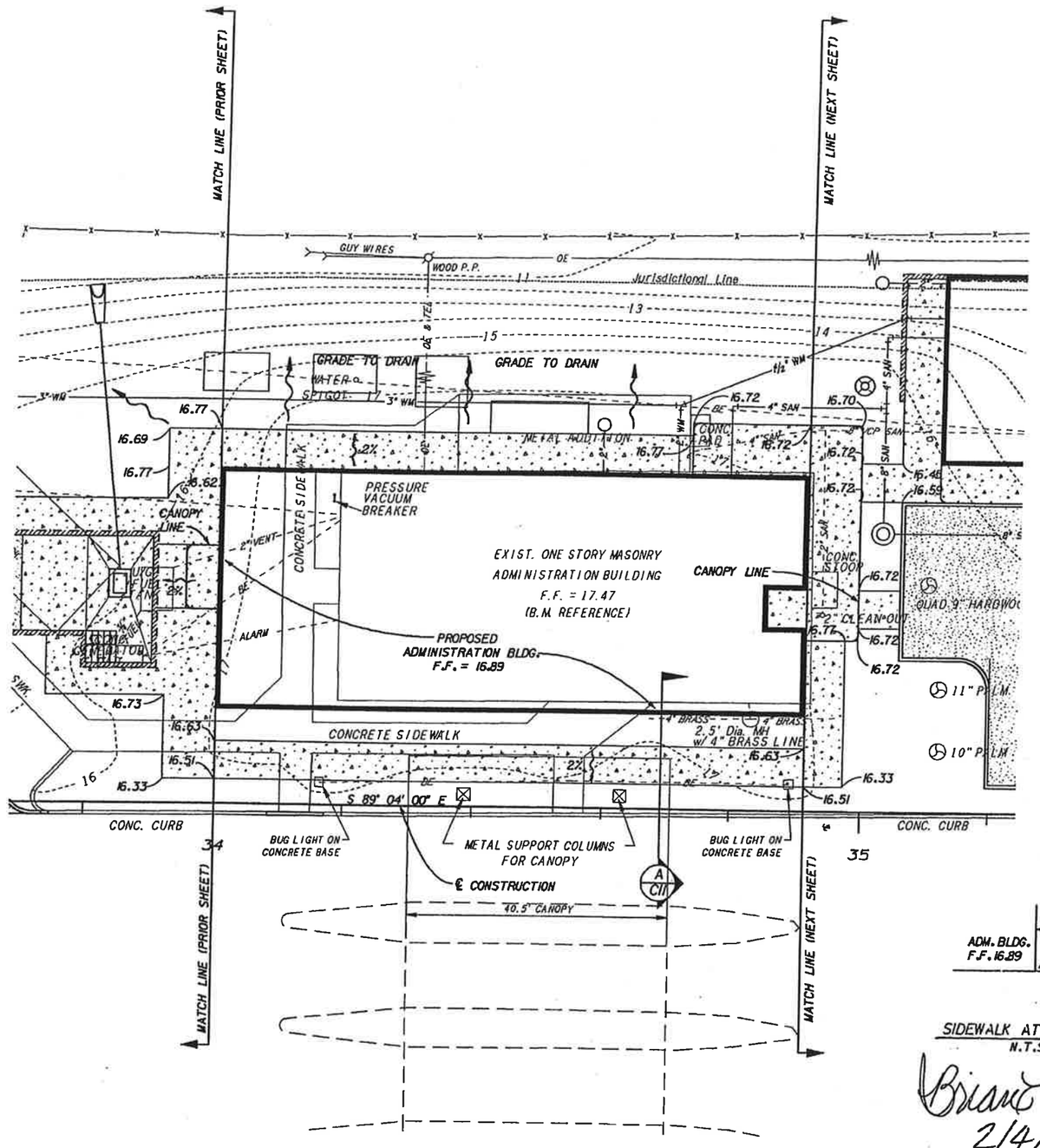
DAVID VOLKERT & ASSOCIATES, INC. Engineers · Architects · Planners

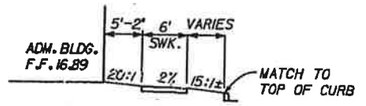
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

SITE PLAN WITH OPTIONAL TECH SHOP

FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	C11

1" = 20'





SIDEWALK AT ADMIN. BLDG. (A C11)
N.T.S

Brian Tanberg
2/4/00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
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CHECKED BY	BRT	01/00	CHECKED BY	BRT	01/00

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DAVID VOLKERT & ASSOCIATES, INC. — Engineers · Architects · Planners
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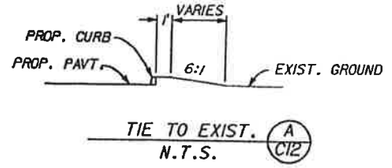
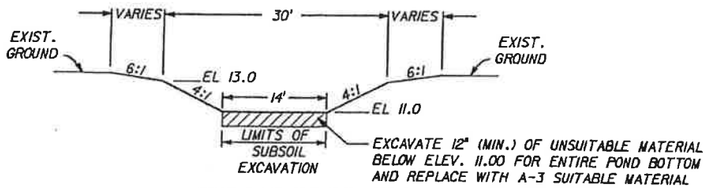
GRADING PLAN WITH OPTIONAL TECH SHOP

s:\eab\grades04.dgn Fri Feb 4 10:35:41 2000

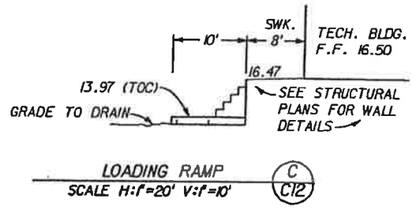
FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	C12



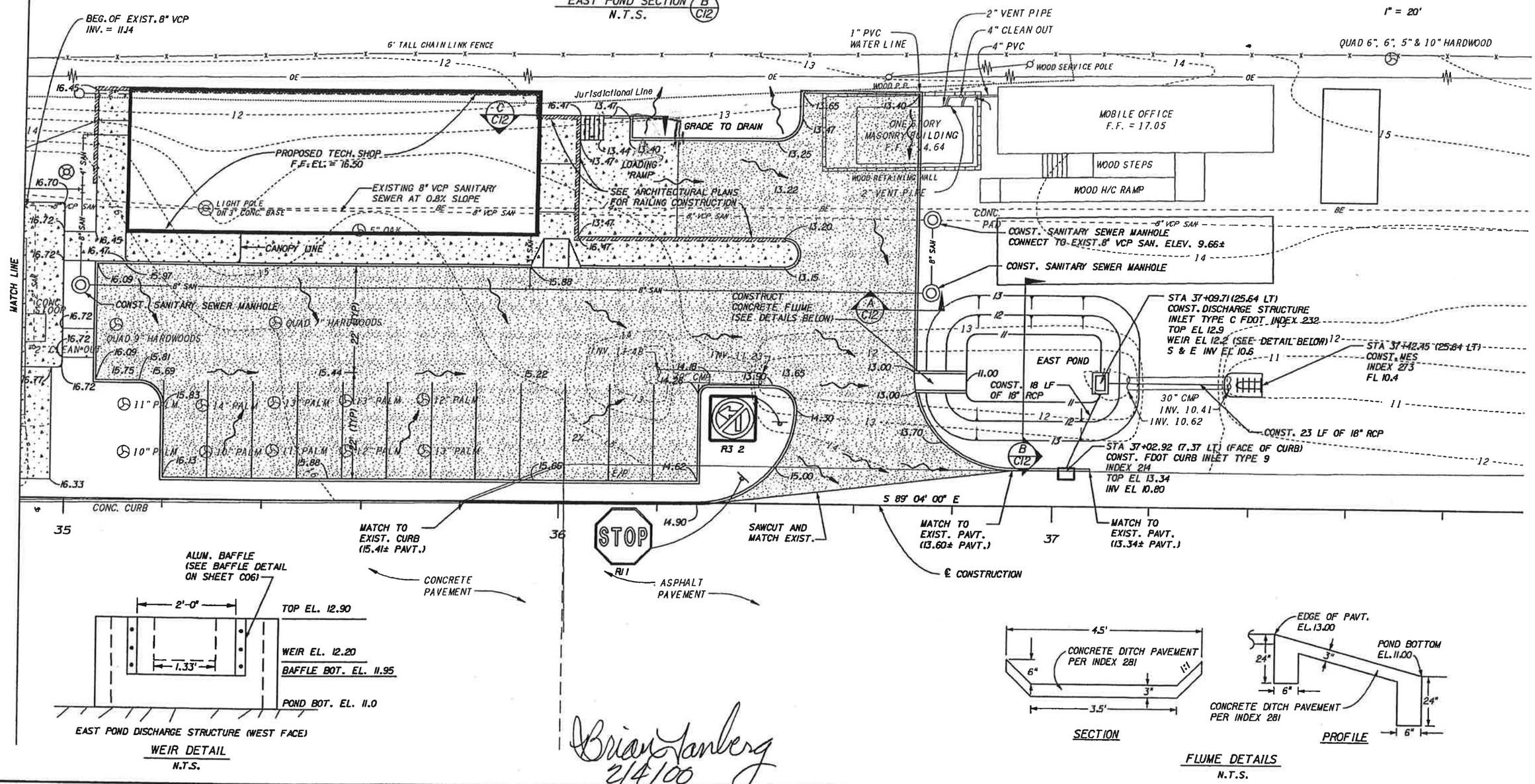
TIE TO EXIST. (A C12)
N.T.S.



EAST POND SECTION (B C12)
N.T.S.



LOADING RAMP (C C12)
SCALE H:1"=20' V:1"=10'



WEIR DETAIL
N.T.S.

SECTION

PROFILE

FLUME DETAILS
N.T.S.

Brian Tanberg 2/4/00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	GD	01/00	DRAWN BY	GD	01/00
CHECKED BY	BRT	01/00	CHECKED BY	BRT	01/00

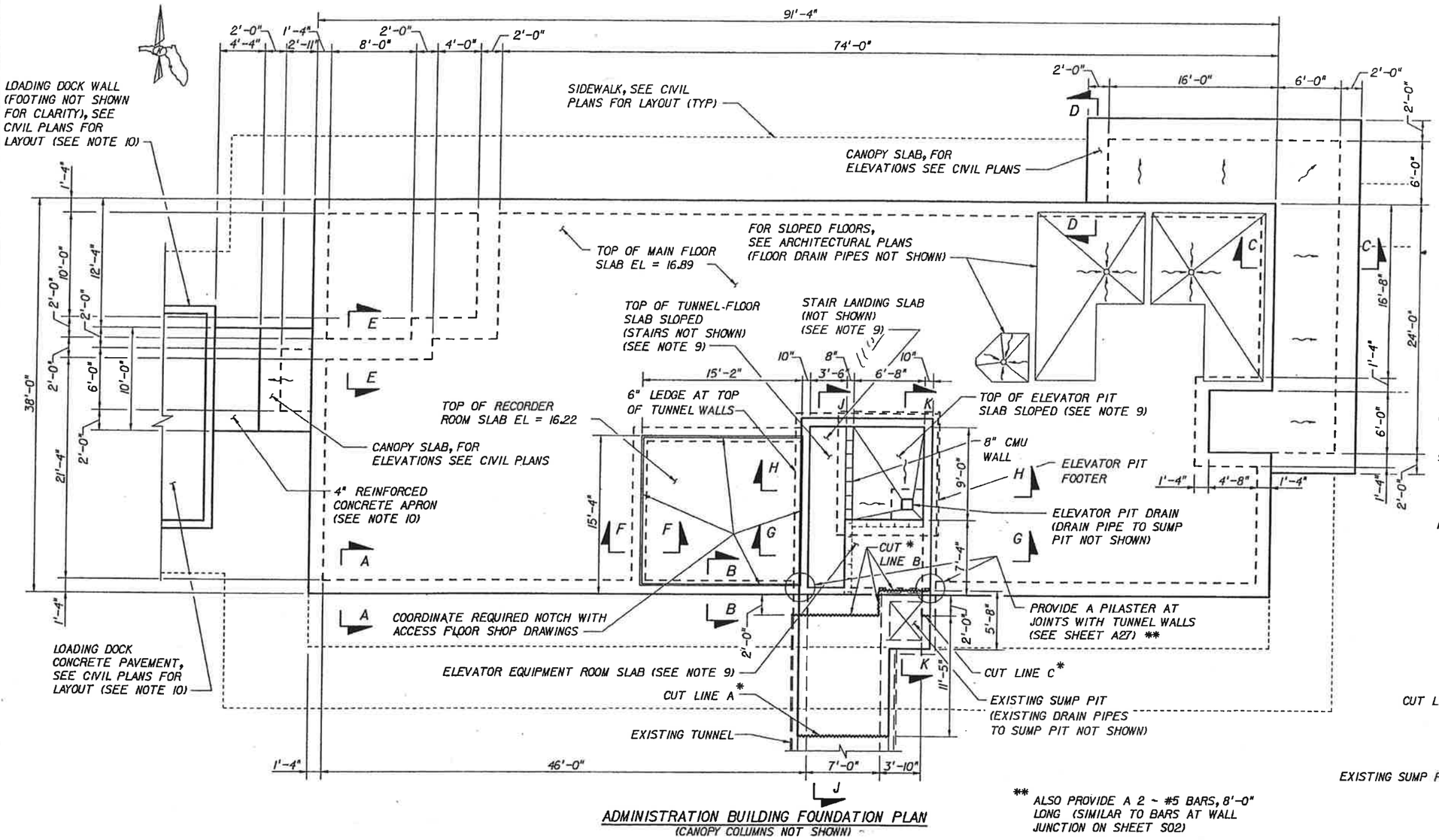
SUPERVISED BY: BRIAN R. TANBERG, P.E.

DAVID VOLKERT & ASSOCIATES, INC. Engineers • Architects • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

GRADING PLAN WITH OPTIONAL TECH SHOP

S:\Grading\grade605.dgn Fri Feb 4 10:35:10 2000

FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	S01

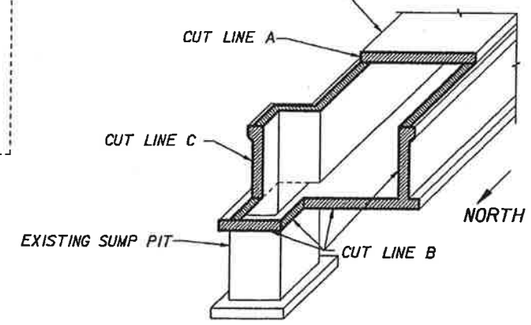


ADMINISTRATION BUILDING FOUNDATION PLAN

(CANOPY COLUMNS NOT SHOWN)

* SEE ISOMETRIC VIEW ON THIS SHEET

** ALSO PROVIDE A 2 - #5 BARS, 8'-0" LONG (SIMILAR TO BARS AT WALL JUNCTION ON SHEET S02)



ISOMETRIC FOR CUT LINES

NOTES:

1. MAIN FLOOR SLAB AND RECORDER ROOM SLAB ON FILL SHALL BE 4" THICK UNLESS OTHERWISE NOTED WITH WELDED WIRE FABRIC WWF 4x4 - W3.5 x W3.5.
2. ALL SLABS ON FILL SHALL BE PLACED ON A VAPOR RETARDER (6 MIL (MIN) POLYETHYLENE SHEET).
3. FOR PLAN DIMENSIONS NOT SHOWN, SEE ARCHITECTURAL PLANS.
4. ALL DIMENSIONS SHALL BE VERIFIED BY THE GENERAL CONTRACTOR.
5. ALL ELEVATIONS SHOWN ARE BASED ON A FINISHED FLOOR ELEVATION OF 16.89 AT THE MAIN FLOOR SLAB.
6. FOR SECTIONS A-A, B-B, C-C, D-D, E-E AND F-F, SEE SHEET S05.
7. FOR SECTIONS G-G AND H-H, SEE SHEET S06.
8. FOR SECTIONS J-J AND K-K, SEE SHEET S07.
9. FOR STAIR LANDING SLAB, ELEVATOR EQUIPMENT ROOM SLAB, ELEVATOR PIT SLAB AND TUNNEL FLOOR SLAB, SEE SECTION VIEWS ON SHEETS S06 AND S07.
10. FOR LOADING DOCK WALL, LOADING DOCK CONCRETE PAVEMENT AND 4" REINFORCED CONCRETE APRON, SEE SECTION VIEWS ON SHEET S10.

GENERAL NOTES:

1. GENERAL SPECIFICATIONS: FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1991 EDITION WITH 1994 SUPPLEMENT.
2. DESIGN CODE: STANDARD BUILDING CODE, 1997 EDITION.
3. DESIGN LOADS:
   - A. SUPERIMPOSED DEAD LOADS
     1. MECHANICAL DUCTS: 4 PSF
     2. CEILING: 2 PSF
     3. ROOFING: 18 PSF
   - B. LIVE LOADS
     1. GENERAL: 50 PSF (OFFICE BUILDING) OR 2,000 POUND CONCENTRATED LOAD DISTRIBUTED OVER 2.5' x 2.5' AREA
     2. LOBBIES AND CORRIDORS: 100 PSF
     3. STAIRS: 100 PSF OR 300 POUND CONCENTRATED LOAD
     4. VAULTS: 160 PSF
     5. ELEVATOR PIT: 12,000 POUND CONCENTRATED LOAD (INCLUDING 100% IMPACT) DISTRIBUTED OVER 2' x 2' AREA
     6. ELEVATOR EQUIPMENT ROOM: 2,360 POUND CONCENTRATED LOAD DISTRIBUTED OVER 2.8' x 3.25' AREA
     7. ROOF: 20 PSF
   - C. WIND LOADS: WIND LOADS ARE IN ACCORDANCE WITH SECTION 1606 OF THE 1997 STANDARD BUILDING CODE.
   - D. SEISMIC LOADS: SEISMIC LOADS ARE IN ACCORDANCE WITH SECTION 1607, SEISMIC PERFORMANCE CATEGORY A OF THE 1997 STANDARD BUILDING CODE.
4. MATERIALS
   - A. CONCRETE CAST-IN-PLACE: fc' = 3,400 PSI (CLASS II)
   - B. REINFORCING STEEL: ASTM A615, GRADE 60. ALL REINFORCING STEEL SHALL HAVE CONCRETE COVER IN ACCORDANCE WITH SECTION 1908.6 OF THE 1997 STANDARD BUILDING CODE.
   - C. WELDED WIRE FABRIC: ASTM A185
   - D. WIRE REINFORCEMENT: ASTM A82
   - E. STRUCTURAL STEEL: ASTM A36
   - F. STRUCTURAL STEEL TUBES: ASTM A500, GRADE C
   - G. BAR JOISTS: CONFORM TO STEEL JOIST INSTITUTE STANDARD SPECIFICATIONS
   - H. CONCRETE MASONRY UNITS: ASTM C90, GRADE N, TYPE II, WITH PRISM STRENGTH, FM = 1,500 PSI AND TYPE S MORTAR WITH FM = 1,800 PSI.
   - I. ALLOWABLE SOIL BEARING CAPACITY: 2,000 PSF

Edward D. Brekhus 2-4-00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	KBD	01/00	DRAWN BY	GMS	01/00
CHECKED BY	GMS	01/00	CHECKED BY	KBD	01/00

SUPERVISED BY: E.W. BREKHUS, PE

DAVID VOLKERT & ASSOCIATES, INC. Engineers • Architects • Planners
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GENERAL NOTES AND ADMINISTRATION BUILDING FOUNDATION PLAN

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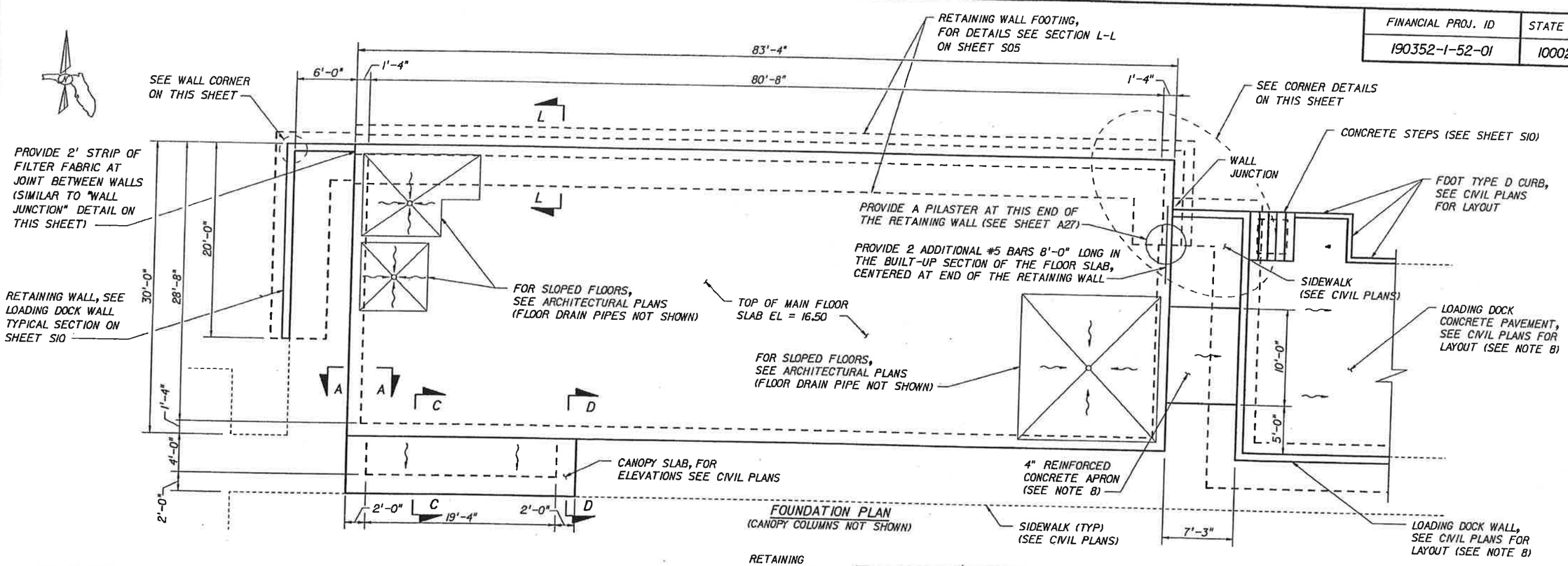
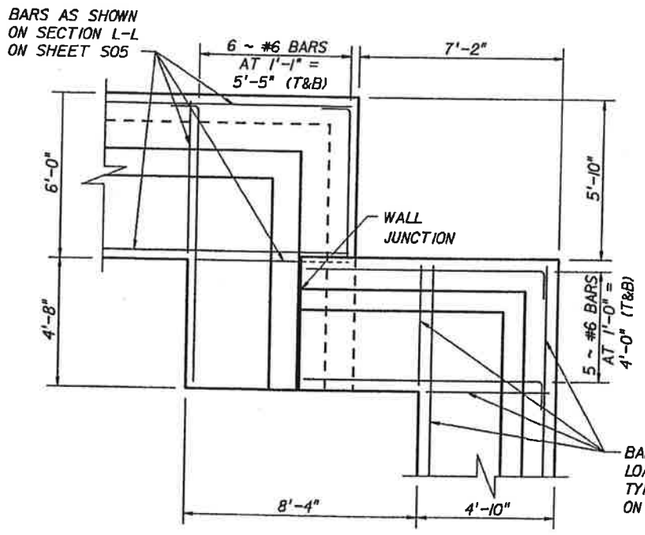
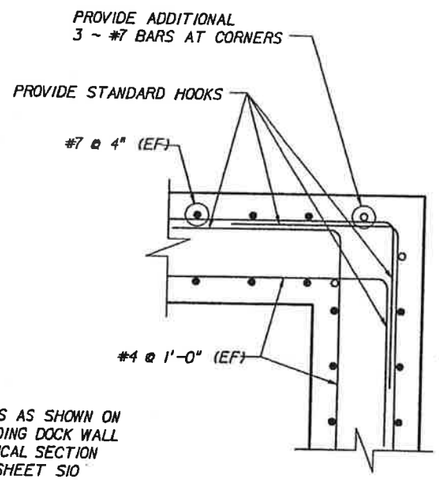
190352-1-52-01	10002-0000	S02

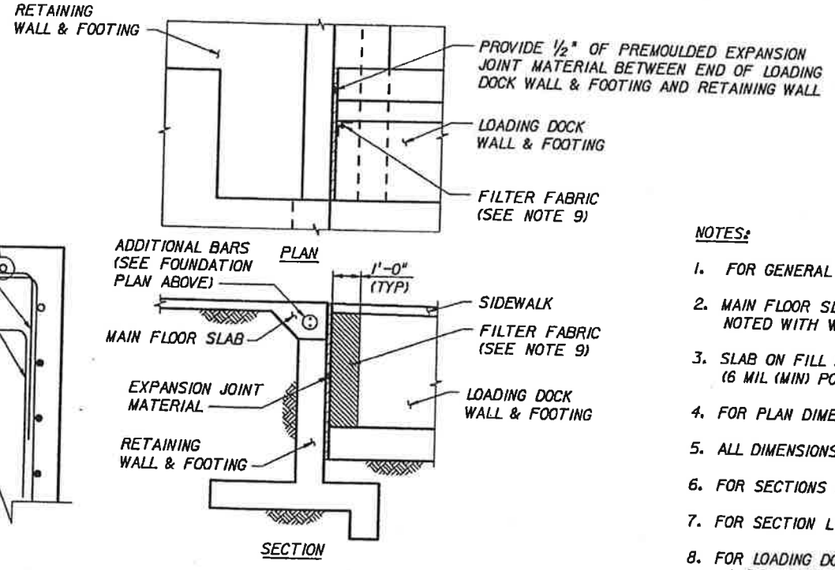




FOOTER DETAIL



WALL CORNER



WALL JUNCTION

CORNER DETAILS

NOTES:

1. FOR GENERAL NOTES, SEE SHEET S01.
2. MAIN FLOOR SLAB ON FILL SHALL BE 4" THICK UNLESS OTHERWISE NOTED WITH WELDED WIRE FABRIC WWF 4 x 4 - W 3.5 x W 3.5.
3. SLAB ON FILL SHALL BE PLACED ON A VAPOR RETARDER (6 MIL (MIN) POLYETHYLENE SHEET).
4. FOR PLAN DIMENSIONS NOT SHOWN, SEE ARCHITECTURAL PLANS.
5. ALL DIMENSIONS SHALL BE VERIFIED BY THE GENERAL CONTRACTOR.
6. FOR SECTIONS A-A, C-C AND D-D, SEE SHEET S05.
7. FOR SECTION L-L, SEE SHEET S05
8. FOR LOADING DOCK WALL, LOADING DOCK CONCRETE PAVEMENT AND 4" REINFORCED CONCRETE APRON, SEE SECTION VIEWS ON SHEET S10.
9. BOND FILTER FABRIC TO WALLS WITH MASTIC. FILTER FABRIC SHALL MEET FDOT SPECIFICATION 514.

Edward K. Brekhus 2-4-00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	KBD	01/00	DRAWN BY	GMS	01/00
CHECKED BY	GMS	01/00	CHECKED BY	KBD	01/00

SUPERVISED BY: E.W. BREKHUS, PE

DAVID VOLKERT & ASSOCIATES, INC. Engineers • Architects • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

TECH SHOP FOUNDATION PLAN

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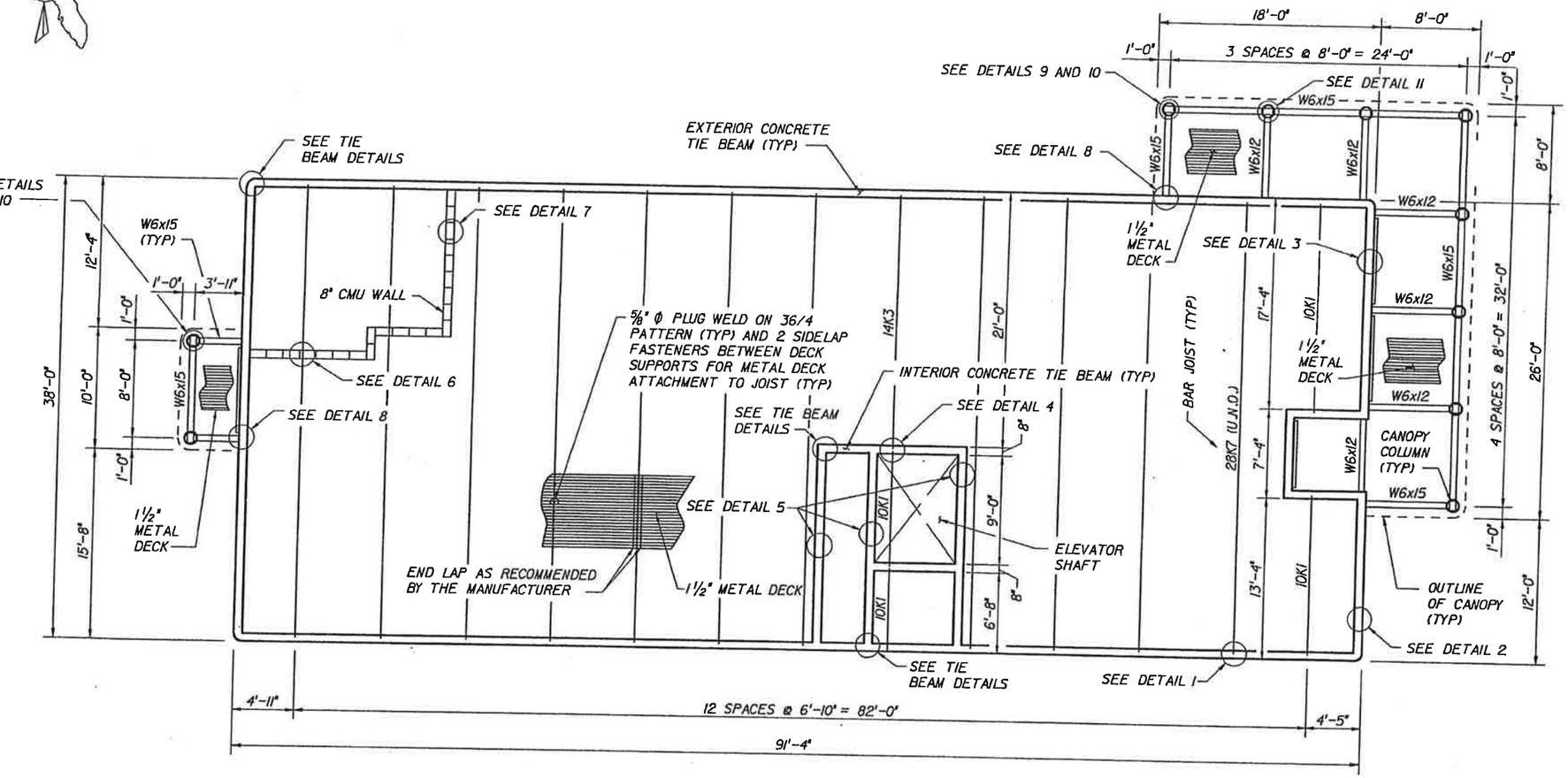
FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	S03



ROOF FRAMING PLAN

NOTES:

1. FOR GENERAL NOTES, SEE SHEET S01.
2. 1½" DEEP METAL DECK SHALL HAVE THE FOLLOWING MINIMUM SECTION PROPERTIES:

   I = 0.167 IN4 / FT
   Sp = 0.186 IN3 / FT
   Sn = 0.194 IN3 / FT
   t = 0.0295 IN

3. FOR DETAILS 1 THROUGH 7 AND TIE BEAM DETAILS, SEE SHEET S08.
4. FOR DETAILS 8 THROUGH 11, SEE SHEET S09.
5. FOR INTERIOR WALL LOCATIONS, SEE ARCHITECTURAL PLANS.
6. PROVIDE BRIDGING IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE STEEL JOIST INSTITUTE.
7. FOR CONCRETE BEAMS ABOVE WINDOWS AND DOORS, SEE SHEET S08.

2-4-00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	GMS	01/00	DRAWN BY	GMS	01/00
CHECKED BY	FXH	01/00	CHECKED BY	KBD	01/00

SUPERVISED BY: E. W. BREKHUS, PE

DAVID VOLKERT & ASSOCIATES, INC. Engineers • Architects • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ADMINISTRATION BUILDING ROOF FRAMING PLAN

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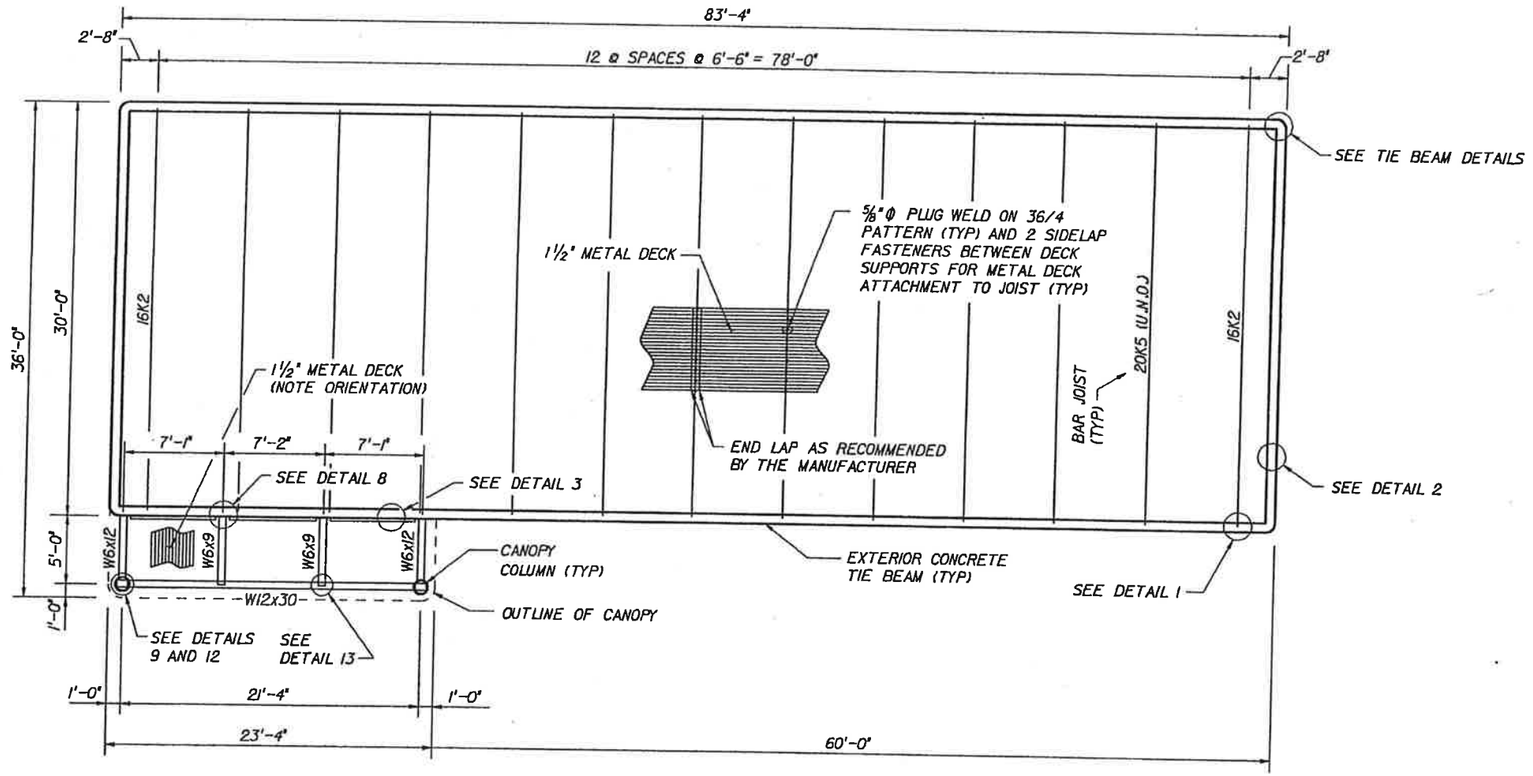
FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	S04



ROOF FRAMING PLAN

NOTES:

1. FOR GENERAL NOTES, SEE SHEET S01.
2. 1½" DEEP METAL DECK SHALL HAVE THE FOLLOWING MINIMUM SECTION PROPERTIES:

   I = 0.167 IN4 / FT
   Sp = 0.186 IN3 / FT
   Sn = 0.194 IN3 / FT
   t = 0.0295 IN
3. FOR DETAILS 1, 2, 3 AND TIE BEAM DETAILS, SEE SHEET S08.
4. FOR DETAILS 8, 9, 12 AND 13, SEE SHEET S09.
5. FOR INTERIOR WALL LOCATIONS, SEE ARCHITECTURAL PLANS.
6. PROVIDE BRIDGING IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE STEEL JOIST INSTITUTE.
7. FOR CONCRETE BEAMS OVER WINDOWS AND DOORS, SEE SHEET S08.

2-4-00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
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CHECKED BY	FXH	01/00	CHECKED BY	KBD	01/00

SUPERVISED BY: E.W. BREKHUS, PE

DAVID VOLKERT & ASSOCIATES, INC. Engineers • Architects • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

TECH SHOP
ROOF FRAMING PLAN

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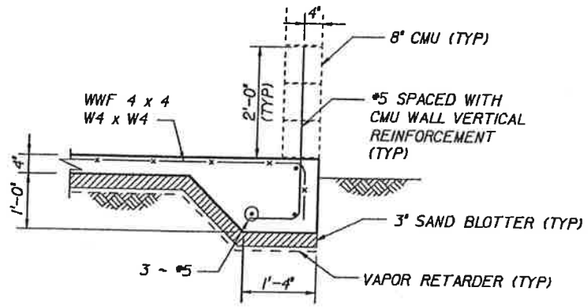
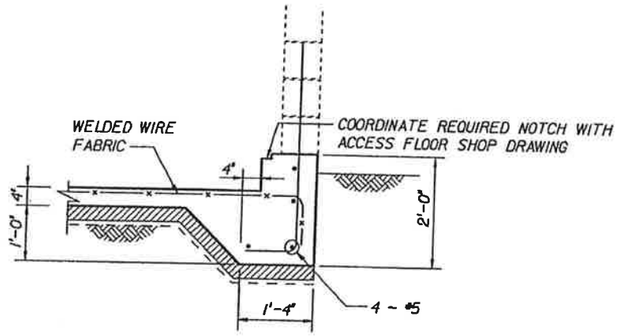
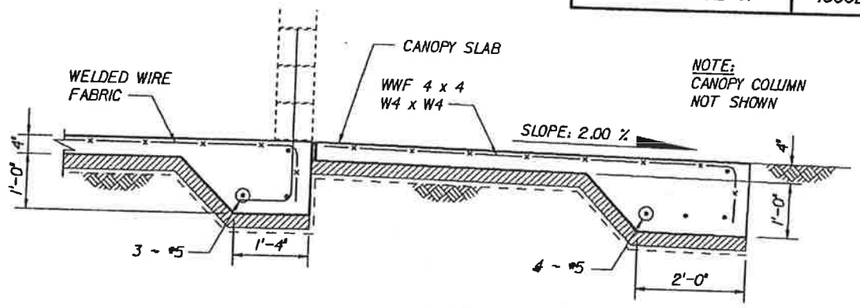
FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	S05



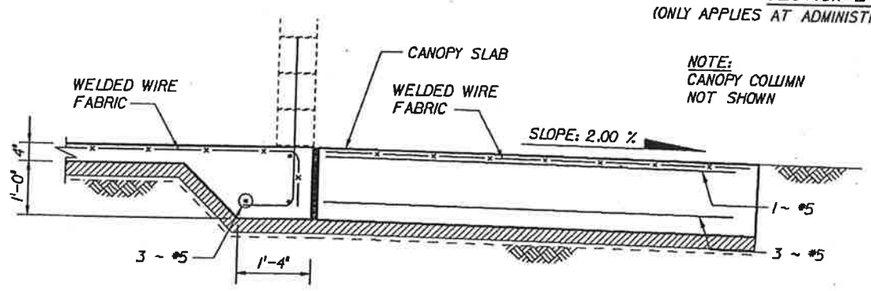
SECTION A-A



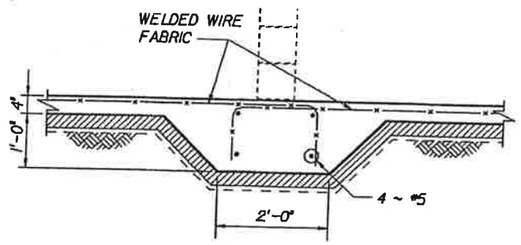
SECTION B-B
(ONLY APPLIES AT ADMINISTRATION BUILDING)



SECTION C-C



SECTION D-D



SECTION E-E
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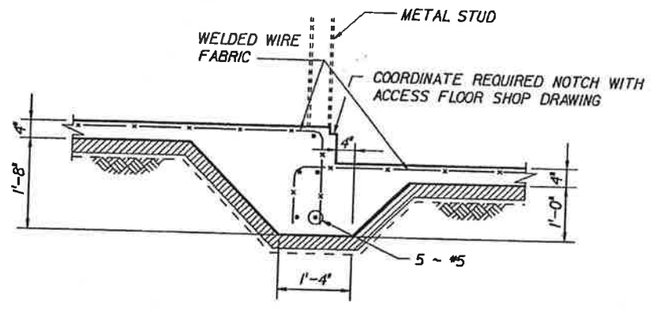
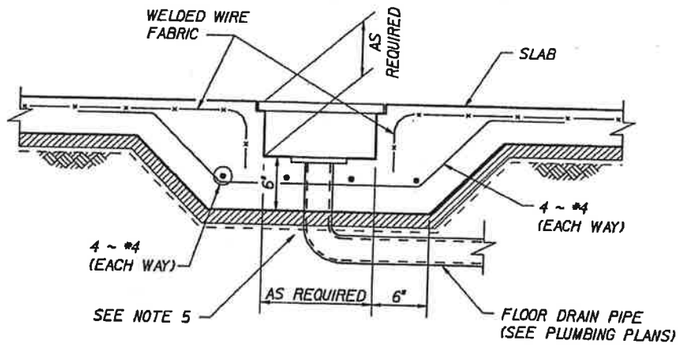


SECTION F-F
(ONLY APPLIES AT ADMINISTRATION BUILDING)

SECTION L-L
(ONLY APPLIES AT TECH SHOP)



FLOOR DRAIN DETAIL

NOTES:

1. FOR NOTES AND SECTION LOCATIONS, SEE SHEETS S01 AND S02.
2. SEE SECTION A-A FOR DETAILS THAT ARE TYPICAL AT OTHER SECTIONS.
3. SEE WALL CORNER DETAIL ON SHEET S02 (SIMILAR).
4. FOR CMU WALL VERTICAL REINFORCEMENT, SEE ARCHITECTURAL PLANS.
5. ALL PENETRATIONS THROUGH VAPOR RETARDER SHALL BE SEALED.

2-4-00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	GMS	01/00	DRAWN BY	GMS	01/00
CHECKED BY	FXH	01/00	CHECKED BY	KBD	01/00
SUPERVISED BY :	E.W. BREKHUS, PE				

DAVID VOLKERT & ASSOCIATES, INC. Engineers • Architects • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

FOUNDATION DETAILS

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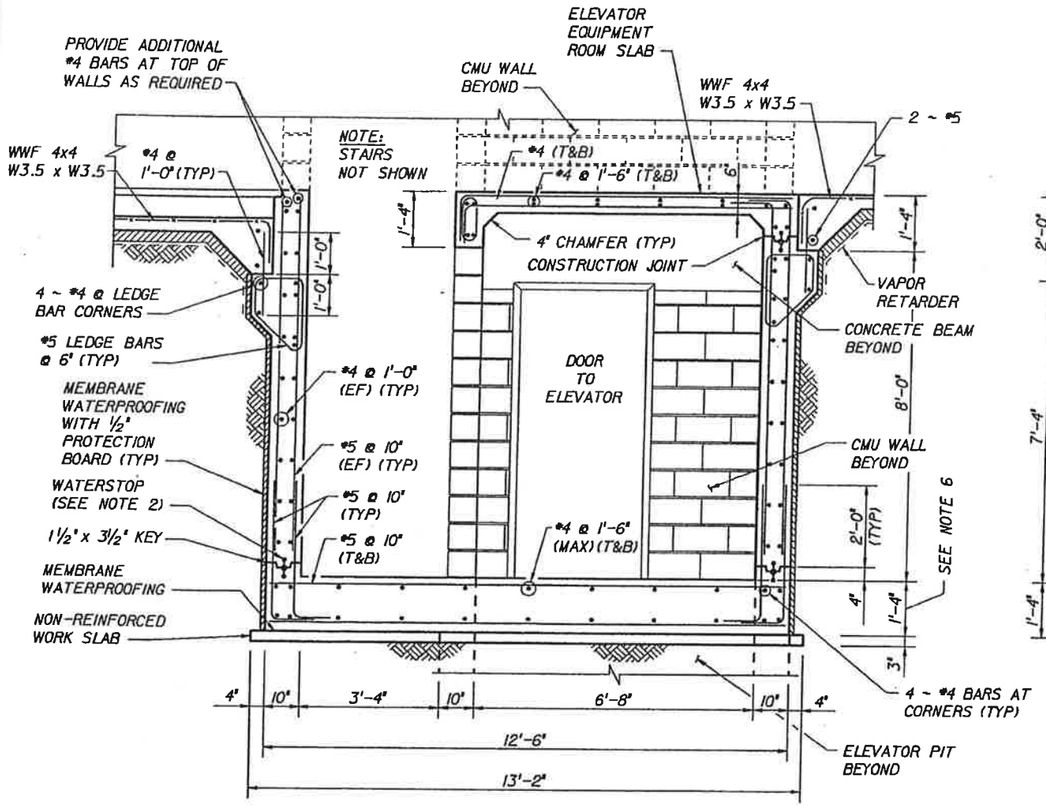
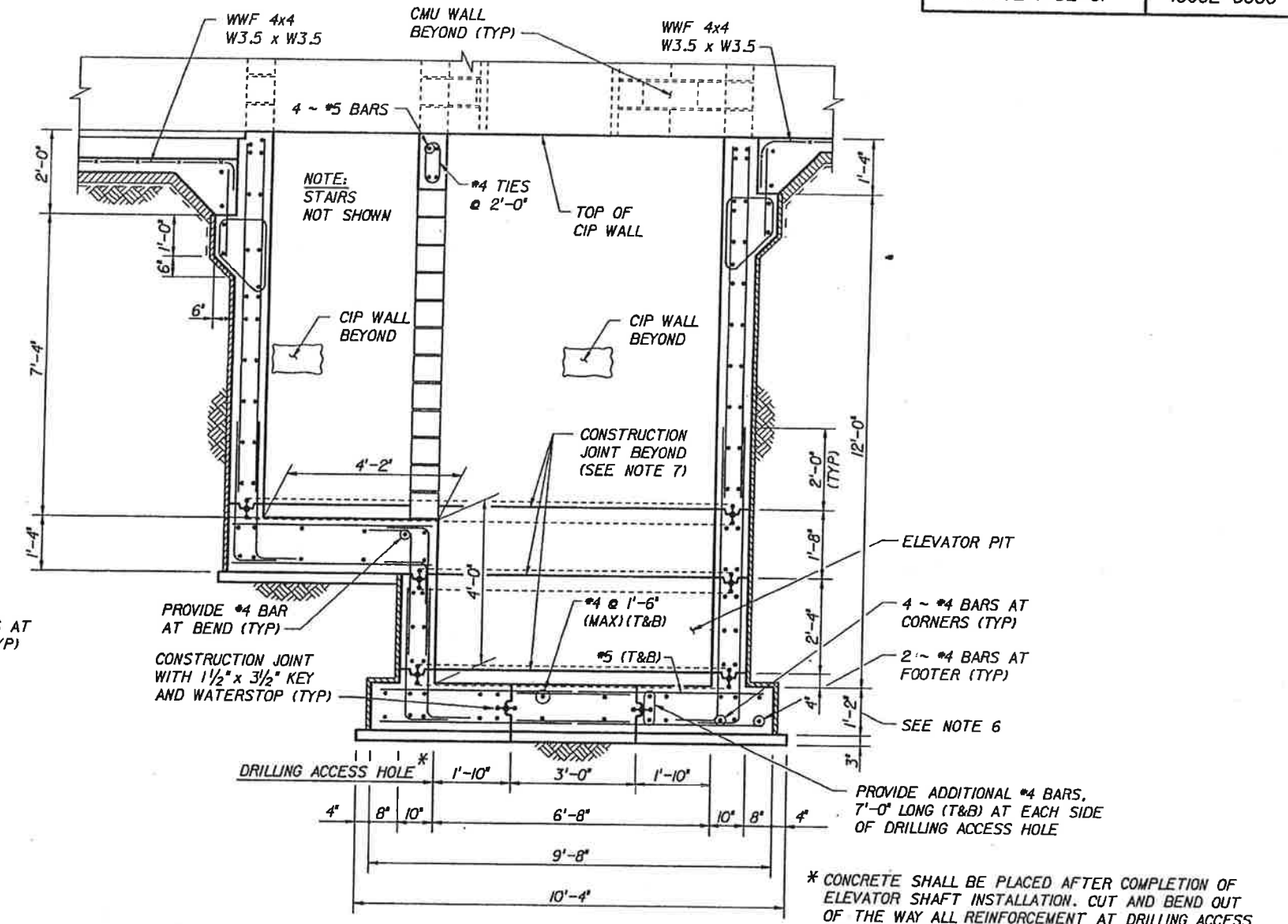
FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	S06



SECTION G-G

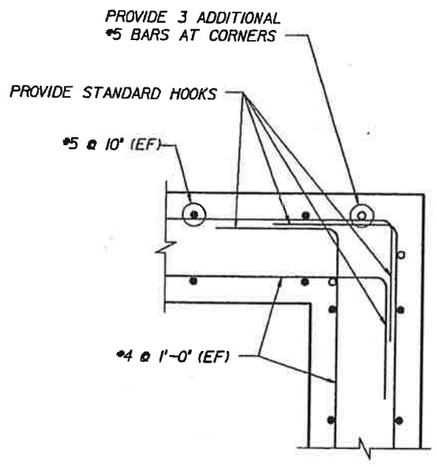
(FLOOR SLOPES NOT SHOWN, SEE NOTE 6)



* CONCRETE SHALL BE PLACED AFTER COMPLETION OF ELEVATOR SHAFT INSTALLATION. CUT AND BEND OUT OF THE WAY ALL REINFORCEMENT AT DRILLING ACCESS HOLE. SPLICE CUT REINFORCEMENT ACROSS HOLE.

SECTION H-H

(FLOOR SLOPES NOT SHOWN, SEE NOTE 6)



PLAN VIEW

TUNNEL WALL CORNER DETAIL

NOTES:

1. WORK THIS SHEET WITH SHEET S07.
2. WATERSTOP SHALL BE 6" x 1/4", CONTINUOUS, POLYVINYL CHLORIDE CONFORMING TO ARMY CORPS OF ENGINEERS SPECIFICATION NUMBER CRD-C 572, SPLICED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
3. TEMPORARY SHORING SHALL BE INSTALLED 1'-0" BELOW TOP OF CIP WALL PRIOR TO BACKFILLING BEHIND WALLS. SHORING SHALL BE MAINTAINED UNTIL THE FINISHED CONCRETE SLAB HAS REACHED 70% OF DESIGN STRENGTH, AFTER WHICH TIME SHORING MAY BE REMOVED.
4. SHORING SHALL BE CAPABLE OF SUPPORTING A SAFE HORIZONTAL UNIFORM LOAD OF 11 KIPS/FT. THE MAXIMUM ALLOWANCE FOR SURCHARGE ADJACENT TO THE ELEVATOR PIT WALLS IS 240 PSF. IF THE CONTRACTOR'S OPERATION WILL EXCEED THE SURCHARGE ALLOWANCE, HE SHALL PROVIDE APPROPRIATE INCREASED SHORING CAPACITY.
5. CONTRACTOR SHALL SUBMIT A PLAN OF HIS PROPOSED SHORING FOR THE APPROVAL BY THE ENGINEER.
6. FOR FLOOR SLOPES IN THE TUNNEL AREA, SEE ARCHITECTURAL PLANS. SINCE SLOPES ARE NOT SHOWN, DIMENSIONS SHOWN FOR SLABS APPLY AT THE JUNCTION WITH WALLS. THE MINIMUM SLAB THICKNESS IS 1'-0".
7. ALL CONSTRUCTION JOINTS SHALL CONSIST OF THE 1 1/2" x 3 1/2" KEY AND THE CONTINUOUS WATERSTOP.

Edward W. Brekhus 2-4-00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	GMS	01/00	DRAWN BY	GMS	01/00
CHECKED BY	FXH	01/00	CHECKED BY	KBD	01/00
SUPERVISED BY :	E. W. BREKHUS, PE				

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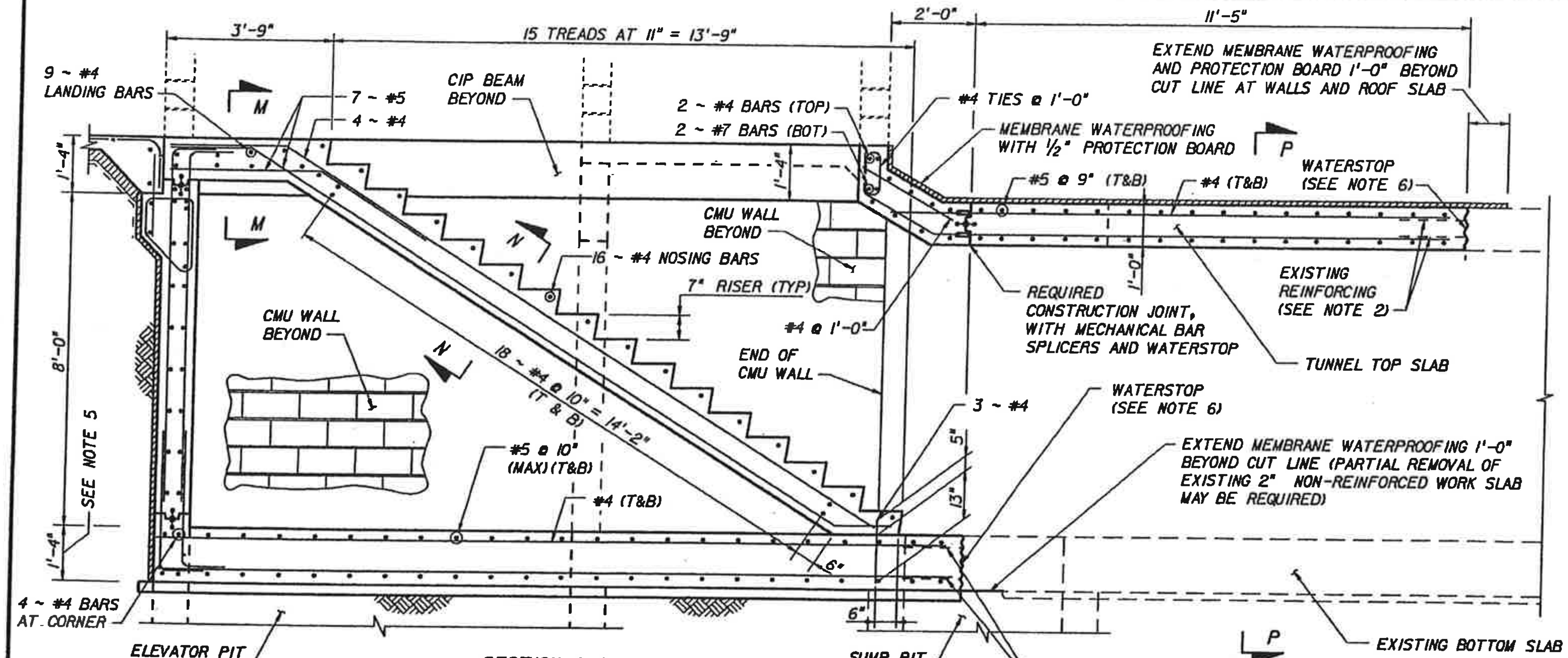
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

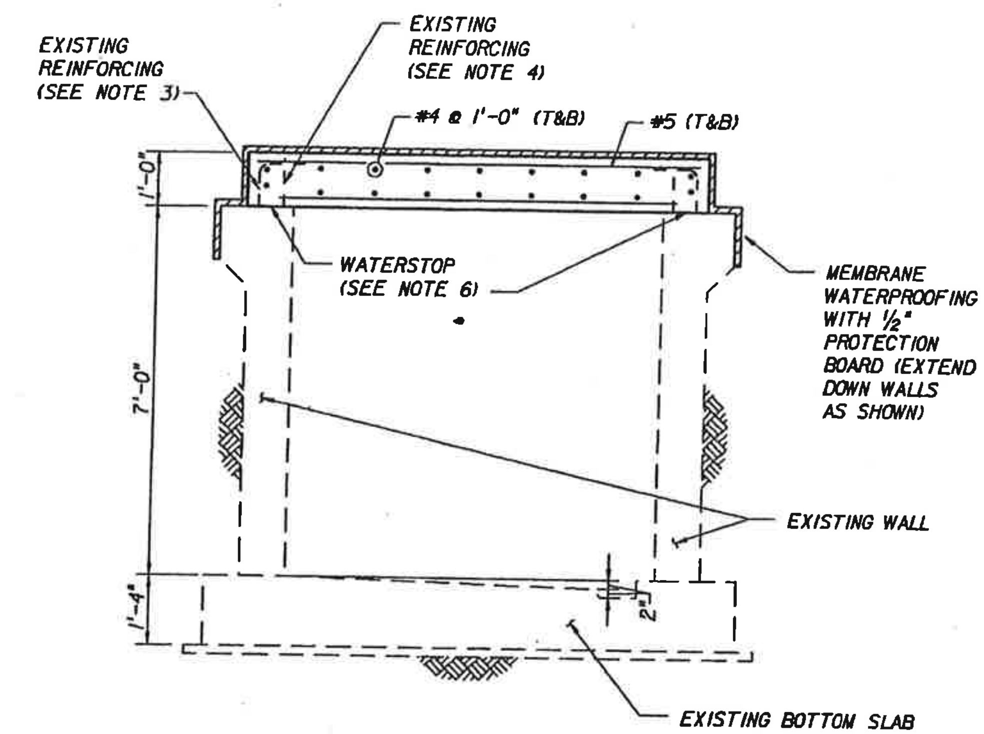
ADMINISTRATION BUILDING TUNNEL DETAILS

s:\eab\adfdet2.dgn Fri Feb 4 10:43:14 2000

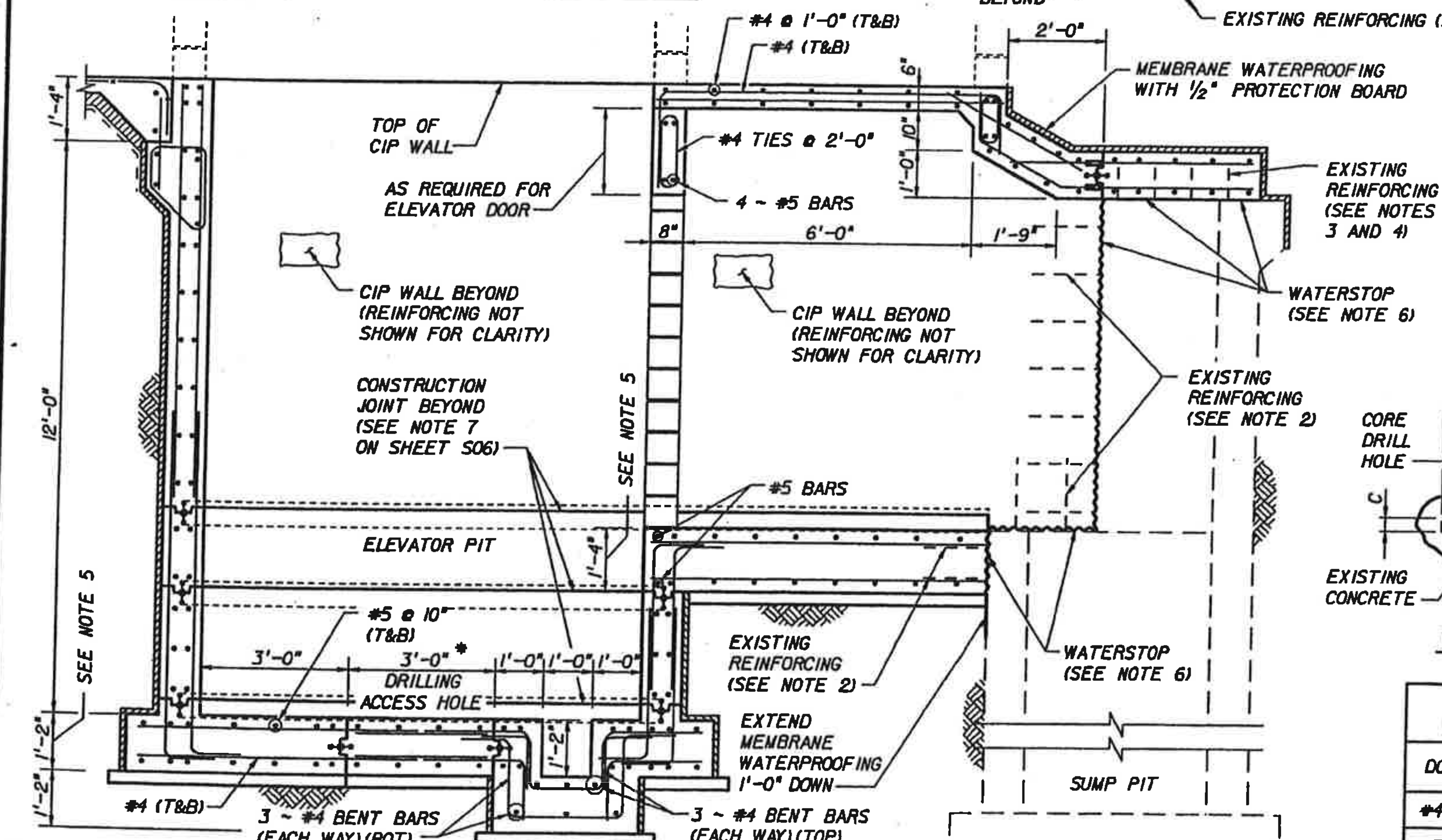
FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	S07



SECTION J-J

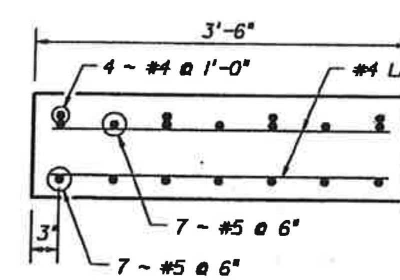


SECTION P-P

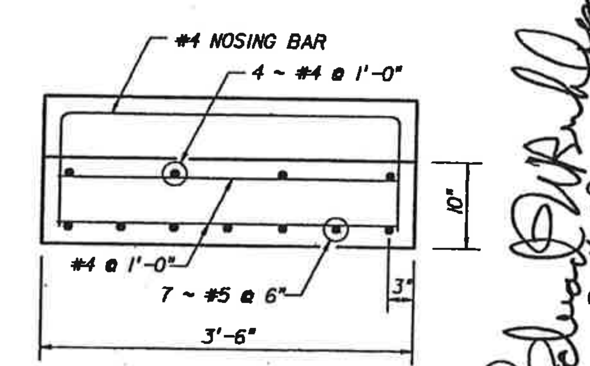


*FOR ALL DETAILS AROUND DRILLING ACCESS HOLE, SEE SECTION H-H ON SHEET S06

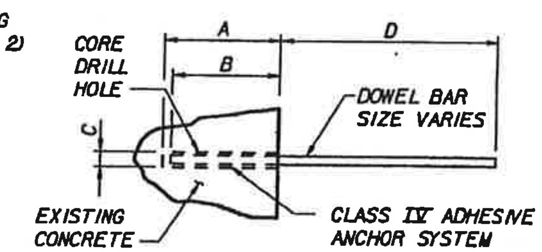
SECTION K-K



SECTION M-M
LANDING



SECTION N-N
TYPICAL STAIR



TYPICAL DOWEL DETAIL

TYPICAL DOWEL EMBEDMENT LENGTHS

DOWEL	A (In)	B (In)	C (In)	D (In)
#4 BAR	8¾	8¼	⅝	22
#5 BAR	11	10½	¾	28

NOTES:

1. WORK THIS SHEET WITH SHEET S06.
2. PRESERVE 24" (MIN) OF EXISTING REINFORCING AND EMBED INTO NEW CIP CONCRETE. BARS SHALL BE CLEANED AND STRAIGHTENED. IF A BAR IS BROKEN OR OTHERWISE DETERMINED TO BE UNSATISFACTORY BY THE ENGINEER, IT SHALL BE REPLACED BY A DOWEL BAR AS SHOWN IN THE TYPICAL DOWEL DETAIL ON THIS SHEET. (DIRECT CONTACT LAP SPLICE WITH THE EXISTING STEEL IS NOT REQUIRED).
3. APPLY THE SAME REQUIREMENTS AS IN NOTE 2 ABOVE, BUT PRESERVE ENOUGH LENGTH OF THE EXISTING REINFORCING TO OBTAIN STANDARD HOOK. IF DOWEL BAR IS REQUIRED, PROVIDE STANDARD HOOK ON THE DOWEL. IN EITHER CASE, PROVIDE ADEQUATE CONCRETE COVER ON THE HOOK PORTION OF THE BAR.
4. APPLY THE SAME REQUIREMENTS AS IN NOTE 2 ABOVE, BUT REQUIRED LENGTH OF BAR OR DOWEL INTO NEW CONCRETE IS 10", IN LIEU OF THE VALUE IN THE DOWEL TABLE.
5. FLOOR SLOPES ARE NOT SHOWN IN SECTIONS J-J AND K-K. SEE ARCHITECTURAL PLANS. ALSO SEE NOTE 6 ON SHEET S06.
6. INSTALL CHLOROPRENE RUBBER HYDROPHILIC WATERSTOP IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

2-4-00

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	GMS	01/00	DRAWN BY	GMS	01/00
CHECKED BY	FXH	01/00	CHECKED BY	KBD	01/00
SUPERVISED BY: E.W. BREKHUS, PE					

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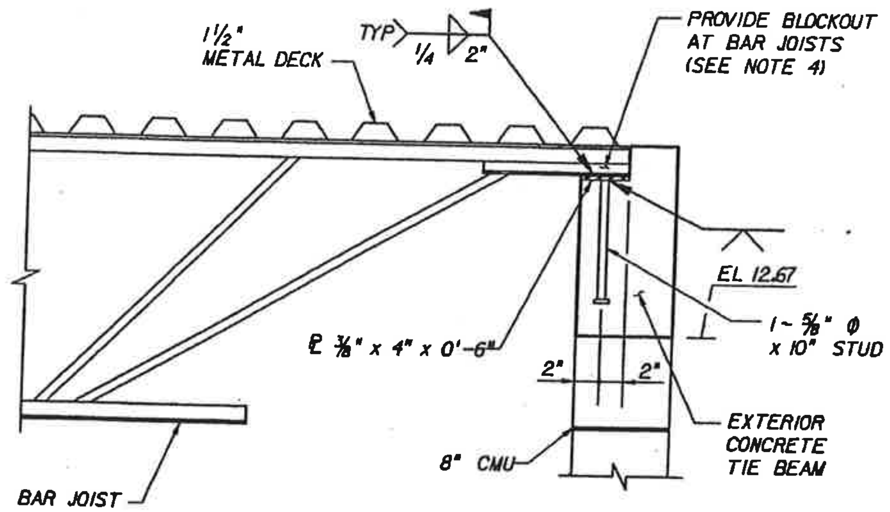
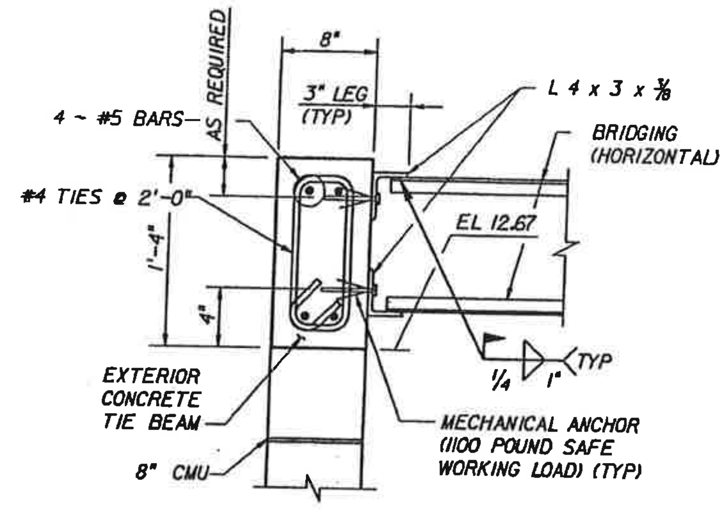
ADMINISTRATION BUILDING
TUNNEL DETAILS

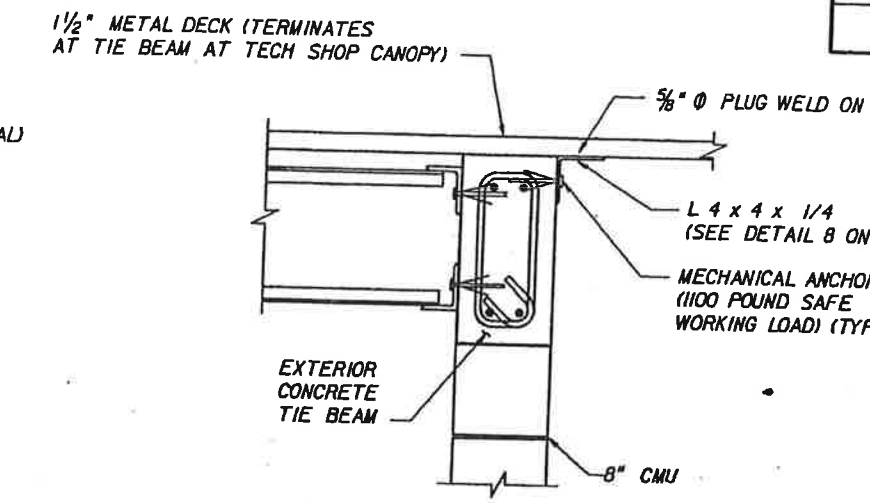
FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	S08



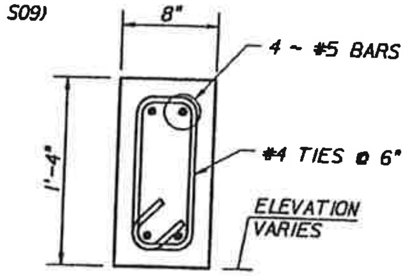
DETAIL 1



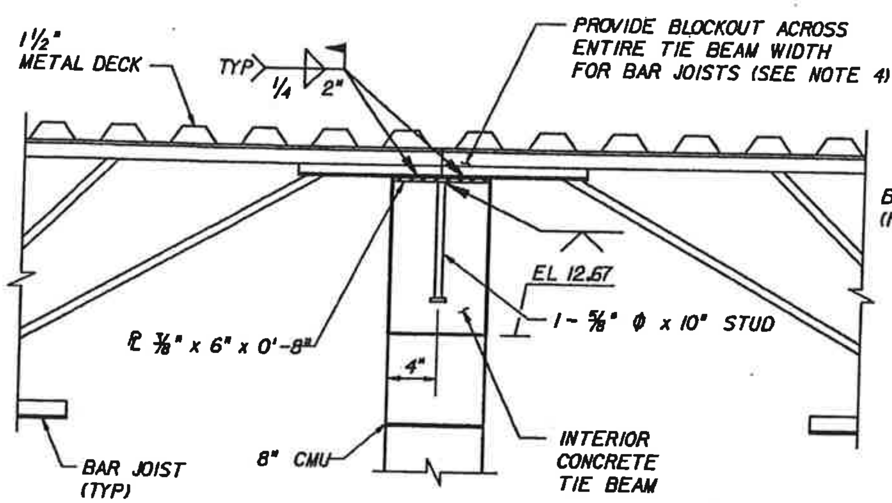
DETAIL 2
(SHOWING TYPICAL CONCRETE TIE BEAM REINFORCING)



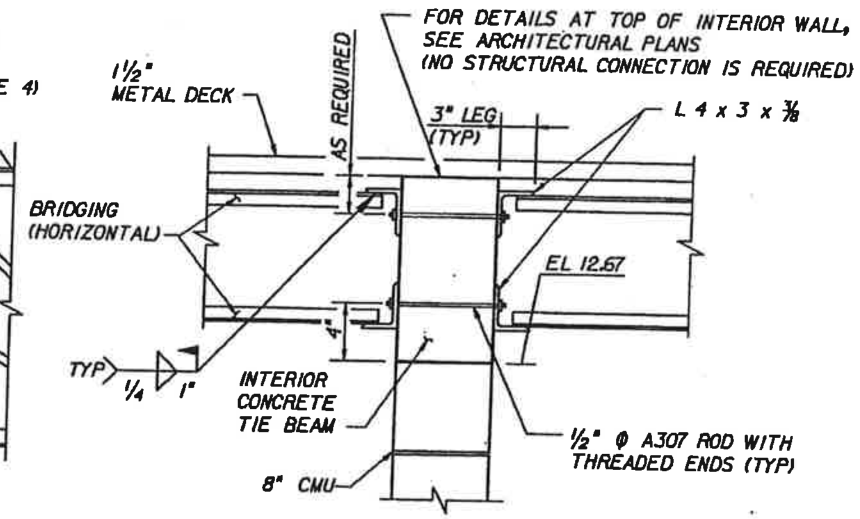
DETAIL 3
(APPLIES ONLY AT LOCATIONS WHERE CANOPY METAL DECK RUNS PERPENDICULAR TO BUILDING WALL)



CONCRETE BEAM
(LINTEL OVER WINDOWS AND DOORS, SEE ARCHITECTURAL PLANS)



DETAIL 4
(ONLY APPLIES AT ADMINISTRATION BUILDING)



DETAIL 5
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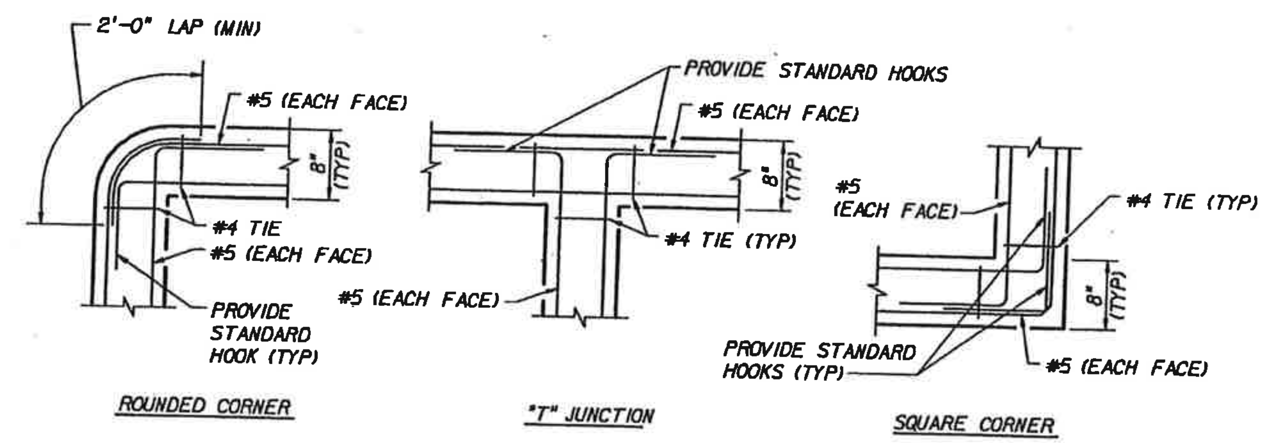
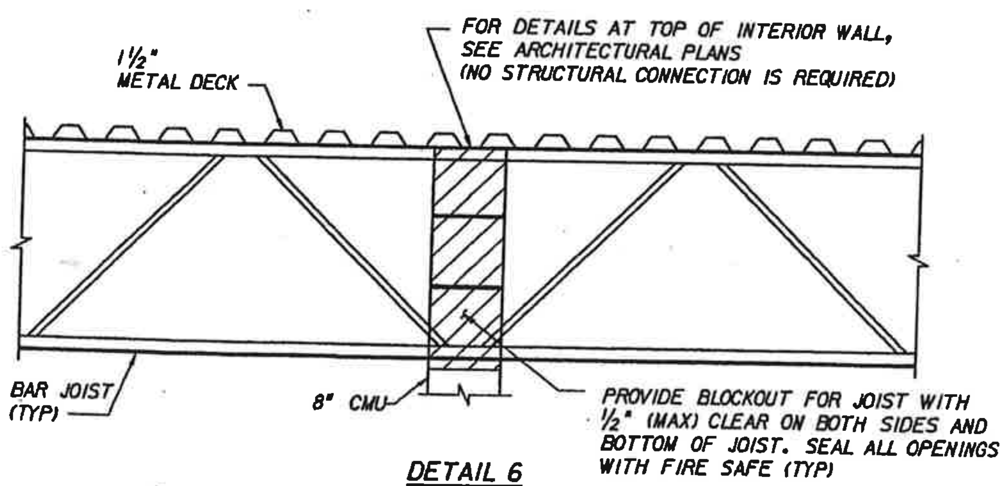
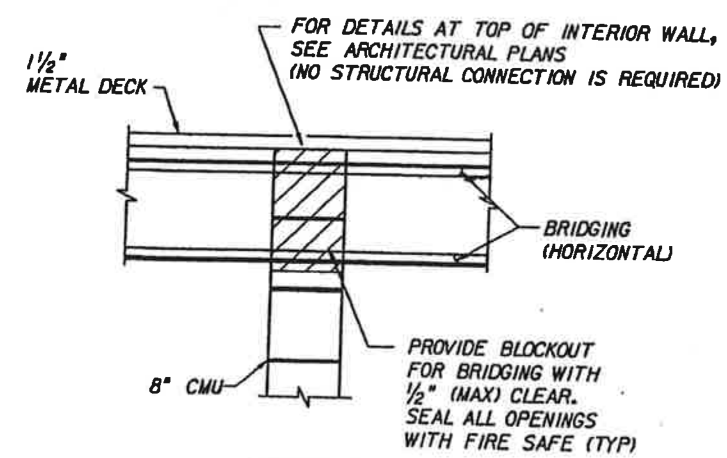


TIE BEAM DETAILS



DETAIL 6
(ONLY APPLIES AT ADMINISTRATION BUILDING)



DETAIL 7
(ONLY APPLIES AT ADMINISTRATION BUILDING)

NOTES:

1. THE CONTRACTOR SHALL SUBMIT JOIST SHOP DRAWINGS FOR APPROVAL, PRIOR TO FABRICATION.
2. ELEVATIONS SHOWN ARE RELATIVE ELEVATIONS BASED ON A FINISHED FLOOR ELEVATION OF 0.00.
3. DETAILS SHOWN ON THIS SHEET ARE FROM SHEETS S03 AND S04.
4. BLOCKOUTS AT BAR JOIST LOCATIONS SHALL BE COORDINATED WITH THE JOIST MANUFACTURER. CUT THE LONGITUDINAL #5 BAR IN THE CORNER WHERE THE BLOCKOUT OCCURS AT EACH SUPPORT LOCATION. IF A #4 TIE BAR IS IN CONFLICT WITH THE BLOCKOUT, REPLACE THE ONE #4 TIE WITH A #4 TIE ON EACH SIDE OF THE BLOCKOUT.

2-4-00

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

REVISIONS

	NAME	DATE		NAME	DATE
DESIGNED BY	GMS	01/00	DRAWN BY	GMS	01/00
CHECKED BY	NQN	01/00	CHECKED BY	KBD	01/00
SUPERVISED BY:	E.W. BREKHUS, PE				

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ROOF FRAMING DETAILS

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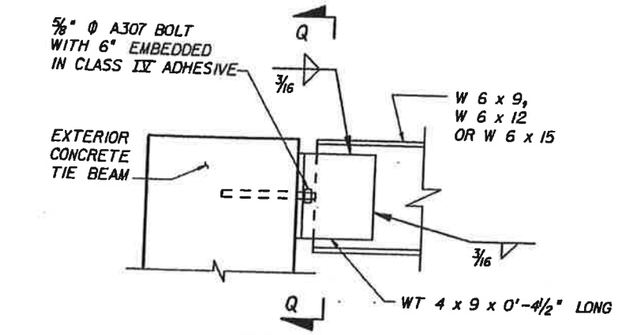
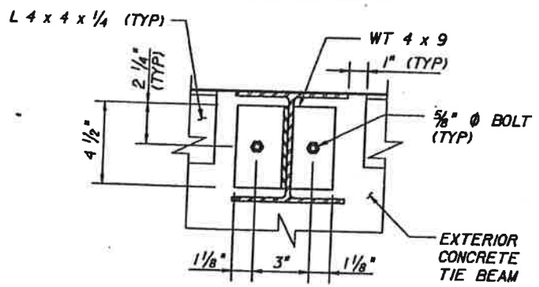
FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	S09

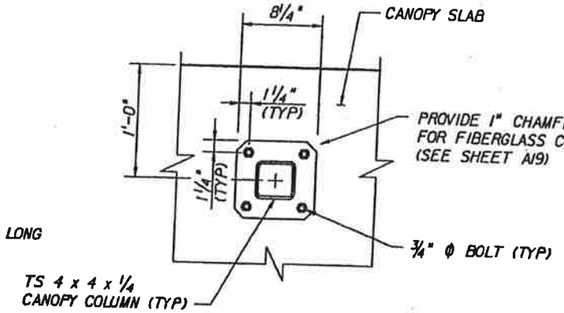


ELEVATION
(L 4 x 4 x 1/4 NOT SHOWN)

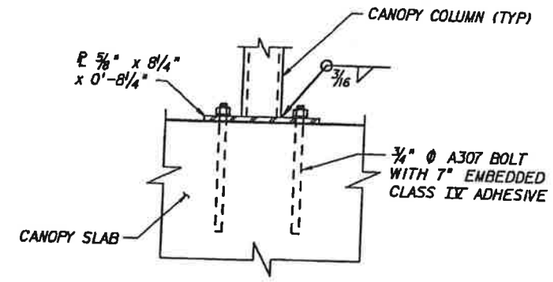


SECTION Q-Q

DETAIL 8

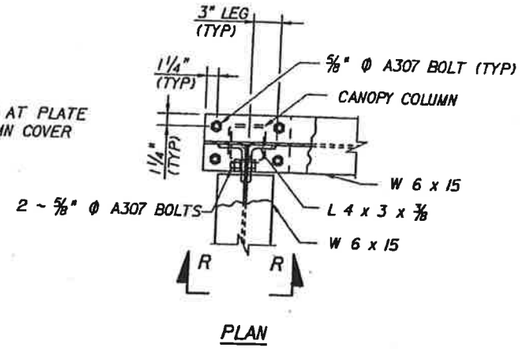


PLAN

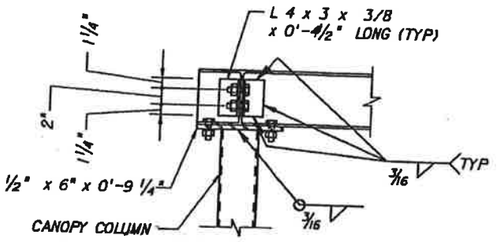


ELEVATION

DETAIL 9

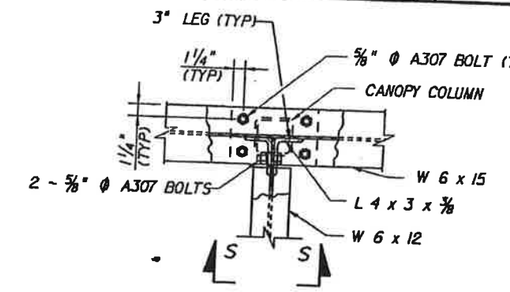


PLAN

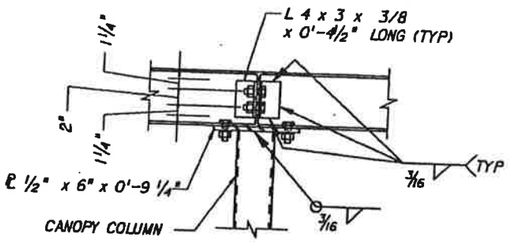


VIEW R-R

DETAIL 10
(ONLY APPLIES AT ADMINISTRATION BUILDING)

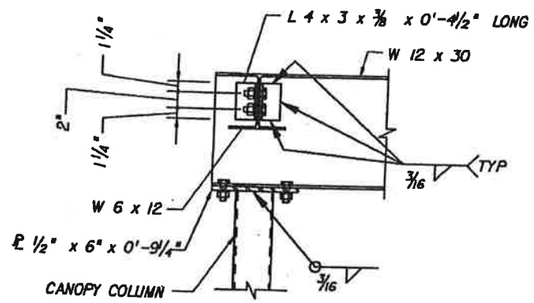


PLAN



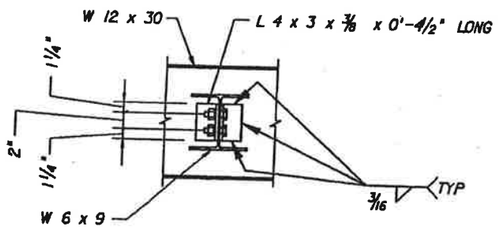
VIEW S-S

DETAIL 11
(ONLY APPLIES AT ADMINISTRATION BUILDING)



ELEVATION
(PLAN VIEW IS SIMILAR TO DETAIL 10)

DETAIL 12
(ONLY APPLIES AT TECH SHOP)



ELEVATION

DETAIL 13
(ONLY APPLIES AT TECH SHOP)

NOTES:

1. DETAILS SHOWN ON THIS SHEET ARE FROM SHEETS S03 AND S04.
2. ALL BOLT HOLE DIAMETERS SHALL BE THE BOLT DIAMETER PLUS 1/16".

2-4-00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	GWS	01/00	DRAWN BY	GWS	01/00
CHECKED BY	FXH/NQN	01/00	CHECKED BY	KBD	01/00

SUPERVISED BY: E.W. BREKHUS, PE

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CANOPY DETAILS

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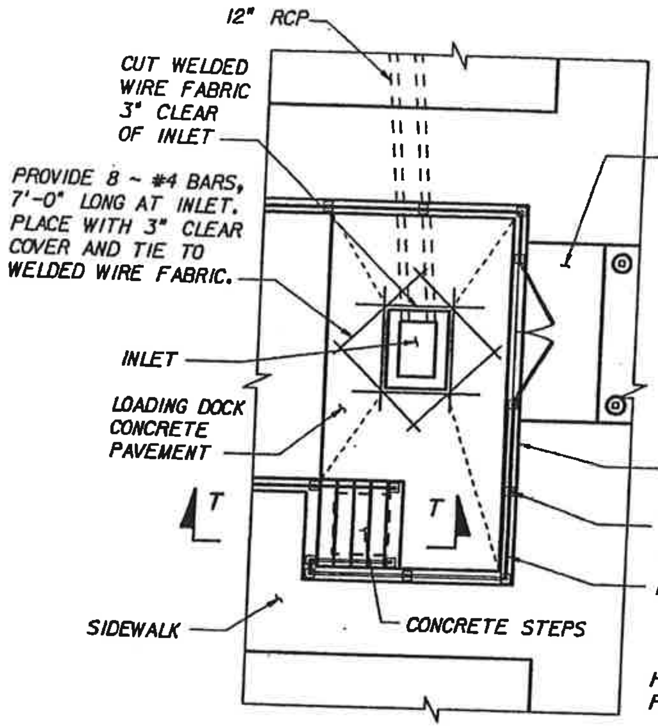
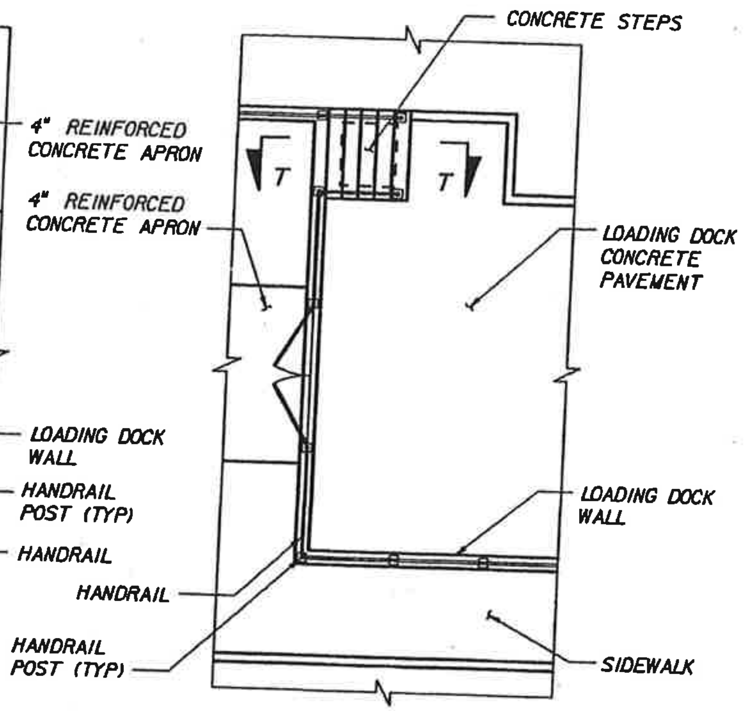
FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	S10



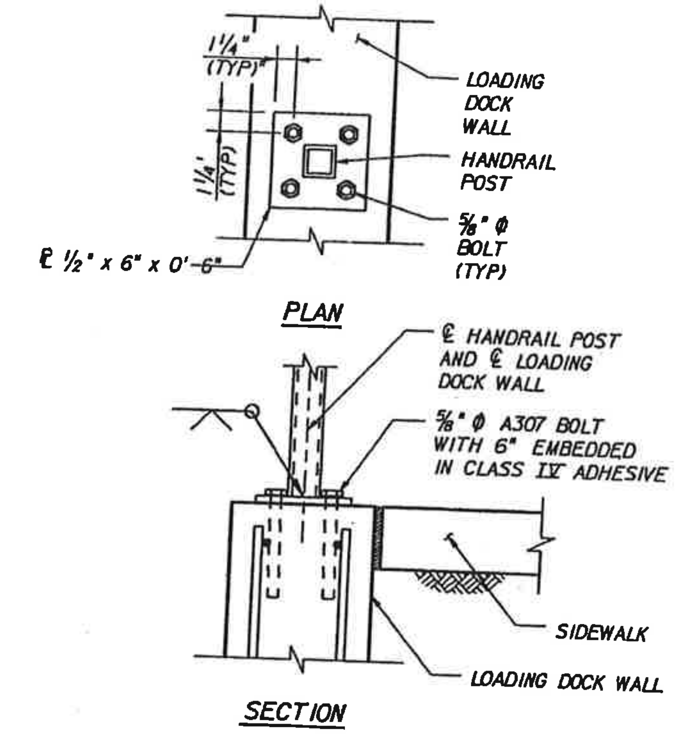
PARTIAL PLAN

LOADING DOCK AT ADMINISTRATION BUILDING



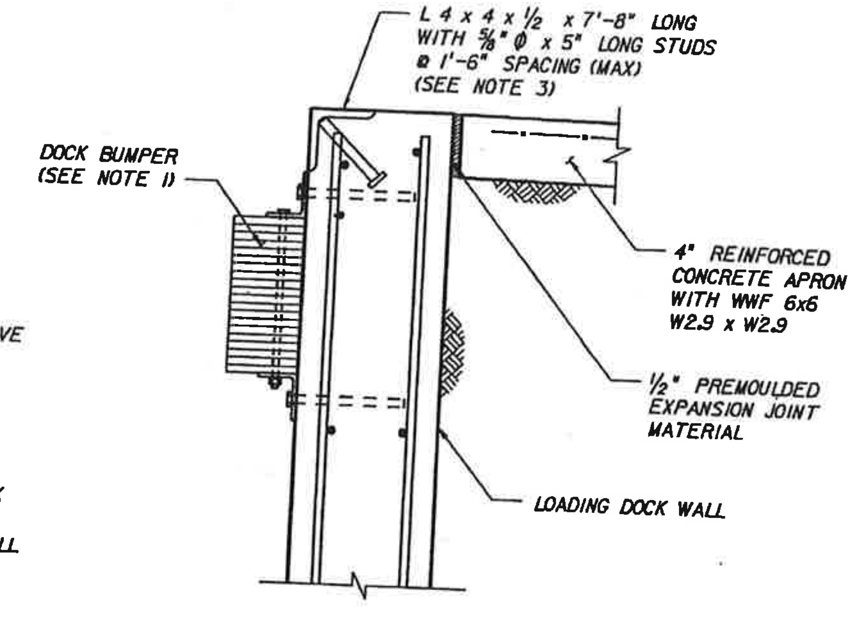
PARTIAL PLAN

LOADING DOCK AT TECH SHOP

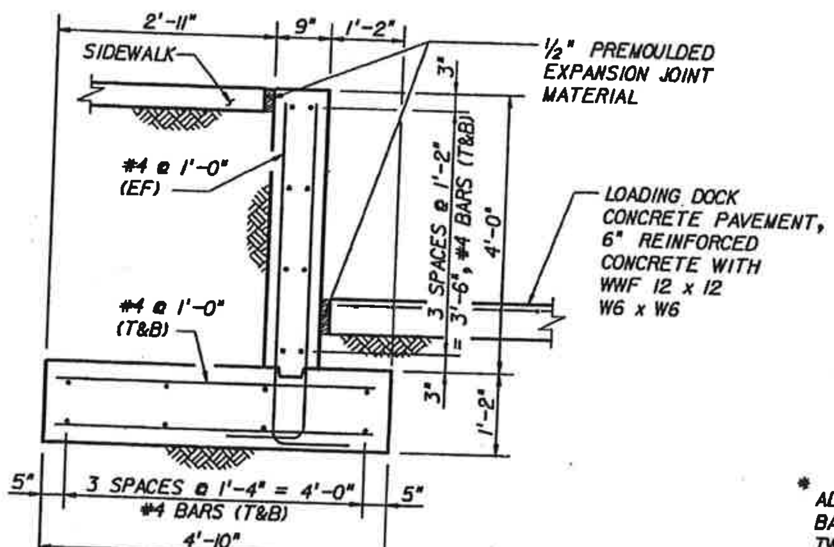


HANDRAIL POST CONNECTION DETAIL

(POST DESIGNED FOR 6'-6" SPACING, SEE NOTE 2)

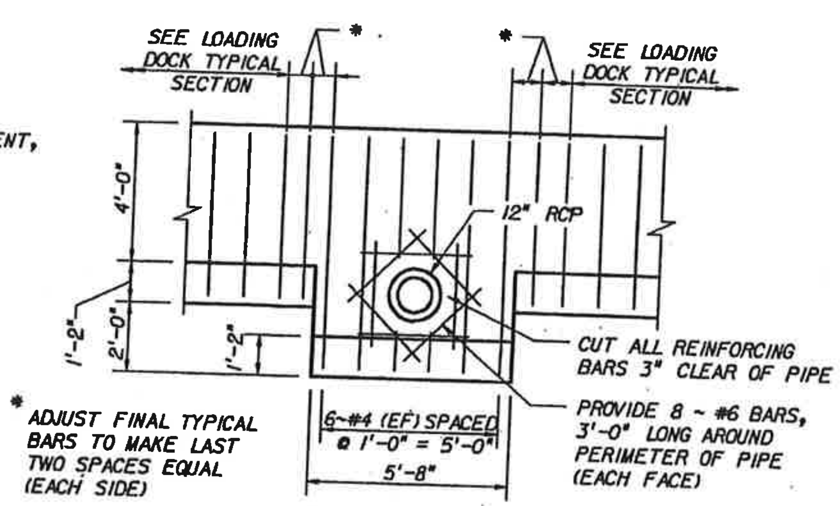


SECTION AT 4" REINFORCED CONCRETE APRON



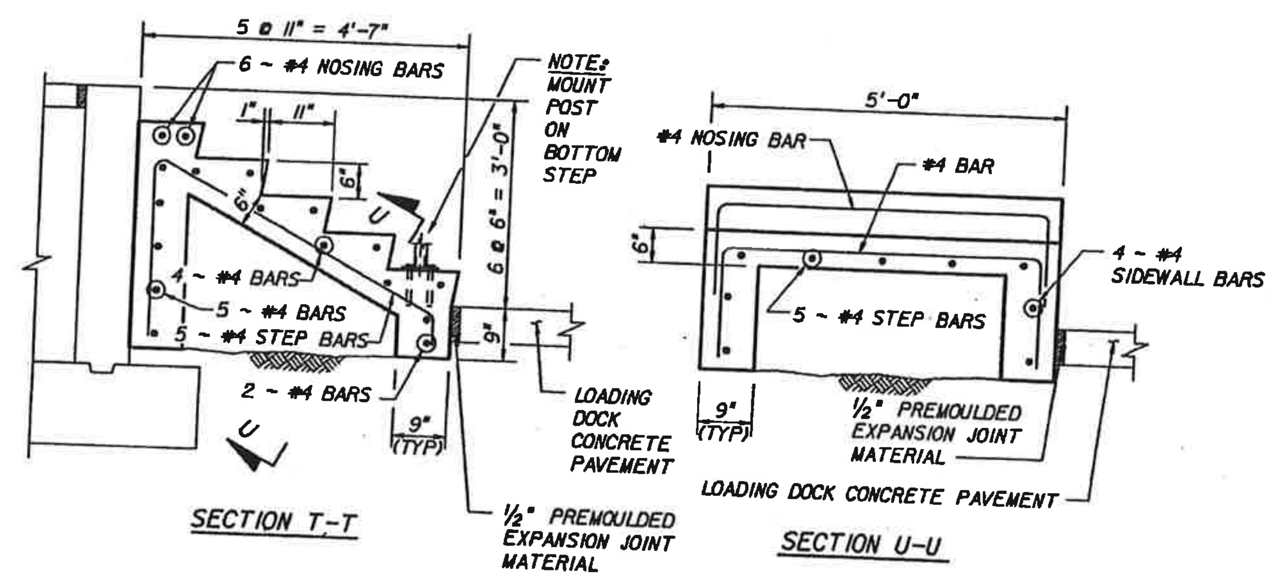
LOADING DOCK WALL TYPICAL SECTION

(FOR WALL CORNERS, SEE WALL CORNER DETAIL ON SHEET S02)



DETAIL AT PIPE PENETRATION

(ONLY APPLIES AT LOADING DOCK AT ADMINISTRATION BUILDING)



CONCRETE STEPS DETAIL

NOTES:

1. SEE TECHNICAL SPECIAL PROVISIONS FOR DOCK BUMPER.
2. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE HANDRAIL SYSTEM FOR REVIEW.
3. LENGTH OF THE L 4 x 4 x ½ SHALL BE COMPATABLE WITH THE FINAL DETAILED GATE DIMENSIONS.

[signature] 2-4-00

REVISIONS							
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	GMS	01/00	DRAWN BY	GMS	01/00
CHECKED BY	NQN	01/00	CHECKED BY	KBD	01/00
SUPERVISED BY: E.W. BREKHUS, PE					

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LOADING DOCK DETAILS

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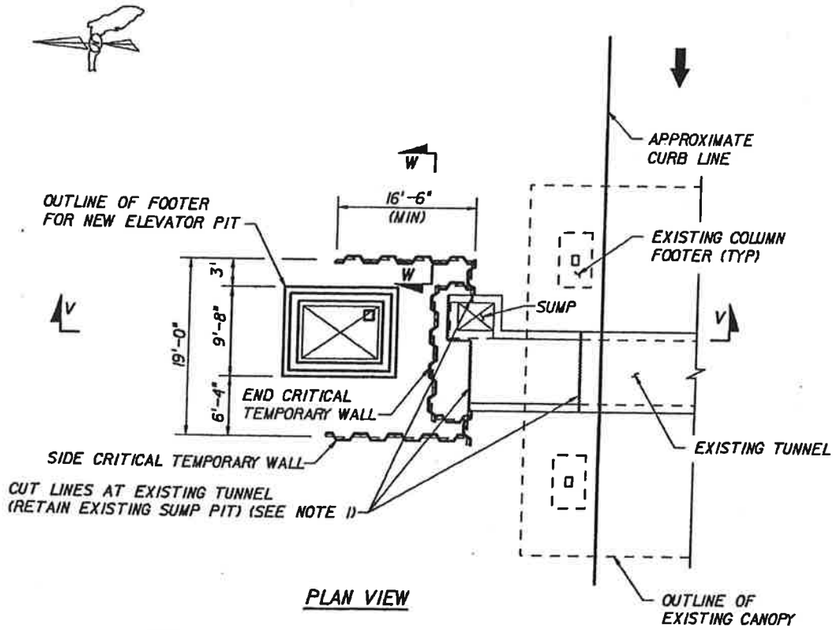
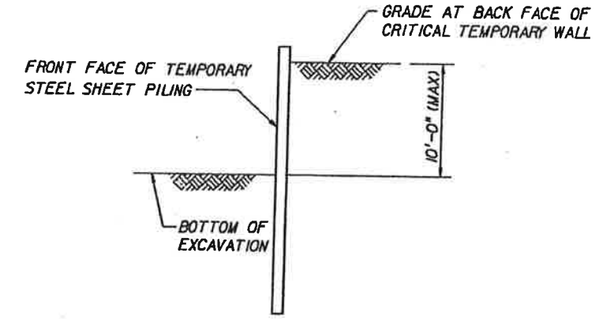
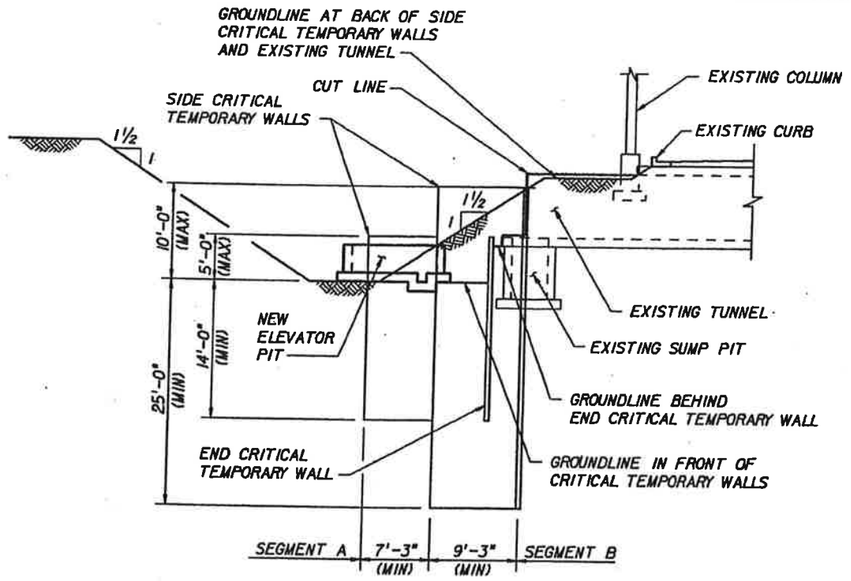
FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
190352-1-52-01	10002-0000	S11



PLAN VIEW



SECTION W-W



SECTION V-V
(SHOWN AT TIME OF NEW ELEVATOR PIT CONSTRUCTION)

GENERAL NOTES FOR TEMPORARY STEEL SHEET PILE WALLS:

1. SPECIFICATIONS: AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO), 1997 STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SIXTEENTH EDITION.
2. GENERAL SPECIFICATIONS: FLORIDA DEPARTMENT OF TRANPORTATION STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 1991 EDITION WITH 1994 SUPPLEMENT.
3. DESIGN METHOD: THE TEMPORARY SHEET PILING IS DESIGNED IN ACCORDANCE WITH AASHTO SERVICE LOAD DESIGN.
4. ALL SHEET PILING DIMENSIONS ARE TO THE CENTER OF SHEET PILING.
5. ANY UNDERGROUND UTILITIES LOCATED WITHIN 4 FEET OF THE TEMPORARY SHEET PILING SHALL BE RELOCATED AS REQUIRED PRIOR TO INSTALLATION OF THE SHEET PILING.
6. TEMPORARY SHEET PILING SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE UPON COMPLETION OF THE WORK.
7. THE COST OF FURNISHING, INSTALLING AND REMOVING THE TEMPORARY SHEET PILING SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE.
8. AT THE CONTRACTOR'S OPTION AND EXPENSE, AN ALTERNATE DESIGN, SIGNED AND SEALED (CALCULATIONS AND PLANS) BY A FLORIDA REGISTERED PROFESSIONAL ENGINEER, MAY BE SUBMITTED FOR REVIEW IN THE FORM OF A SHOP DRAWING.
9. THE CONTRACTOR SHALL SUBMIT FOR REVIEW SHOP DRAWINGS SHOWING THE PROPOSED SHEET PILING SYSTEM AND DETAILS.
10. SHEET PILES SHALL BE STRUCTURAL STEEL, CONFORMING TO ASTM A-328 (Fy = 33 ksi) OR A-572 (Fy=50 ksi). COLD-ROLLED SECTIONS WILL BE ALLOWED AS SUBSTITUTES FOR HOT-ROLLED SECTIONS AS LONG AS THE SECTION PROPERTY REQUIREMENTS ARE MET. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE AVAILABILITY OF HOT-ROLLED AND COLD-ROLLED SECTION.

SUGGESTED CONSTRUCTION SEQUENCE

CRITICAL TEMPORARY WALL

ELEVATOR PIT CONSTRUCTION

1. INSTALL SIDE CRITICAL TEMPORARY WALLS, INCLUDING SHEET PILES ADJACENT TO TUNNEL WALLS.
2. EXCAVATE TO THE ELEVATION OF THE BOTTOM OF THE EXISTING TUNNEL.
3. DEMOLISH PORTIONS OF THE EXISTING TUNNEL THAT ARE NORTH OF THE CUT LINE.
4. INSTALL END CRITICAL TEMPORARY WALL NORTH OF THE CUT LINE.
5. FINISH EXCAVATION FOR THE CONSTRUCTION OF THE ELEVATOR PIT.
6. CONSTRUCT THE ELEVATOR PIT UP TO THE ELEVATION OF THE BOTTOM OF THE TUNNEL.

REMAINING TUNNEL CONSTRUCTION

1. AFTER ELEVATOR PIT IS CONSTRUCTED, BACKFILL TO ELEVATION OF BOTTOM OF TUNNEL.
2. REMOVE END CRITICAL TEMPORARY WALL.
3. CONSTRUCT REMAINING PORTIONS OF TUNNEL.
4. BACKFILL TO BOTTOM OF FLOOR SLAB.
5. REMOVE SIDE CRITICAL TEMPORARY WALLS.

NOTES:

1. SEE SHEET S01 FOR ISOMETRIC OF EXISTING TUNNEL CUT LINES.
2. SHEET PILING ANALYSIS WAS PERFORMED FOR THE WALL HEIGHTS DEPICTED IN SECTION V-V. IF THE CONTRACTOR PLANS OPERATIONS WHICH EXCEED THE DESIGN PARAMETERS SHOWN, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO DESIGN AND CONSTRUCT THE WALLS ACCORDINGLY.
3. MINIMUM TIP ELEVATIONS SHALL BE INACCORDANCE WITH SECTION A455-5.8 OF THE SPECIFICATIONS AND ALLOWABLE STRESS SHALL BE 65% OF THE YIELD STRESS.
4. THE MINIMUM SECTION MODULUS OF THE STEEL SHEET PILES SHALL BE AS FOLLOWS:
   A328 HOT-ROLLED 17.7 In3/ft
   A572 HOT-ROLLED 13.8 In3/ft
   A328 COLD-ROLLED 20.8 In3/ft
   A572 COLD-ROLLED 16.3 In3/ft.

2-24-00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

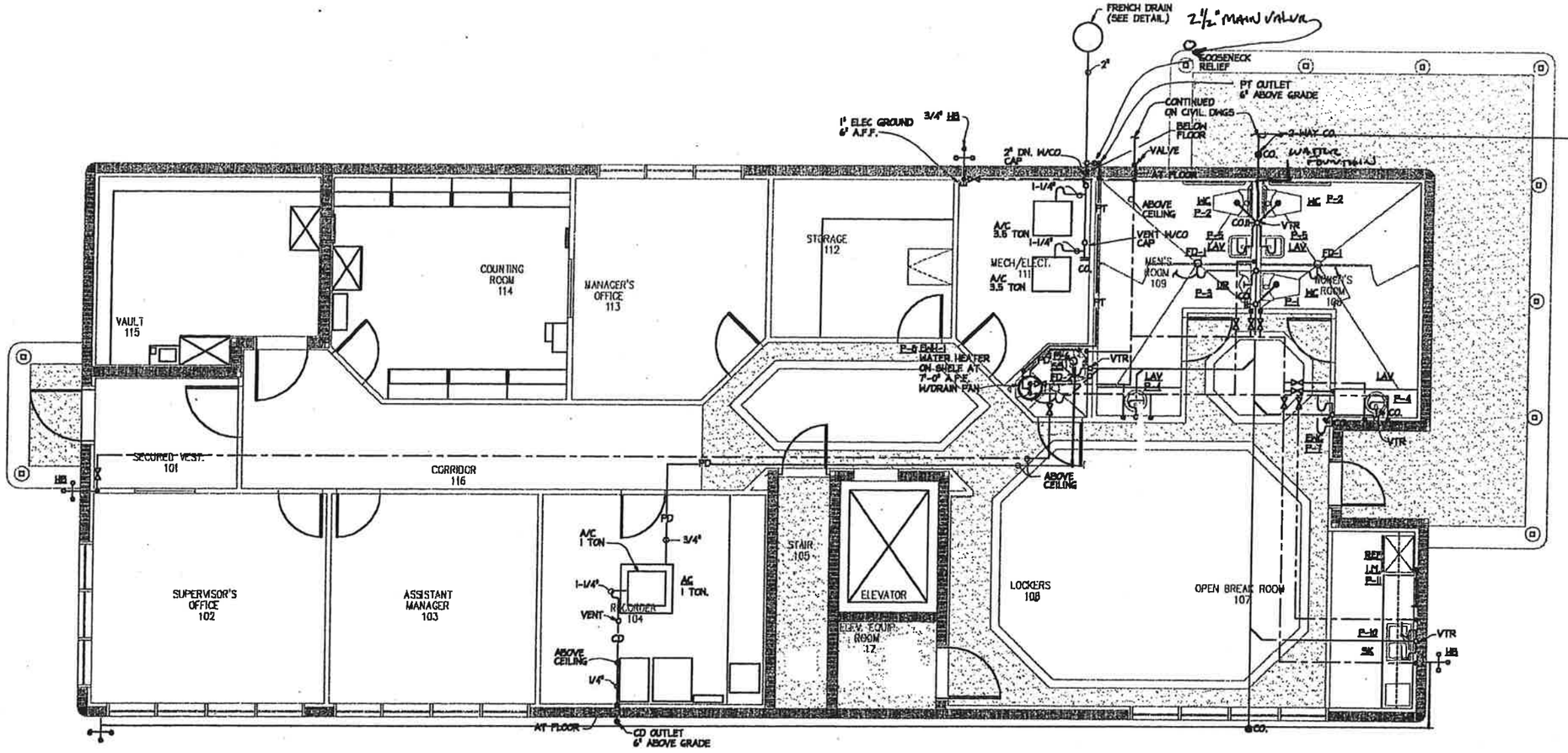
	NAME	DATE		NAME	DATE
DESIGNED BY	GMS	01/00	DRAWN BY	KBD	01/00
CHECKED BY	NQN	01/00	CHECKED BY	EWB	01/00
SUPERVISED BY: E.W. BREKHUS, PE					

DAVID VOLKERT & ASSOCIATES, INC. Engineers • Architects • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ADMINISTRATION BUILDING
CRITICAL TEMPORARY WALL DETAILS

s:\eab\addtwl.dgn Fri Feb 4 10:44:32 2000

FINANCIAL PROJ. ID	PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	P01



ADMIN. BUILDING PLUMBING FLOOR PLAN

SCALE: 1/4" = 1'-0"

0 4 8 12

ALL ITEMS ON THIS SHEET SHALL BE PAID FOR UNDER PAY ITEM 726-68, "TOLL PLAZA MODIFY EXISTING"

JAN 10 2000

REVISIONS								
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

initial engineers

3145 S.W. 42nd Terrace
Miami, Florida 33133
(305)669-9333 • (305)669-9378(fax)
Alfonso Fernandez-Fraga, P.E.
Florida Mechanical Engineer 53126
Project No. 971502

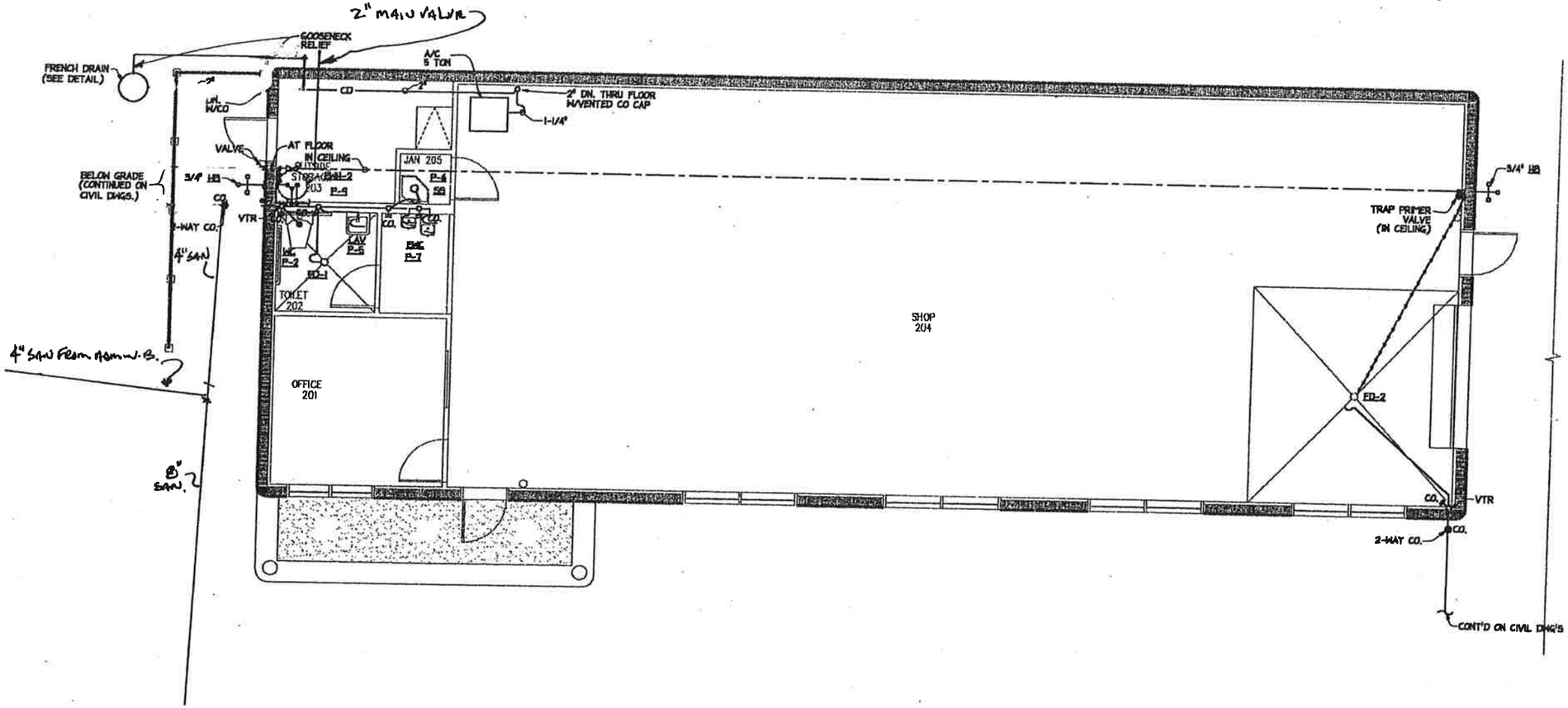
	NAME	DATE		NAME	DATE
DESIGNED BY	W.G.H.	31JAN00	DRAWN BY	M.A.	31JAN00
CHECKED BY	A.F.F.	31JAN00	CHECKED BY	A.F.F.	31JAN00

SUPERVISED BY: ALFONSO FERNANDEZ-FRAGA, P.E.

VOLKERT & ASSOCIATES, INC. — Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ADMINISTRATION BUILDING PLUMBING FLOOR PLAN

FINANCIAL PROJ. ID	PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	P02



TECH SHOP PLUMBING FLOOR PLAN

SCALE: 1/4" = 1'-0"

0 4 8 12

ALL ITEMS ON THIS SHEET SHALL BE PAID FOR UNDER PAY ITEM 770-101-106 "BUILDING"

REVISIONS								
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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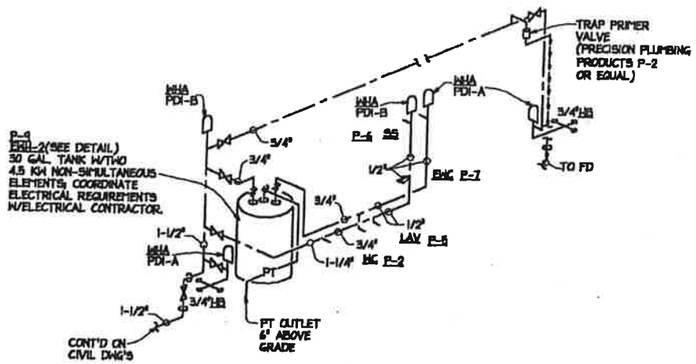
SUPERVISED BY : ALFONSO FERNANDEZ-FRAGA, P.E.

VOLKERT & ASSOCIATES, INC.
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

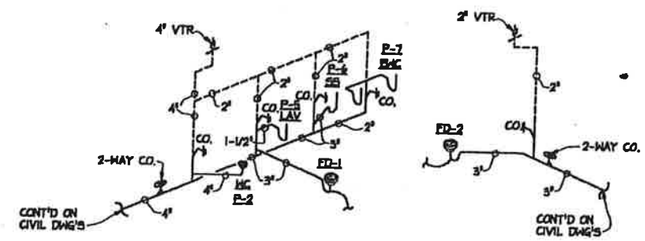
JAN 8 2000

TECH SHOP PLUMBING FLOOR PLAN

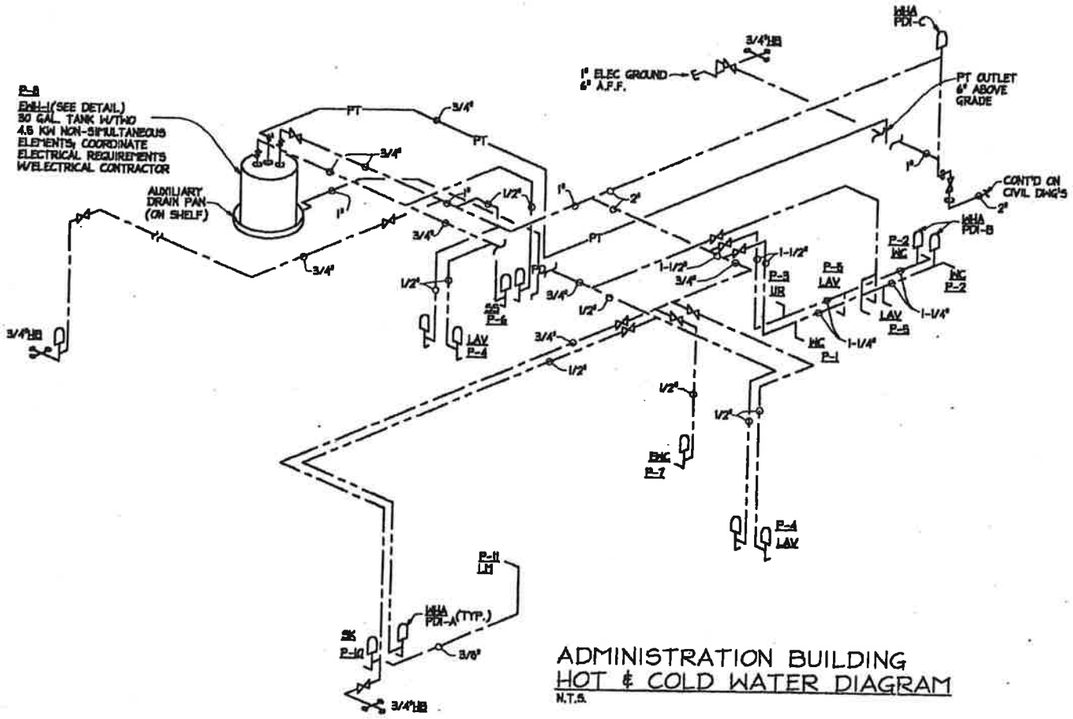
FINANCIAL PROJ. ID	PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	P03



TECH SHOP
HOT & COLD WATER DIAGRAM
N.T.S.



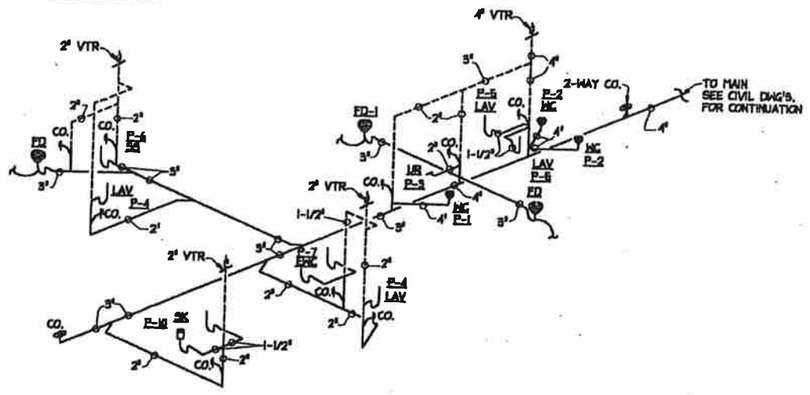
TECH SHOP
SANITARY DIAGRAM
N.T.S.



ADMINISTRATION BUILDING
HOT & COLD WATER DIAGRAM
N.T.S.

ITEMS ON THIS SHEET ASSOCIATED WITH THE TECH SHOP BUILDING SHALL BE PAID FOR UNDER PAY ITEM 770-101-106 "BUILDING"

ITEMS ON THIS SHEET NOT ASSOCIATED WITH THE TECH SHOP BUILDING SHALL BE PAID FOR UNDER PAY ITEM 795-56 "TOLL PLAZA MODIFY EXISTING"



ADMINISTRATION BUILDING
SANITARY DIAGRAM
N.T.S.

JAN 10 2008

REVISIONS								
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CHECKED BY	A.F.F.	31JAN00	CHECKED BY	A.F.F.	31JAN00

SUPERVISED BY : ALFONSO FERNANDEZ-FRAGA, P.E.

DAVID VOLKERT ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

PLUMBING ISOMETRICS

E02 REV 11-01-01.DWG

CONTRACTOR TO ALLOW 3 (THREE) FEET OF LEVEL GROUND IN FRONT OF METER.

MOUNT METER BASE TO BE READ FROM NORTH SIDE

EXISTING 2-4" TECO CONDUITS TO RISER POLE

WATER LINE

2-4" CONDUITS TO CT CABINET

PROPOSED SHRUBS AROUND CT CABINET/METER BASE

2-3" CONDUITS FROM CT CABINET UNDER TECO PULLBOX TO MAIN BREAKER. USE 4-500 MCM, XHHW INSULATED CONDUCTORS IN EACH CONDUIT FROM TECO PULLBOX THROUGH CT CABINET TO MAIN BREAKER.

TECO PULL BOX

15' TO BLDG.

2-3" CONDUITS TO MAIN PANEL

NOTE: UTILIZE PROPOSED RECEPTACLE FOR ELECTRIC WATER COOLER.

3#8, #10 GND, 3/4"C

MDP-8,10,12

MDP-14,16,18

CU-3

CU-2

CU-1

D-12,14

LIGHTING CONTACTOR

PANEL "MDP"

MDP-25,27

MDP-17,19

MDP-13,15

800 AMP ENCLOSED BREAKER

MDP-21,23

800 AMP AUTOMATIC TRANSFER SWITCH

SHUNT TRIP STATION

C-7

C-10 CCTV MONITOR

C-9

LRP-18

C-15

LRP-13

C-3 COIN COUNTER

C-20

LRP-20

LRP-14

LRP-11

2#10, #10 GND, 3/4"C

LRP-17

LRP-8

LRP-15

LRP-1

LRP-2

MDP-1,3,5

LRP-5

SCALE

C-1

GF1/WP

LRP-9

LRP-12

LRP-10

C-6

C-8

CARD ACCESS PRINTER & TERMINAL

2#10, #10 GND, 3/4"C

AHU-3

D-8,10

UPS/BATT. (FUTURE)

CARD ACCESS CPU

LRP-16

PANEL "D"

C-11

C-4

C-5

COMPUTER (FUTURE)

PANEL "C"

LRP-26

ELEVATOR MOTOR

3#3, #6 GND, 1 1/4"C

MDP-32,34,36

LRP-35

LRP-7

ELEVATOR CONTROL & LIGHTS

D-19,21,23

SUMP PUMP PACKAGE UNIT 2@1HP (EXISTING)

LRP-4

LRP-3

LRP-6

ADMINISTRATION BUILDING POWER PLAN

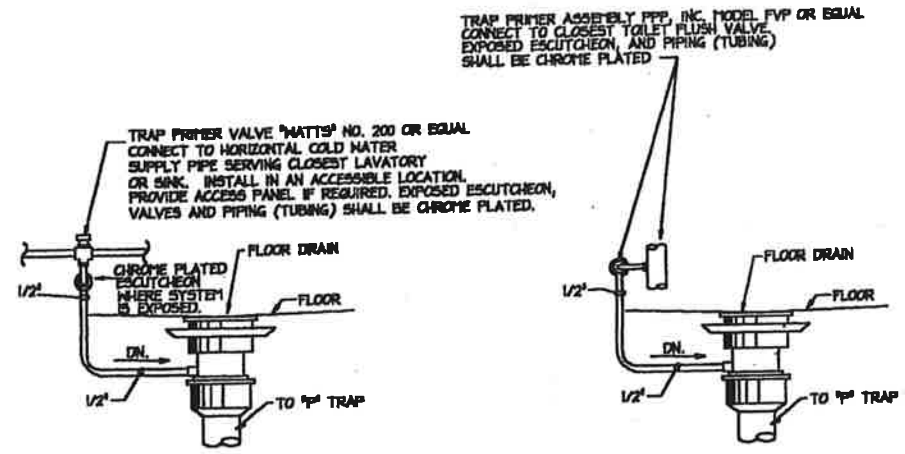
SCALE: 1/4" = 1'-0"

PCN1 02/09/95

0 4 8 12

N

FINANCIAL PROJ. ID	PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	P04



NOTE:
FOR NON-FIXTURE APPLICATIONS, PROVIDE AS REQUIRED BY QUANTITY OF CONNECTIONS A PRECISION PLUMBING PRODUCTS "PRIME-RITE" OR "OREGON # 1" VALVE WITH A MODEL "DU" DISTRIBUTION UNIT WHERE APPLICABLE OR EQUAL.

6 TRAP RESEAL DETAIL

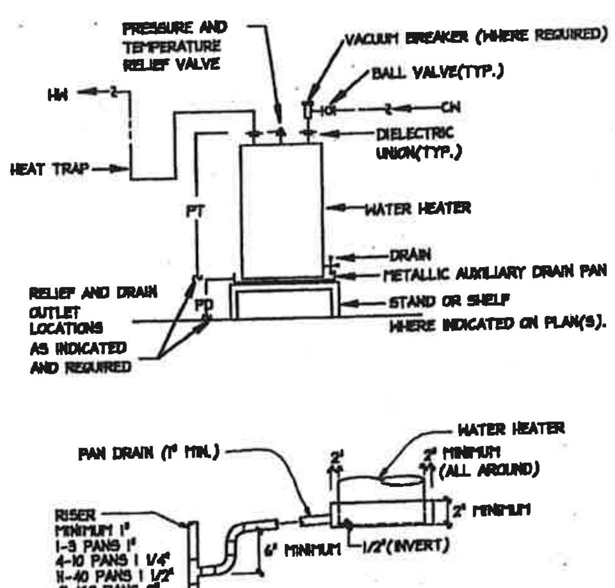
SCALE: N.T.S.

FIXTURE NO.	FIXTURE DESCRIPTION	MANUFAC-TURER	FIXTURE MODEL	TRIM	NOTES
P-1	WATER CLOSET, WHITE, FLOOR MOUNTED, FLUSH TANK	KOHLER	K-4349	- - -	SEAT-WHITE, OPEN FRONT KOHLER K-4670-CA FLUSH VALVE- SLOAN ROYAL 1.6 G.P.F.
P-2	WATER CLOSET, WHITE, ADA, FLOOR MOUNTED, FLUSH TANK	KOHLER	K-4302	- - -	SEAT-WHITE, OPEN FRONT KOHLER K-4670-CA FLUSH VALVE- SLOAN ROYAL 1.6 G.P.F.
P-3	URINAL, WHITE, ADA, WALL HUNG, FLUSH VALVE	KOHLER	K-5016-ET	- - -	CARRIER- FLOOR MOUNTED: JOSAM, WADE OR ZURN FLUSH VALVE- SLOAN ROYAL 1.0 G.P.F.
P-4	LAVATORY, WHITE, COUNTERTOP, SELF RIMMING	KOHLER	K-2196	CHICAGO 404A-E-12	WASTE-K-7716-CP CHROME PLATED TRAP- 1 1/4" X 1 1/2" SUPPLY- K-7606-CP
P-5	LAVATORY, WHITE, ADA, WALL HUNG	KOHLER	K-2005	CHICAGO 404A-317	WASTE-K-13685-CP CHROME PLATED TRAP-1 1/4" X 1 1/2" SUPPLY- K-7605-CP ALL ADA COMPLIANT WITH INSULATION CARRIER- FLOOR MOUNTED: JOSAM, WADE OR ZURN
P-6	SERVICE SINK, FLOOR MOUNTED MOP BASIN	FIAT	TSBC-6011	CHICAGO 897	PROVIDE WITH: STAINLESS STEEL CURB CAPS ALL CURBS; STAINLESS STEEL HANGER FOR 3 MOPS; 4 FOOT HOSE AND STAINLESS STEEL HOSE HOOK
P-7	ELECTRIC WATER COOLER HI-LO, ADA, WALL HUNG	ELKAY	EHFSA-8-G (2 REQ'D)	- - -	STAINLESS STEEL CABINET & BACK SPLASH 3/8" ANGLE SUPPLY STOP, 1 1/4" CAST BRASS P-TRAP WITH CLEANOUT
P-8	ELECTRIC WATER HEATER, EWH-1	LOCHINVAR	SSK030KK	P&T RELIEF VALVE, DRAIN PAN	SEE DETAILS AND DIAGRAMS FOR ADDITIONAL INFORMATION
P-9	ELECTRIC WATER HEATER, EWH-2	LOCHINVAR	STK030KK	P&T RELIEF VALVE	SEE DETAILS AND DIAGRAMS FOR ADDITIONAL INFORMATION
P-10	SINK, STAINLESS STEEL, COUNTERTOP, SELF RIMMING, TWO COMPART.	ELKAY	PSR-3321	CHICAGO 1201	WASTES- LK-35 TRAPS- K-9000 SUPPLIES- K-7605-CP
P-11	ICE MAKER	KOHLER	- - -	K-7600-CP	CONNECT AND VERIFY OPERATION PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS
FD-1	FLOOR DRAIN	JOSAM	30000-6	- - -	6"X6" SQUARE NICKEL BRONZE TOP WITH TRAP PRIMER
FD-2	FLOOR DRAIN	JOSAM	30000-A-50	- - -	6" ROUND NICKEL BRONZE TOP; BASKET STRAINER AND TRAP PRIMER

3 PLUMBING FIXTURE SCHEDULE

	SANITARY PIPE (SAN.)
	VENT PIPE (V)
	COLD WATER PIPE (CW)
	HOT WATER PIPE (HW)
—CD—	CONDENSATE DRAIN PIPE (CD)
→ → →	INDIRECT WASTE PIPE (IW)
	VALVE (VLV)
	CHECK VALVE
	BALL VALVE
	UNION
	"P" TRAP
FD	FLOOR DRAIN W/ 1/2" RESEAL
CO	CLEAN-OUT IN HORIZONTAL
CO	CLEAN-OUT IN VERTICAL
WHA	WATER HAMMER ARRESTER
	AIR CHAMBER
	VENT THRU ROOF (VTR)
	PRESSURE & TEMPERATURE RELIEF VALVE (P&T)
HB	HOSE BIBB W/ VACUUM BREAKER & SHUT-OFF VALVE
—PT—	PRESSURE & TEMPERATURE RELIEF PIPE
—PD—	PAN DRAIN
N.T.S.	NOT TO SCALE
R	REDUCER (INCREASER)
W/	WITH
WC	WATER CLOSET
LAV	LAVATORY
UR	URINAL
SK	SINK
SS	SERVICE SINK
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
MIN.	MINIMUM
A/C	AIR CONDITION (ER) (ING)

1 PLUMBING LEGEND



7 WATER HEATER DETAIL

SCALE: N.T.S.

1- SITE INVESTIGATION: IT SHALL BE THE RESPONSABILITY OF BIDDERS TO VISIT THE SITE OF THE WORK AND TO ACQUAINT THEMSELVES WITH ALL INFORMATION REGARDING THE BUILDING REQUIREMENTS AND EXISTING SITE CONDITIONS.

2- PIPING SYSTEMS SHOWN ARE DIAGRAMATICALLY TYPICAL AND ARE NOT INTENDED TO INDICATE EXACT INSTALLED LOCATIONS OR CONFIGURATIONS OF EACH.

3- BUILDING DRAINAGE PIPING SHALL BE INSTALLED AT A MINIMUM FALL OF 1/8" /FT. FOR 3" AND LARGER PIPE AND 1/4" /FT. FOR 2" AND SMALLER PIPE UNLESS INDICATED OTHERWISE ON PLANS.

4- * INDICATES PIPE SHALL BE SLOPED AT 1/4" /FT. MINIMUM.

5- PROVIDE ACCESS PANEL AT ALL PLACES WHERE EQUIPMENT AND DEVICES REQUIRING SERVICE ARE CONCEALED BEHIND INACCESSIBLE CEILINGS AND WALLS. SUCH EQUIPMENT AND DEVICES INCLUDES, BUT IS NOT NECESSARILY LIMITED TO CLEANOUTS, WATER HAMMER ARRESTERS, AND VALVES. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.

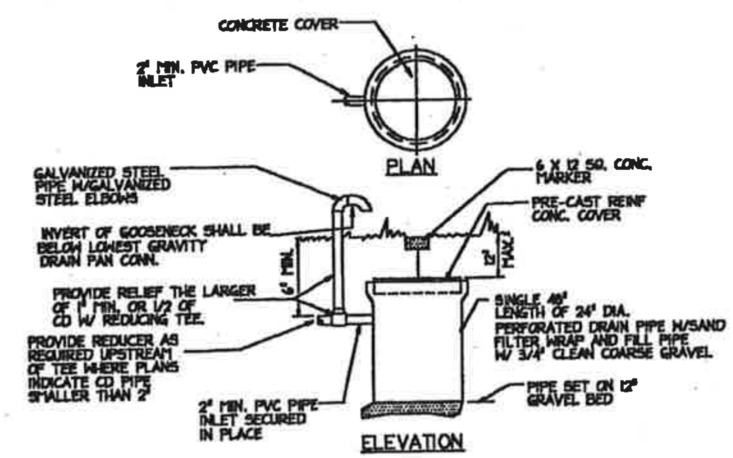
6- TEST ALL SANITARY AND WATER SYSTEMS PROVIDED AND FLUSH AND STERILIZE WATER SYSTEMS.

7- CONTRACTOR SHALL DISPOSE OF ALL DEBRIS PER LOCAL REQUIREMENTS, INCLUDING PAYING ALL FEES, AT NO ADDITIONAL COST TO OWNER.

5 CONSTRUCTION NOTES

SCALE: N.T.S.

JAN 1 0 2000



4 CONDENSATE FRENCH DRAIN DETAIL

SCALE: N.T.S.

ITEMS ON THIS SHEET ASSOCIATED WITH THE TECH SHOP BUILDING SHALL BE PAID FOR UNDER PAY ITEM 770-101-106 "BUILDING"

ITEMS ON THIS SHEET NOT ASSOCIATED WITH THE TECH SHOP BUILDING SHALL BE PAID FOR UNDER PAY ITEM 755-66 "TOLL PLAZA MODIFY EXISTING"

2 PAY ITEM NOTES

REVISIONS							
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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7145 S.W. 42nd Terrace Miami, Florida 33155 (305)669-9393 * (305)669-9176(fax) Alfonso Fernandez-Fraga, P.E. Florida Mechanical Engineer 33126 Project No. 971502

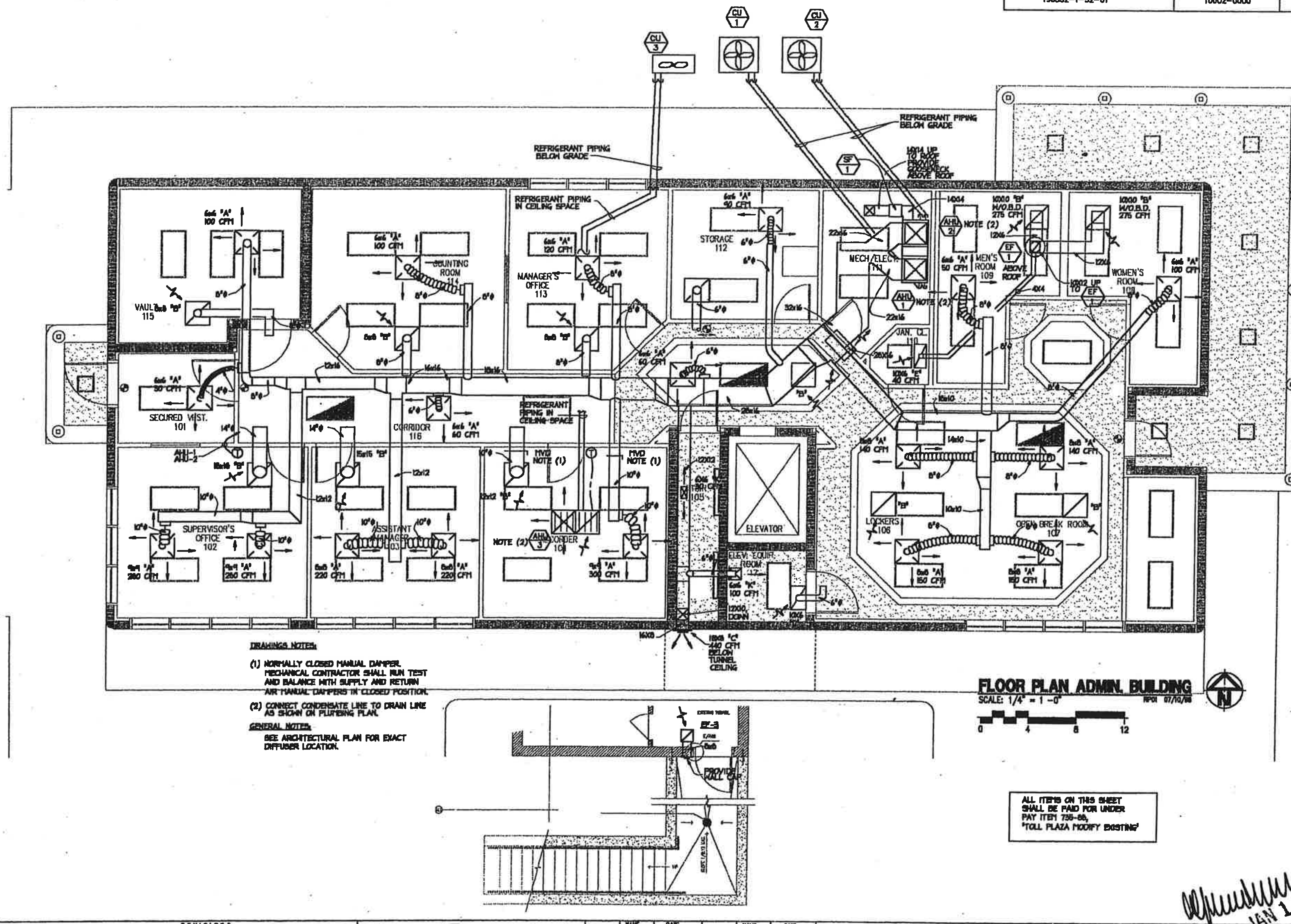
	NAME	DATE		NAME	DATE
DESIGNED BY	J.A.D.	31JAN00	DRAWN BY	M.A	31JAN00
CHECKED BY	A.F.F.	31JAN00	CHECKED BY	A.F.F.	31JAN00

SUPERVISED BY: ALFONSO FERNANDEZ-FRAGA, P.E.

VOLKERT & ASSOCIATES, INC.
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

PLUMBING LEGEND, NOTES & DETAILS

FINANCIAL PROJ. ID	PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	M01



DRAWINGS NOTES:

(1) NORMALLY CLOSED MANUAL DAMPER. MECHANICAL CONTRACTOR SHALL RUN TEST AND BALANCE WITH SUPPLY AND RETURN AIR MANUAL DAMPERS IN CLOSED POSITION.

(2) CONNECT CONDENSATE LINE TO DRAIN LINE AS SHOWN ON PLUMBING PLAN.

GENERAL NOTES:

SEE ARCHITECTURAL PLAN FOR EXACT DIFFUSER LOCATION.

FLOOR PLAN ADMIN. BUILDING

SCALE: 1/4" = 1'-0"

RP01 07/10/98

ALL ITEMS ON THIS SHEET SHALL BE PAID FOR UNDER PAY ITEM 755-88, "TOLL PLAZA MODIFY EXISTING"

JAN 1 0 2000

REVISIONS								
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

initial engineers
7145 S.W. 42nd Terrace, Miami, Florida 33155
Alfonso Fernandez-Fraga, P.E., Florida Mechanical Engineer 33128
Project No. 971502

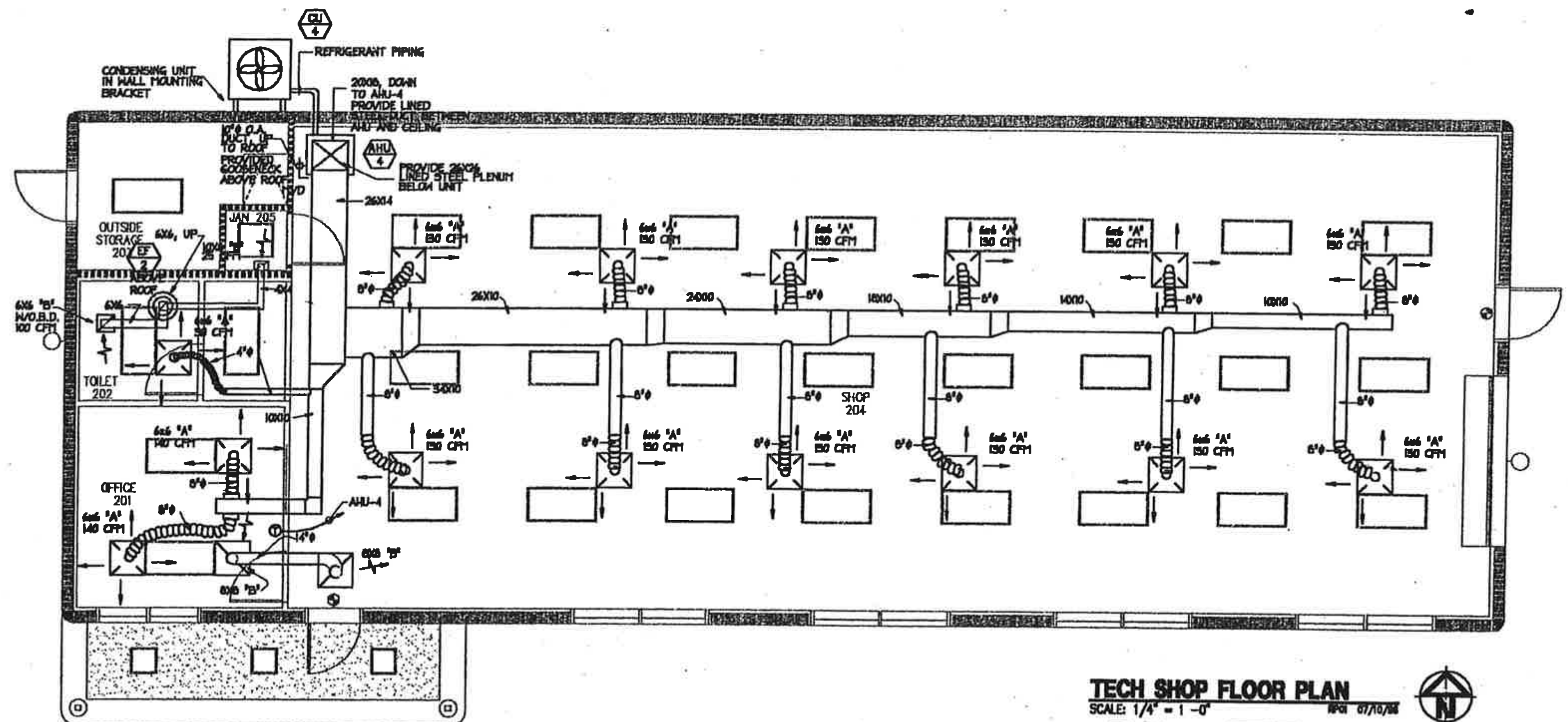
	NAME	DATE		NAME	DATE
DESIGNED BY	J.A.D.	31JAN00	DRAWN BY	M.A	31JAN00
CHECKED BY	A.F.F.	31JAN00	CHECKED BY	A.F.F.	31JAN00

SUPERVISED BY: ALFONSO FERNANDEZ-FRAGA, P.E.

VOLKERT & ASSOCIATES, INC.

ADMINISTRATION BUILDING HVAC FLOOR PLAN

FINANCIAL PROJ. ID	PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	M02



TECH SHOP FLOOR PLAN

SCALE: 1/4" = 1'-0"

0 4 8 12

ALL ITEMS ON THIS SHEET SHALL BE PAID FOR UNDER PAY ITEM 770-101-106 "BUILDING"

JAN 1 0 2000

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

REVISIONS

initial engineers

7145 S.W. 42nd Terrace Miami, Florida 33155

Alfonso Fernandez-Fraga, P.E. Florida Mechanical Engineer 33126 Project No. 971502

	NAME	DATE		NAME	DATE
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CHECKED BY	A.F.F.	31JAN00	CHECKED BY	A.F.F.	31JAN00

SUPERVISED BY: ALFONSO FERNANDEZ-FRAGA, P.E.

VOLKERT & ASSOCIATES, INC.

TECH SHOP HVAC FLOOR PLAN

FINANCIAL PROJ. ID	PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	M03

VENTILATION CALCULATIONS

AREA	SQ. FT.	PERSONS PER 1000 SQ. FT.	POPULATION DIVERSITY	PEOPLE	O/A PER PERSON	VENTILATION (CFM)
ADMINISTRATION BUILDING						
SURPERVISOR OFFICE	220	7	100%	1	20	20
ASSISTANT MANAGER	200	7	100%	1	20	20
OPEN BREAK ROOM	824	20	50%	8	20	120
WOMEN TOILETS	50 CFM X TOILET					100
MEN TOILETS	50 CFM X TOILET OR URINAL					100
MANAGER'S OFFICE	200	7	100%	1	1	20
COUNTING	244	7	100%	1	1	20
CORRIDOR	380	0.005 CFM X SQFT				2
TUNNEL	1610	AIR EXHAUSTED 440 CFM				440
TECH. SHOP BUILDING						
OFFICE	140	7	100%	1	20	20
TOILET	50 CFM X TOILET OR URINAL					50
SHOP	2000	8	80%	12	15	200

4 VENTILATION CALCULATION

AIR DISTRIBUTION SCHEDULE

TYPE	DESCRIPTION	ACCESSORIES	MANUFACTURER & MODEL NO.
A	PERFORATED CEILING DIFFUSER	OPPOSED BLADE DAMPER	METAL*AIRE SERIES 7000 24 X 24 NOMINAL PANEL SIZE
B	PERFORATED CEILING RETURN	------	METAL*AIRE SERIES 7000 24 X 24 NOMINAL PANEL SIZE
C	SIDEWALL SUPPLY GRILLE	OPPOSED BLADE DAMPER	METAL*AIRE MODEL V4004D
D	WALL/CEILING RETURN/EXHAUST GRILLE	------	METAL*AIRE MODEL RH
E	WALL/CEILING EXHAUST/RETURN GRILLE	OPPOSED BLADE DAMPER	METAL*AIRE MODEL RHD
F	FILTER GRILLE	FILTER	METAL*AIRE MODEL RHF
G	EGGCRATE FILTER GRILLE	FILTER	METAL*AIRE SERIES CC5 FB
H	BAR GRILLE	OPPOSED BLADE DAMPER	METAL*AIRE SERIES 2000 0° DEFLECTION
In	CEILING LINEAR SLOT DIFFUSER	PLENUM (FIELD OR FACTORY FABRICATED), VOLUME DAMPER, AIR PATTERN CONT	METAL*AIRE SERIES 4000 n INDICATES NUMBER OF 3/4" SLOTS
J1 J2	LIGHT TROFFER DIFFUSER	VOLUME DAMPER	METAL*AIRE J1 INDICATES MODEL SB J2 INDICATES MODEL DB OR DT
K	SQUARE CEILING DIFFUSER	OPPOSED BLADE DAMPER	METAL*AIRE SERIES 5000
L	DRAINABLE LOUVER	BIRDSCREEN	RUSKIN MODEL ELF375D
M	EGGCRATE RETURN GRILLE	------	METAL*AIRE MODEL CC5
N	CURVED LINEAR SLOT DIFFUSER	CURVED BORDER EQUALIZING GRID	TITUS ML-38, TYPE 16 n INDICATES NUMBER OF 3/4" SLOTS

5 AIR DISTRIBUTION SHEDULE

SPLIT A/C UNIT SCHEDULE

			AHU-1	AHU-2	AHU-3	AHU-4
AIR HANDLING UNIT		UNIT DESIGNATION	AHU-1	AHU-2	AHU-3	AHU-4
		AREA SERVED	ADM. BLDG.	ADM. BLDG.	REC. ROOM ADM BLDG.	TECH SHOP BLDG
		LOCATION	MECH. ROOM	MECH. ROOM	CEILING	ABOVE STAND SHOP AREA
		OPERATING WEIGHT LBS. (APPROX.)	188	188	156	173
		DESIGN, MANUFACTURER & MODEL NO.	TRANE TWE060	TRANE TWE060	LIEBERT MME018	TRANE TWE060
		MINIMUM S.E.E.R. / E.E.R.	12.15	12.15	-	12.15
	FAN	TOTAL CFM	1620	1620	700	1870
	FAN	TOTAL VENT CFM	420	420	-	270
	FAN	EXTERNAL STATIC PRESSURE TOTAL (IN. WATER)	0.5	0.5	0.3	0.5
	FAN	MOTOR HP (NON-OVERLOAD)	1/2	1/2	1/5	1/2
	FAN	ELECTRICAL SERVICE	208V 60HZ/1PH	208V 60HZ/1PH	208V 60HZ/1PH	208V 60HZ/1PH
	COOLING COIL	TOTAL CAPACITY BTU / HR.	60250	60250	13300	58700
	COOLING COIL	SENSIBLE CAPACITY BTU / HR.	41800	41800	12100	46300
	COOLING COIL	ENTERING AIR TEMP. °F DB / WB	81.8 / 67.1	81.8 / 67.1	78/63	79.9/64.6
	COOLING COIL	LEAVING AIR TEMP. °F DB / WB	54.7/53.2	54.7/53.2	61/57	54.7/53.6
	FILTER	TYPE AND THICKNESS	THROWAWAY	THROWAWAY	THROWAWAY	THROWAWAY
	FILTER	QUANTITY AND SIZE, INCHES	(1) 20X25X1	(1) 20X25X1	(1) NOTE (1)	(1)
		HEAT, KW	5.76	5.76	-	5.76
AIR COOLED CONDENSING UNIT		UNIT DESIGNATION	CU-1	CU-2	CU-3	CU-4
		No OF FANS AND HP	(1) 1/4	(1) 1/4	(1) 1/5	(1) 1/4
		AMBIENT AIR TEMPERATURE °F DB	95	95	95	95
		NO. COMPRESSORS AND FLA	(1) 19.0	(1) 19.0	(1) -	(1) 19.0
		ELECTRICAL SERVICE	208V 60HZ/3PH	208V 60HZ/3PH	208V 60HZ/1PH	208V 60HZ/3PH
		OPERATING WEIGHT LBS. (APPROX.)	254	254	199	254
		MANUFACTURER & MODEL NO.	TRANE TTA060	TRANE TTA060	LIEBERT PFC020A	TRANE TTA060
		REFRIGERANT LINE SIZE INCHES SUCTION/LIQUID	1 1/8 / 3/8	1 1/8 / 3/8	5/8/1/4	1-1/8/3/8
		REMARKS	(1), (2)	(1), (2)	(1), (3), (4)	(1), (2)

NOTES:
(1) PROVIDE FILTERS AS RECOMMENDED BY EQUIPMENT MANUFACTURER.
(2) SUBFEED FAN FROM ELECTRIC HEATER
(3) FURNISH WITH SOLID STATE WALL MOUNTED CONTROLLED.
(4) PROVIDE REHEAT & HUMIDIFIER PACKAGE.

3 SPLIT A/C UNIT SCHEDULE

VENTILATION FAN SCHEDULE

		FAN No.	EF-1	EF-2	SF-1	EF-3
		AREA SERVED	ADM. BLDG.	TECH. BLDG.	O.A. ADM. BLDG.	TUNNEL
		OPERATING WEIGHT LBS. (APPROX.)	23	14	75	31
		LOCATION	ROOF	ROOF	MECH. ROOM	TUNNEL
		MANUFACTURER & MODEL NO.	GREENHECK G-80	GREENHECK G-85	GREENHECK SQ-120-B	GREENHECK SP-282
		TOTAL AIR CFM	875	125	880	440
FAN		DRIVE TYPE	DIRECT	DIRECT	DIRECT	DIRECT
FAN		WHEEL TYPE	CENTRIF.	CENTRIF.	CENTRIF.	CENTRIF.
FAN		SPEED (RPM)	1580	1550	1140	1070
FAN		TOTAL STATIC PRESSURE (IN. WATER)	0.25	0.25	0.125	0.125
FAN		MOTOR HP (NON-OVERLOAD)	1/15	1/30	1/8	224 WATTS
FAN		STARTER TYPE / FURNISHED BY	—	—	—	—
FAN		ELECTRICAL SERVICE	208V 60Hz 1 PH	208V 60Hz 1 PH	208V 60Hz 1 PH	208V 60Hz 1 PH
ACCESSORIES		SERVICE SWITCH	YES	YES	YES	YES
ACCESSORIES		CONSTRUCTION	ALUMINUM	ALUMINUM	ALUMINUM	ALUMINUM
ACCESSORIES		MULTIBLADE BACKDRAFT DAMPER	YES	YES	YES	YES
ACCESSORIES		BIRDSCREEN	YES	YES	NO	NO
ACCESSORIES		ROOF CURB	YES	YES	NO	NO
ACCESSORIES		INTERLOCK WITH	AHU'S ADM. BLDG.	AHU-4	AHU'S ADM. BLDG.	AHU'S ADM. BLDG.
		REMARKS	(1)	(1)	(2)	(1)

(1) PROVIDE SOLID STATED SPEED CONTROL.
(2) PROVIDE VARIABLE FREQUENCY DRIVE.

1 VENTILATION FAN SCHEDULE

ITEMS ON THIS SHEET ASSOCIATED WITH THE TECH SHOP BUILDING SHALL BE PAID FOR UNDER PAY ITEM 770-101-106 "BUILDING"

ITEMS ON THIS SHEET NOT ASSOCIATED WITH THE TECH SHOP BUILDING SHALL BE PAID FOR UNDER PAY ITEM 795-86 "TOLL PLAZA MODIFY EXISTING"

2 PAY ITEM NOTES

JAN 10 2000

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
REVISIONS								

initial engineers
7145 S.W. 42nd Terrace Miami, Florida 33155 (305)669-9393 * (305)669-9178(fax) Alfonso Fernandez-Fraga, P.E. Florida Mechanical Engineer 33126 Project No. 971502

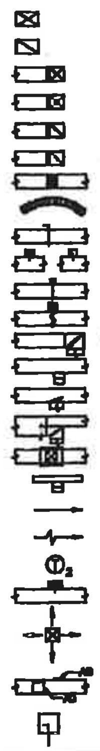
	NAME	DATE		NAME	DATE
DESIGNED BY	J.A.D.	31JAN00	DRAWN BY	M.A	31JAN00
CHECKED BY	A.F.F.	31JAN00	CHECKED BY	A.F.F.	31JAN00

APPROVED BY: ALFONSO FERNANDEZ-FRAGA, P.E.

VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

MECHANICAL SCHEDULES

FINANCIAL PROJ. ID	PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	M04



SUPPLY AIR DUCT, SECTION
RETURN OR EXHAUST AIR DUCT, SECTION
SUPPLY DUCT UP
SUPPLY DUCT DOWN
RETURN OR EXHAUST DUCT UP
RETURN OR EXHAUST DUCT DOWN
FLEXIBLE CONNECTION
FLEXIBLE DUCT
DAMPER-PLAN
SMOKE DETECTOR/FIRESTAT
AUTOMATIC FIRE DAMPER
MOTORIZED DAMPER
SQUARE ELBOW WITH TURNING VANES
BRANCH TAKEOFF WITH VOLUME DAMPER AND FLEX. DUCT
BRANCH TAKEOFF WITH ADJUSTABLE EXTRACTOR
SPLITTER DAMPER
SQUARE CEILING DIFFUSER
LINEAR DIFFUSER
SUPPLY AIR FLOW
RETURN OR EXHAUST AIR FLOW
THERMOSTAT (WITH VAV BOX NUMBER IF REQUIRED)
STATIC PRESSURE SENSOR
DIFFUSER
ACCESS DOOR
FLOW SENSING ELEMENT

5 HVAC AND SHEET METAL SYMBOLS

1ST LETTER OR ONLY LETTER	2ND LETTER	3RD LETTER
A-ANALYZER F-FLOW H-HAND I-CURRENT K-TIME M-MOISTURE,HUMIDITY OR DEW POINT N-SPEED O- OXYGEN, PHOTOELECTRIC P-PRESSURE, PILOT, PUSH R-RELIEF S-SMOKE T-TEMPERATURE Y-DOOR(SWITCH OR CONTROL) Z-POSITION	A-ALARM B-BUTTON C-CONTROLLER D-DETECTOR E-ELEMENT-INSERTED IN ELEMENT I-INDICATOR L-LIGHT S-SWITCH T-TRANSMITTER W-WELL Y-RELAY	H-HIGH L-LOW V-VALVE

SPECIAL IDENTIFIERS	FUNCTION IDENTIFIERS
FCV —FLOW CONTROL VALVE HCV —HAND CONTROL VALVE HIC —HAND INDICATING CONTROLLER HOA —HAND-OFF-AUTOMATIC PCV —PRESSURE CONTROL VALVE SOV —SOLENOID VALVE TCV —TEMPERATURE CONTROL VALVE P-T —PRESSURE-TEMPERATURE TAP VY —VAPOR RELAY	Σ —— SUM (RELAY), ADD OR TOTALIZE $\sqrt{}$ —— SQUARE ROOT (EXTRACTOR) ⊠ —— HIGH SELECT (RELAY) ⊟ —— LOW SELECT (RELAY) ∫ —— INTEGRATE I/D —— INVERSE DERIVATIVE AVG —— AVERAGE RATIO —RATIO (RELAY) MIN. POS. —MINIMUM POSITION (RELAY)

2 DEVICE IDENTIFYING LETTERS

1. BEVELED TAKE-OFFS AND DAMPERS SHALL BE INSTALLED IN ALL BRANCH DUCTWORK LEADING FROM MAIN TRUNK LINES.
2. DUCT SIZES SHOWN ARE MINIMUM INSIDE DIMENSIONS.
3. EXHAUST FAN OUTLETS SHALL BE INSTALLED A MINIMUM OF 10'-0" FROM FRESH AIR INTAKES OF MECHANICAL EQUIPMENT.
4. DUCT MOUNTED SMOKE DETECTORS SHALL BE FURNISHED AND POWERED BY DIV. 16 - ELECTRICAL AND MOUNTED IN DUCTWORK BY DIV. 15 - MECHANICAL.
5. ALL OUTSIDE AIR INTAKES SHALL BE A MINIMUM OF 3'-0" ABOVE GRADE AND ROOF DECK.

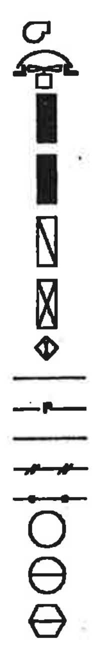
3 DUCTWORK NOTES

ITEMS ON THIS SHEET ASSOCIATED WITH THE TECH SHOP BUILDING SHALL BE PAID FOR UNDER PAY ITEM 770-101-105 "BUILDING"

ITEMS ON THIS SHEET NOT ASSOCIATED WITH THE TECH SHOP BUILDING SHALL BE PAID FOR UNDER PAY ITEM 795-88 "TOLL PLAZA MODIFY EXISTING"

4 PAY ITEM NOTES

JAN 1 0 2000



CENTRIFUGAL FAN OR PUMP
ROOF FAN
PREFILTER OR ROUGHING FILTER
EXTENDED MEDIA FILTER
COOLING COIL
HEATING COIL
INTERLOCK
ELECTRIC LINE
PREWIRED IN EQUIPMENT PACKAGE
ELECTRONIC LINE
PNEUMATIC LINE
SENSING LINE
LOCAL CONTROL DEVICE
PANEL MOUNTED DEVICE
EQUIPMENT IDENTIFIER SYMBOL
V INDICATES FURNISHED BY EQUIPMENT VENDOR

6 FLOW AND INSTRUMENT DIAGRAMS SYMBOLS

AF	AUXILIARY FAN
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ATC	AUTOMATIC CONTROL SYSTEM
BAS	BUILDING AUTOMATION SYSTEM
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
C	CELSIUS OR CENTIGRADE
C TO C	CENTER TO CENTER
CD	CONDENSATE DRAIN
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
℄	CENTER LINE
CLG	COOLING
CT	COOLING TOWER
CU	CONDENSING UNIT
CWS	CONDENSING WATER SUPPLY
CWR	CONDENSING WATER RETURN
Cv	VALVE FLOW COEFFICIENT
DB	DRY BULB
dB	DECIBEL
DIA	DIAMETER
DMPR	DAMPER
EAR	EXHAUST AIR REGISTER
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
EL	ELEVATION
EMCS	ENERGY MANAGEMENT CONTROL SYSTEM
F	FAHRENHEIT
F TO F	FACE TO FACE
FD	FIRE DAMPER
FP	FIRE PROTECTION
FPM	FEET PER MINUTE
FPV	FAN POWERED VAV
FT	FEET
GAL	GALLON
GPM	GALLON PER MINUTE
HD	HEAD
HG	MERCURY
HV	REHEAT VAV
HVAC	HEATING, VENTILATING & AIR CONDITIONING
Hz	HERTZ-CYCLES PER SECOND
IPS	IRON PIPE SIZE
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
MAX	MAXIMUM
MBH	THOUSANDS OF BTU PER HOUR
MIN	MINIMUM, MINUTE
MOD	MOTOR OPERATED DAMPER
NC	NOISE CRITERIA, NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
PLBG	PLUMBING
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH-GAUGE
RAR	RETURN AIR REGISTER
RPM	REVOLUTIONS PER MINUTE
SENS.	SENSIBLE
SPEC	SPECIFICATION
TF	TRANSFER FAN
UC	UNDERCUT DOOR
UH	UNIT HEATER
V	VOLTS
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
WB	WET BULB
WC	WATER COLUMN
WH	WALL HYDRANT
#	POUNDS
ø	DIAMETER, PHASES(1 OR 3)
Δ	DIFFERENCE OR DIFFERENTIAL

NOTE: THESE SYMBOLS AND ABBREVIATIONS ARE STANDARD AND MAY NOT ALL BE USED ON THIS PROJECT

1 ABBREVIATIONS

REVISIONS								
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

initial engineers
7145 S.W. 42nd Terrace Miami, Florida 33155 (305)669-9393 • (305)669-9179(fax) Alfonso Fernandez-Fraga, P.E. Florida Mechanical Engineer 33126 Project No. 971502

	NAME	DATE		NAME	DATE
	J.A.D.	31JAN00		M.A	31JAN00
	A.F.F.	31JAN00		A.F.F.	31JAN00

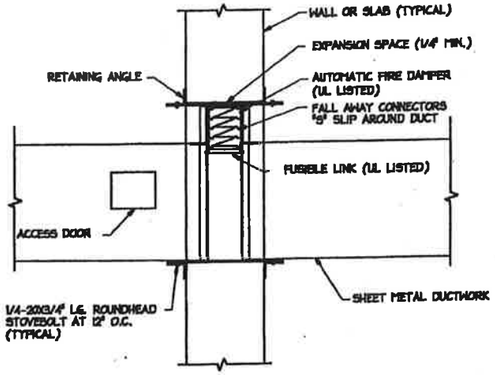
SUPERVISED BY: ALFONSO FERNANDEZ-FRAGA, P.E.

DAVID VOLKERT & ASSOCIATES, INC.

MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

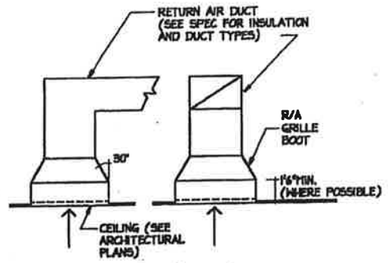
MECHANICAL LEGEND AND SYMBOLS

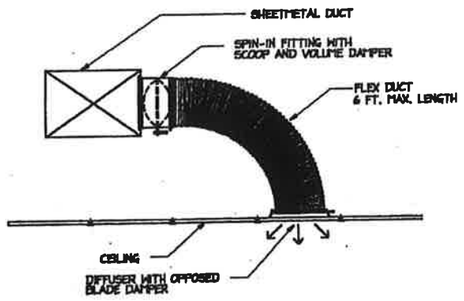
FINANCIAL PROJ. ID	PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	M05



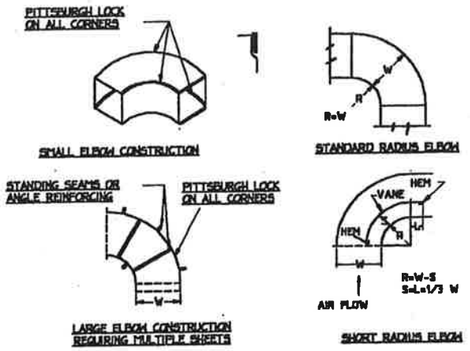
NOTES:
1. DAMPER SLEEVE TO BE 16 GAGE FOR ALL DAMPERS NOT EXCEEDING 36" WIDE OR 24" HIGH. SLEEVE SHALL BE 14 GAGE FOR ALL DAMPERS LARGER THAN 36" WIDE OR 24" HIGH.
2. ALL FIRE DAMPER INSTALLATIONS SHALL BE IN ACCORDANCE WITH STANDARD MECHANICAL CODE, NFPA REGULATIONS, LOCAL CODES AND MANUFACTURERS RECOMMENDATIONS.

9 FIRE DAMPER DETAIL
N.T.S.



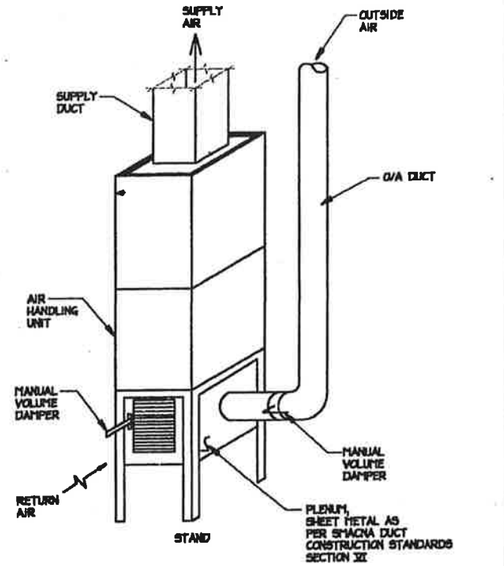


6 TYPICAL SUPPORT AND RETURN AIR CONNECTION DETAILS
N.T.S.

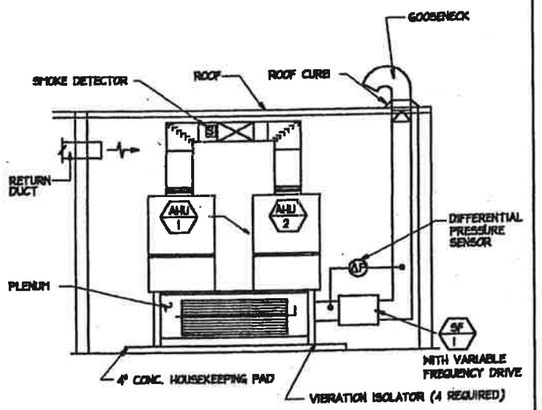


NOTE: PROVIDE LONG RADIUS ELBOWS WHENEVER SPACE PERMITS.

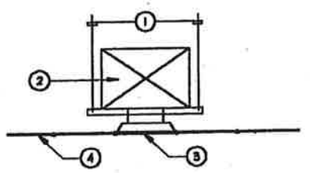
4 DUCT ELBOW DETAILS
N.T.S.



1 AHU MOUNTING DETAIL
N.T.S.

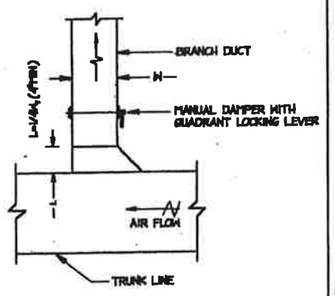


10 AIR HANDLING UNITS ELEVATION
N.T.S.

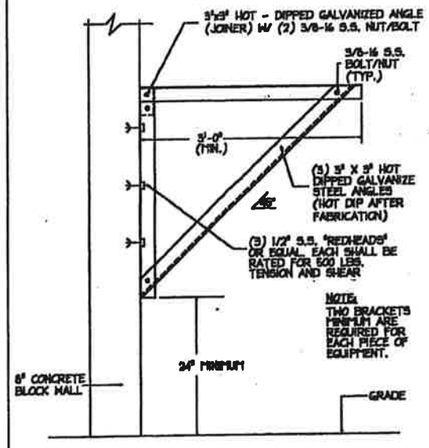


1	DUCT HANGERS TO BE SUPPORTED FROM STRUCTURE ABOVE. (SEE SPECIFICATIONS FOR METHODS AND MATERIALS)
2	SUPPLY AIR DUCT (SEE SPECIFICATIONS FOR INSULATION & DUCT TYPES)
3	SUPPLY AIR DIFFUSER (SEE AIR DISTRIBUTION SCHEDULE & PLANS FOR SIZE AND TYPE)
4	CEILING (SEE ARCHITECTURAL PLANS FOR LAYOUT)

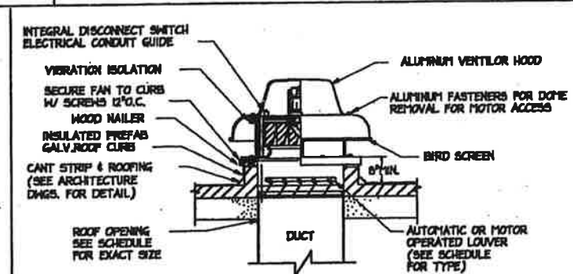
8 TYPICAL DUCT DETAIL
N.T.S.



7 TYPICAL BRANCH DUCT DETAIL
N.T.S.



5 WALL EQUIPMENT MOUNTING BRACKET DETAIL
N.T.S.



NOTE: CURB AND EQUIPMENT MANUFACTURER AND/OR INSTALLER TO PROVIDE ASSEMBLIES TO COMPLY WITH THE REQUIREMENTS FOR PERFORMANCE PER ASCE 7-93 USING 110 MPH WIND VELOCITY.

2 TYPICAL EXHAUST FAN DETAIL
N.T.S.

ITEMS ON THIS SHEET ASSOCIATED WITH THE TECH SHOP BUILDING SHALL BE PAID FOR UNDER PAY ITEM 770-101-106 "BUILDING"

ITEMS ON THIS SHEET NOT ASSOCIATED WITH THE TECH SHOP BUILDING SHALL BE PAID FOR UNDER PAY ITEM 756-66 "TOLL PLAZA MODIFY EXISTING"

3 PAY ITEM NOTES

JAN 10 2000

REVISIONS								
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

initial engineers
7145 S.W. 42nd Terrace Miami, Florida 33155 (305)668-8333 • (305)668-9178(fax) Johnny Fernandez-Fraga, P.E. Florida Mechanical Engineer 35128 Project No. 971502

	NAME	DATE		NAME	DATE
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CHECKED BY	A.F.F.	31JAN00	CHECKED BY	A.F.F.	31JAN00

SUPERVISED BY: ALFONSO FERNANDEZ-FRAGA, P.E.

VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

MECHANICAL DETAILS

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E01

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
⇐ GFI/WP	DUPLEX RECEPTACLE, 120V, 20A, NEMA TYPE 5-20R FLUSH MOUNT 18" A.F.F. UNLESS OTHERWISE NOTED (WP INDICATES WEATHER PROOF) (GFI INDICATES GROUND FAULT PROTECTION)
⇐₂ GFI/WP	QUADPLEX RECEPTACLE, 120V, 20A, NEMA TYPE 5-20R FLUSH MOUNT 18" A.F.F. UNLESS OTHERWISE NOTED (WP INDICATES WEATHER PROOF) (GFI INDICATES GROUND FAULT PROTECTION)
⇐ C	HOSPITAL GRADE DUPLEX RECEPTACLE WITH RED FACE. 120V, 20 AMP, NEMA TYPE 5-20R FLUSH MOUNT 48" A.F.F. UNLESS OTHERWISE NOTED
$▼_T$	TELEPHONE OUTLET WITH TELEPHONE INSTRUMENT FLUSH MOUNT 18" A.F.F. UNLESS OTHERWISE NOTED
$▼_P$	OUTLET FOR PAY TELEPHONE COORDINATE WIRING (BOTH SIGNAL AND POWER) WITH LOCAL TELEPHONE COMPANY FLUSH MOUNT 18" A.F.F. UNLESS OTHERWISE NOTED
▼	WIRED TELEPHONE JACK FOR FUTURE USE. MOUNT 18" A.F.F. UNLESS OTHERWISE NOTED
Ⓙ	JUNCTION BOX
S	SINGLE POLE TOGGLE SWITCH, 20A, 120/277V, FLUSH MOUNT 4" A.F.F. UNLESS OTHERWISE NOTED
S_3	3-WAY TOGGLE SWITCH, 20A, 120/277V, FLUSH MOUNT 4" A.F.F. UNLESS OTHERWISE NOTED
A	2' X 4' RECESSED OR SURFACE MOUNTED FLUORESCENT FIXTURE LETTER INDICATES FIXTURE TYPE.
E	2' X 2' RECESSED OR SURFACE MOUNTED FLUORESCENT FIXTURE LETTER INDICATES FIXTURE TYPE.
ⓧ ⓧ	CEILING OR WALL MOUNTED EXIT LIGHT WITH ARROWS AS INDICATED. TWIN FACE, GREEN LED, UNIVERSAL MOUNT COLUMBIA # LEDBG2W
F	OUTDOOR CANOPY FIXTURE LETTER INDICATES FIXTURE TYPE.
○ Ō	WALL MOUNTED LIGHTING FIXTURE LETTER INDICATES FIXTURE TYPE
5	DISCONNECT SWITCH, NEMA 3R ON EXTERIOR UNITS AND NEMA 1 ON INTERIOR UNITS
▬	NEW PANEL BOARD
MDP-1,3,5	INDICATES HOME RUN TO PANEL. "MDP" INDICATES PANEL DESIGNATION. NUMBERS INDICATE BRANCH CIRCUIT OF PANEL. TICKS DENOTE THE NUMBER OF CONDUCTORS. / INDICATES EQUIPMENT GROUND CONDUCTOR.
J_{CP}	OUTLET BOX FOR CCTV CAMERA POWER (FUTURE)

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MOUNT	VOLTAGE	LAMPS	MANUFACTURER & CATALOG NO.	REMARKS
A	2'X4' TROFFER FLUORESCENT	RECESSED	120V	4-40W CW E.S., T12	COLUMBIA # 5PS24-440G-FSA12-EB12LH120FCWES	ELECTRONIC BALLAST WITH < 10% THD
B	2'X4' TROFFER FLUORESCENT	RECESSED	120V	3-40W CW E.S., T12	COLUMBIA # 5PS24-340G-FSA12-EB12LH120FCWES	ELECTRONIC BALLAST WITH < 10% THD
C	2'X4' TROFFER FLUORESCENT	RECESSED	120V	2-40W CW E.S., T12	COLUMBIA # 5PS24-240G-FSA12-EB12LH120FCWES	ELECTRONIC BALLAST WITH < 10% THD
D	2'X4' SURFACE FLUORESCENT	SURFACE MOUNT UNDERNEATH CEILING	120V	4-40W CW E.S., T12	COLUMBIA # PM24-440-FSA12-EB12LH120FCWES	ELECTRONIC BALLAST WITH < 10% THD
E	2'X2' TROFFER FLUORESCENT	RECESSED	120V	2-20W CW E.S., T12	COLUMBIA # 7222-240G-RAA12-S-EB12LH120FCWES	ELECTRONIC BALLAST WITH < 10% THD
F	CANOPY FIXTURE HIGH PRESSURE SODIUM	RECESSED UNDERNEATH CANOPY	120V	1-70W H.P.S	COLUMBIA # MDL-5-04-70-12	
G	WALLPACK FIXTURE HIGH PRESSURE SODIUM	WALL MOUNT 14 FEET ABOVE SLAB.	120V	1-400W H.P.S	COLUMBIA # 90040-120ZP	
H	WALLPACK FIXTURE HIGH PRESSURE SODIUM	WALL MOUNT 14 FEET ABOVE SLAB.	120V	1-100W H.P.S	COLUMBIA # PLC1-02-10-12-DZP	
I	WALL MOUNT FIXTURE FLUORESCENT, 4'	WALL MOUNT 8 FEET ABOVE STAIRS	120V	2-40W CW E.S., T12	COLUMBIA # WAL4-240-EB12LH120FCWES	ELECTRONIC BALLAST WITH < 10% THD
K	8"x4' ENCLOSED FLUORESCENT FIXTURE	SURFACE UNDERNEATH TEMP. COVER	120V	1-40W E.S., T12	COLUMBIA # LLM4-I 40-EB12120-LH	UL LISTED 1570 WET LOC. ELECTRONIC BALLAST WITH < 10% THD
L	NOT USED					

LIGHTING FIXTURE SCHEDULE NOTES

1. MOUNTING HEIGHT INDICATED IS ABOVE FINISHED FLOOR OR ABOVE HIGHEST STEP OF STAIR UNDER FIXTURE AS APPLICABLE
2. FOR RECESSED FIXTURES PROVIDE TRIM TYPE COMPATIBLE WITH CEILING IN WHICH FIXTURE IS TO BE INSTALLED.
3. COORDINATE CIRCUIT VOLTAGE REQUIREMENTS OF ALL FIXTURES PRIOR TO ORDERING MATERIALS.

GENERAL NOTES:

1. ALL ELECTRICAL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE (NFPA 70) AND APPLICABLE RULES AND ORDINANCES.
2. ALL INDOOR CONDUIT SHALL BE ELECTRICAL METALLIC TUBING (EMT). ALL OUTDOOR CONDUIT SHALL BE SCHEDULE 40 PVC CONDUIT UNDERGROUND AND SHALL TRANSITION TO RIGID GALVANIZED STEEL (RGS) ABOVE GROUND. ALL CONDUIT SHALL BE 3/4" IN DIAMETER UNLESS NOTED OTHERWISE.
3. ALL CONDUCTORS SHALL BE #12 AWG, SOLID COPPER WITH 600 V, TYPE THWN INSULATION UNLESS NOTED OTHERWISE. SEPARATE EQUIPMENT GROUND CONDUCTORS SHALL BE RUN IN ALL CONDUITS.
4. ELECTRICAL CONTRACTOR SHALL COORDINATE INSTALLATION OF ELECTRICAL POWER TO THE SITE WITH THE UTILITY
5. ELECTRICAL CONTRACTOR SHALL PROPERLY SIZE ALL DISCONNECTS. INTERIOR DISCONNECTS SHALL BE NEMA TYPE 1 AND EXTERIOR NEMA TYPE 3R.
6. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FULLY OPERATIONAL ELECTRICAL AND LIGHTING SYSTEMS.
7. ROUTING OF CONDUIT IS DIAGRAMMATIC. ACTUAL ROUTING AND BEST MEANS OF SUPPORT SHALL BE DETERMINED IN FIELD. EXACT LOCATION OF ELECTRICAL EQUIPMENT SHALL BE FIELD DETERMINED.
8. ALL CONDUIT SHALL BE CONCEALED INSIDE INTERIOR OF BUILDING WALLS AND/OR ABOVE CEILING. RECEPTACLES AND SWITCHES SHALL BE FLUSH MOUNTED.
9. GENERAL NOTES APPLY TO ALL ELECTRICAL DRAWINGS.

Nelson Russell

1-14-00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	D.J.J.	09/09/99	DRAWN BY	S.K.M.	09/09/99
CHECKED BY	C.N.R.	09/09/99	CHECKED BY	C.N.R.	09/09/99
SUPERVISED BY :					

VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ADMINISTRATION BUILDING AND TECH SHOP
GENERAL ELECTRICAL NOTES AND SCHEDULES

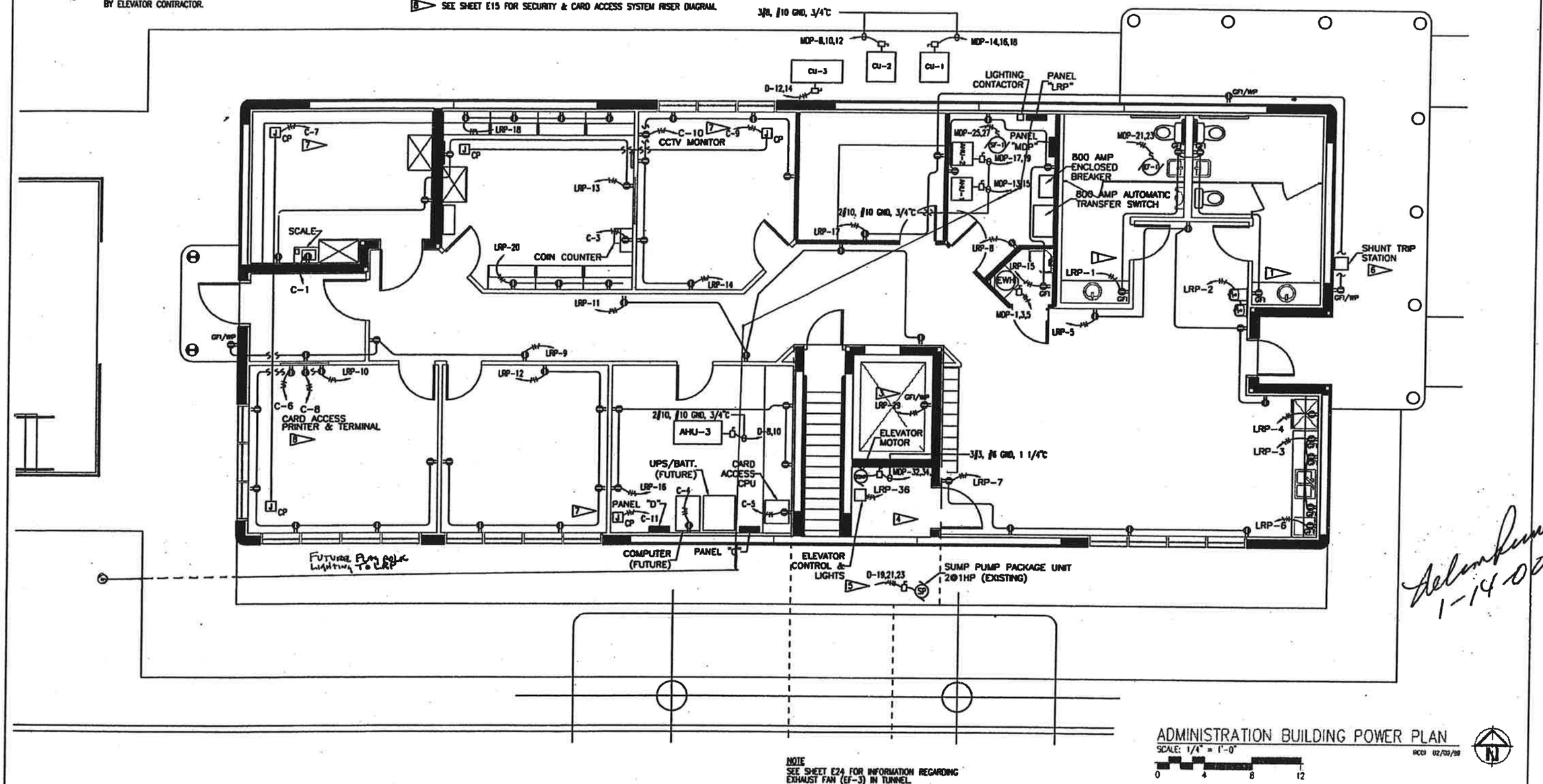
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E02

NOTES

1. MOUNT RECEPTACLES AT RESTROOM SINKS ABOVE SINK COUNTER.
2. FOR POWER RISER DIAGRAM SEE SHEET E04.
3. INSTALL RECEPTACLE IN HOISTWAY PIT PER ARTICLE 620-24(C) OF NEC.
4. ALL WORK IN ELEVATOR PIT AND EQUIPMENT ROOM SHALL BE AS DIRECTED BY ELEVATOR CONTRACTOR.

NOTES CONTINUED

5. RE-FEED EXISTING SUMP PUMP PACKAGE UNIT LOCATED IN TUNNEL BASEMENT FROM NEW PANEL "D".
6. COORDINATE EXACT LOCATION WITH FIRE DEPARTMENT.
7. SEE SHEET E20 FOR CCTV & DATA SYSTEM RISER DIAGRAM.
8. SEE SHEET E15 FOR SECURITY & CARD ACCESS SYSTEM RISER DIAGRAM.



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NOTE
SEE SHEET E24 FOR INFORMATION REGARDING EXHAUST FAN (EF-3) IN TUNNEL.

ADMINISTRATION BUILDING POWER PLAN

SCALE: 1/4" = 1'-0"

RCCI 02/03/99

0 4 8 12

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	D.J.J.	09/09/99	DRAWN BY	S.K.M.	09/09/99
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ADMINISTRATION BUILDING POWER PLAN

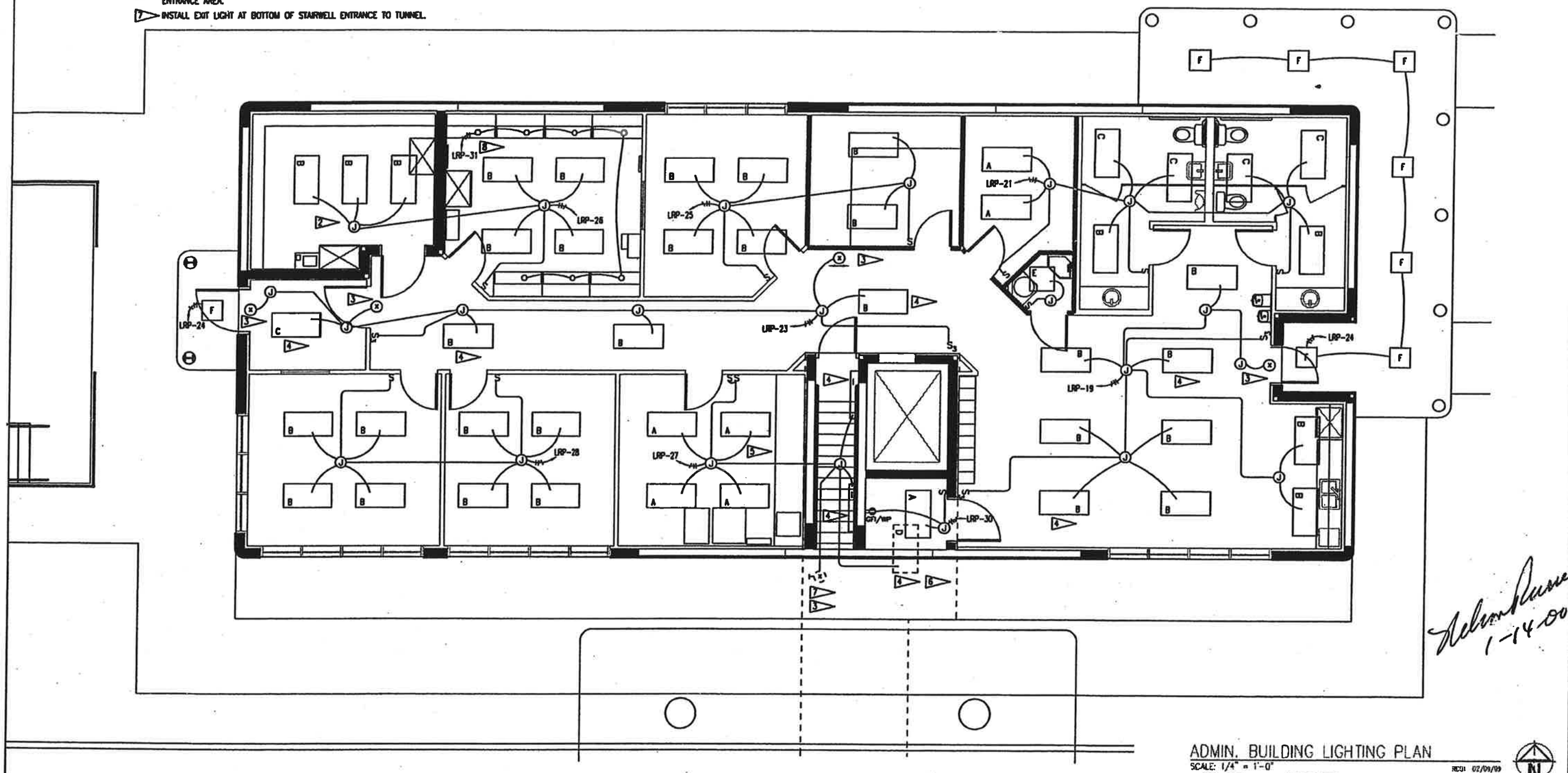
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E03

NOTES:

1. ALL CANOPY AND BUILDING OVERHANG JUNCTION BOXES ARE WEATHERPROOF UNLESS OTHERWISE NOTED.
2. VAULT LIGHTS SHALL BURN CONTINUOUSLY.
3. CONNECT ALL EXIT LIGHTS AHEAD OF SWITCH.
4. CONNECT FIXTURE AHEAD OF SWITCH.
5. PROVIDE DUAL-LEVEL LIGHTING IN RECORDER ROOM. ONE SWITCH SHALL ENERGIZE THE BALLAST CORRESPONDING TO THE CENTER LAMP; THE SECOND SWITCH SHALL ENERGIZE THE BALLAST CORRESPONDING TO THE OTHER LAMPS.
6. PENDANT MOUNT FIXTURE BELOW CEILING AT ELEVATOR ENTRANCE TO TUNNEL BELOW. CENTER FIXTURE WITH ENTRANCE AREA.
7. INSTALL EXIT LIGHT AT BOTTOM OF STAIRWELL ENTRANCE TO TUNNEL.

NOTES CONTINUED:

8. LIGHT FIXTURES PROVIDED WITH CABINETS. CONTRACTOR SHALL PROVIDE POWER TO LIGHTS AS SHOWN.



ADMIN. BUILDING LIGHTING PLAN
SCALE: 1/4" = 1'-0"
REV1 02/09/99
0 4 8 12

Helen Russell 1-14-00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
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CHECKED BY	C.N.R.	09/09/99	CHECKED BY	C.N.R.	09/09/99
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ADMINISTRATION BUILDING LIGHTING PLAN

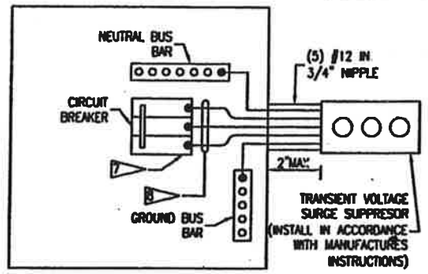
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E04

NOTES:

1. EXISTING POWER PANELS AND CONDUITS IN TUNNEL TO REMAIN. RE-FEED EXISTING POWER PANELS "W","X","Y" AND "Z" AS SHOWN.
2. SECONDARY SERVICE, METERING, SERVICE DISCONNECTING MEANS AND ANY OTHER FEATURES OF THE BUILDING POWER SYSTEM SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE POWER COMPANY.
3. INSTALL A 24"X6"X3/8" CU BUS BAR IN BOTH THE ADMINISTRATION AND TECHNICAL SHOP BUILDINGS. BUILDINGS. TERMINATE ALL GROUND CONDUCTORS TO THIS BUS WITH A 3/8" STAINLESS STEEL NUT AND BOLT AND WITH A COMPRESSION LUG ON EACH CONDUCTOR. PROVIDE NAMEPLATE WITH ENSCRYPTION "MAIN BUS BAR". CONNECT SERVICE NEUTRAL AT THIS POINT ONLY.
4. THE UPS WILL BE PROVIDED BY THE TOLL EQUIPMENT CONTRACTOR AND IS NOT A PART OF THE GENERAL CONTRACT. ELECTRICAL CONTRACTOR SHALL PROVIDE A TEMPORARY FEED BETWEEN THE UPS INPUT AND OUTPUT J-BOXES TO SUPPLY POWER TO PANEL "C" UNTIL THE UPS IS ONSITE AND INSTALLED. UPS CONTRACTOR SHALL REMOVE TEMPORARY PANEL "C" FEED AND CONNECT TO LOAD SIDE OF UPS AND POWER UPS FROM PANEL "MDP" VIA 100 AMP 1"ø3 DISCONNECT BREAKER.
5. GROUND RECORDER ROOM RAISED FLOOR STRUCTURE TO MAIN BUILDING BUS BAR. BOND ALL METAL FRAMING AND PEDESTALS OF RAISED FLOOR AND WIREWAYS TOGETHER WITH #6 GREEN INSULATED GROUNDING CONDUCTOR.
6. PROVIDE SURGE SUPPRESSOR. REFER TO SPECIFICATION 16709 FOR COMPLETE REQUIREMENTS. SEE TYPICAL SURGE ARRESTER WIRING DIAGRAM THIS SHEET. SEE SHEET E05 AND E11 FOR PANEL SCHEDULES AND ADDITIONAL INFORMATION.
7. WHERE INDICATED, CONNECT TO LOAD SIDE OF BREAKER WITH A MINIMUM AMPACITY OF 20 AMPS AND A MAXIMUM AMPACITY OF 60 AMPS.
8. UNGROUNDED CONDUCTORS SHALL BE KEPT AS SHORT AND AS STRAIGHT AS POSSIBLE.
9. STANDBY GENERATOR SET, 200KW (250KVA 0.8 P.F.), 208Y/120V. 3ø, 4W.

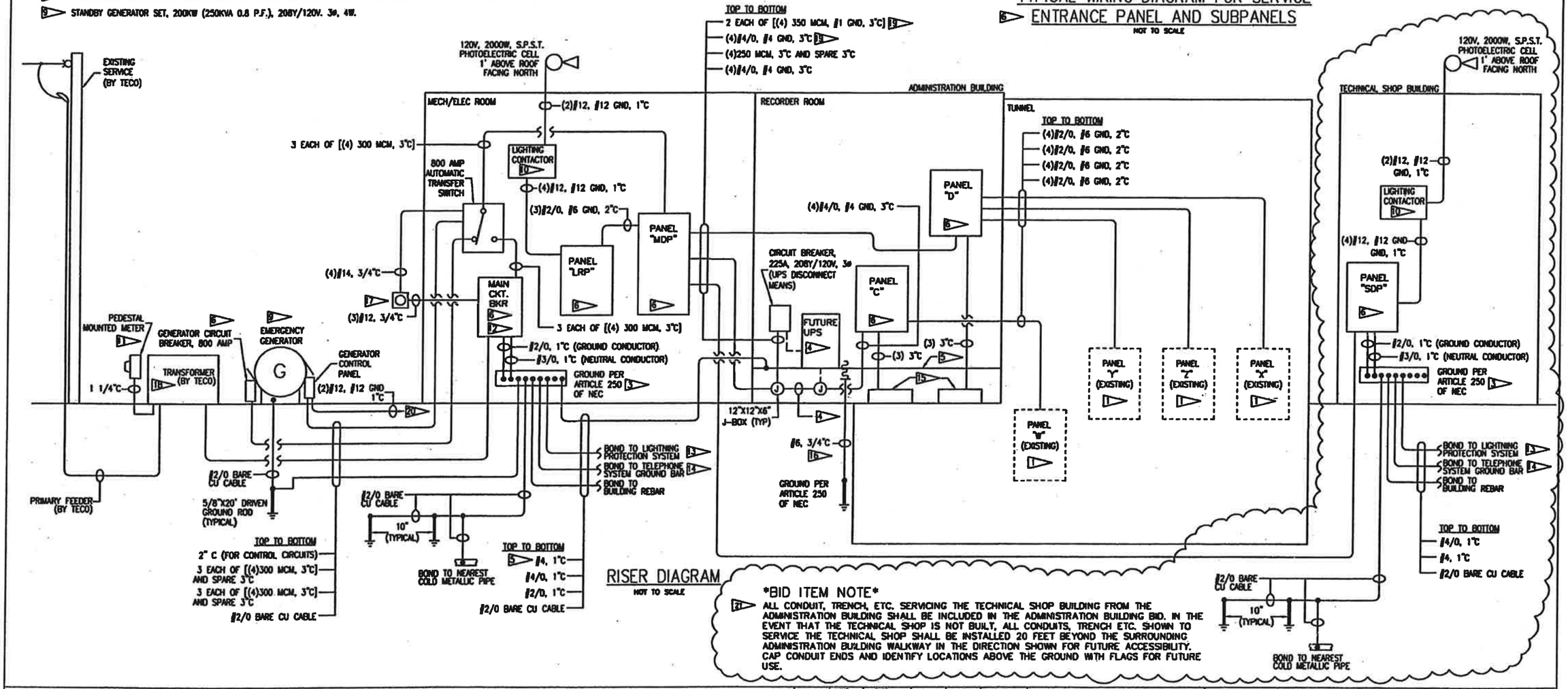
NOTES:

10. LIGHTING CONTACTOR, 30 AMP, 4 POLE (3 SPARE), ELECTRICALLY HELD WITH 120V CONTROL TRANSFORMER, HAND-OFF-AUTO SWITCH AND PILOT LIGHT IN NEMA 1 ENCLOSURE.
11. PEDESTAL MOUNTED METER. PROVIDE CONCRETE FOUNDATION PER POWER CO. REQUIREMENTS. METER SOCKET FURNISHED BY POWER CO. AND INSTALLED BY CONTRACTOR.
12. MAIN CIRCUIT BREAKER, 800 AMP, 208Y/120V, 3ø, 4W, SOLID NEUTRAL, 42,000 A.I.C. MINIMUM IN NEMA 1 ENCLOSURE.
13. BOND TO GROUND LOOP CONDUCTOR OF LIGHTNING PROTECTION SYSTEM. REFER TO SHEET E06 FOR ADMINISTRATION BUILDING AND SHEET E12 FOR TECHNICAL SHOP BUILDING.
14. BOND TO TELEPHONE SYSTEM GROUND BAR. REFER TO SHEET E07.
15. INSTALL 12"X12"X5" WIREWAYS IN ACCESSIBLE FLOOR SPACE UNDERNEATH PANELS "C" AND "D" RESPECTIVELY.
16. GROUND FOR FUTURE UPS STUB-UP AT ACCESIBLE FLOOR SPACE. LEAVE 15' OF SLACK WIRE. PROVIDE SIGN/NAMPLATE INSTRUCTING THE U.P.S. CONTRACTOR TO CONNECT THE GROUND ROD TO EQUIPMENT GROUND FOR SEPARATELY DERIVED SYSTEM AT U.P.S. OUTPUT.
17. KEY OPERATED SWITCH FOR SHUNT TRIP MECHANISM AT MAIN CIRCUIT BREAKER AND FOR GENERATOR "POWER SHUT OFF" CONTROL AT THE AUTOMATION TRANSER SWITCH. REFER TO SHEET E11 FOR SHUNT TRIP DETAILS AND WIRING DIAGRAMS.
18. CONCRETE PAD BY CONTRACTOR PER POWER COMPANY REQUIREMENTS.
19. FEEDER CIRCUITS TO PANELS "C" AND "D" SHALL BE ROUTED UNDERGROUND.
20. ROUTE 20 AMP CIRCUIT LRP-42 UNDERGROUND FOR GENERATOR JACKET HEATER AND BATTERY CHARGER.



TRANSIENT VOLTAGE SURGE SUPPRESSOR TYPICAL WIRING DIAGRAM FOR SERVICE ENTRANCE PANEL AND SUBPANELS

NOT TO SCALE



RISER DIAGRAM

NOT TO SCALE

BID ITEM NOTE

21. ALL CONDUIT, TRENCH, ETC. SERVICING THE TECHNICAL SHOP BUILDING FROM THE ADMINISTRATION BUILDING SHALL BE INCLUDED IN THE ADMINISTRATION BUILDING BID. IN THE EVENT THAT THE TECHNICAL SHOP IS NOT BUILT, ALL CONDUITS, TRENCH ETC. SHOWN TO SERVICE THE TECHNICAL SHOP SHALL BE INSTALLED 20 FEET BEYOND THE SURROUNDING ADMINISTRATION BUILDING WALKWAY IN THE DIRECTION SHOWN FOR FUTURE ACCESSIBILITY. CAP CONDUIT ENDS AND IDENTIFY LOCATIONS ABOVE THE GROUND WITH FLAGS FOR FUTURE USE.

1-14-00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY:	D.J.J.	09/09/99	DRAWN BY:	S.K.M.	09/09/99
CHECKED BY:	C.N.R.	09/09/99	CHECKED BY:	C.N.R.	09/09/99
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ADMINISTRATION AND TECHNICAL SHOP BUILDING RISER DIAGRAM

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E05

DIRECTORY	WATTS LOAD A	WATTS LOAD B	WATTS LOAD C	CKT. NO.	BKR. AMPS	BKR. AMPS	CKT. NO.	WATTS LOAD A	WATTS LOAD B	WATTS LOAD C	DIRECTORY
ELECTRIC WATER HEATER	1500			1	20	400	2	38,550			PANEL D
		1500		3			4		38,800		
			1500	5			6			31,250	
PANEL C	9000			7	225	40	8	2760			CU-2 [2]
		7160		9			10		2760		
			7430	11			12			2760	
AHU-1	3120			13	30	40	14	2760			CU-1 [2]
		3120		15			16		2760		
AHU-2			3120	17	30		18			2760	
	3120			19		150	20	9670			PANEL "LRP" [2]
[2] EF-1, 1/15HP		25		21	15		22		8400		
			25	23			24			10,360	
SF-1, 1/6 HP	62			25	15	225	26	15,495			TECHNICAL SHOP PANEL "SDP" [2] [6]
		62		27			28		13,900		
SPARE				29	20		30			15,035	
				31		100	32	9000			ELEVATOR MOTOR 25 HP
				33			34		9000		
				35			36			9000	
TVSS [2]	—			37	20		38				
		—		39			40				
			—	41			42				

G — — N

VOLTAGE: 208Y/120 3PH 4W SN MAIN BUS: 800 A
MAIN BREAKER: 800 A. FRAME 800 A. TRIP
MOUNTING: FLUSH
NOTE: 42,000 A.I.C. RATING

TOTAL WATTS A 96,117
TOTAL WATTS B 85,567
TOTAL WATTS C 83,240
TOTAL WATTS 264,924

PANEL MDP
LOC. MECH/ELEC ADMINISTRATION BUILDING

DIRECTORY	WATTS LOAD A	WATTS LOAD B	WATTS LOAD C	CKT. NO.	BKR. AMPS	BKR. AMPS	CKT. NO.	WATTS LOAD A	WATTS LOAD B	WATTS LOAD C	DIRECTORY
RECPT. REST ROOMS	800			1	20	20	2	1400			ELECTRIC WATER COOLER
RECPT. KITCHEN COUNTER		600		3	20	20	4		700		REFRIGERATOR
RECPT. BREAK ROOM			500	5	20	20	6			1000	MICROWAVE OVEN
RECPT. BREAK ROOM	800			7	20	20	8	500			TELEPHONE EQUIPMENT [2]
[2] RECPT. CORRIDORS/OUTSIDE		800		9	20	20	10		1100		SUPV OFFICE RECPT
RECPT. CORRIDORS			800	11	20	20	12			1100	ASSIST MANG OFFICE RECPT
VAULT/COUNTING RM RECPT	500			13	20	20	14	1100			MANAGERS OFFICE RECPT
MECH/ELEC RM RECPT		500		15	20	20	16		800		RECORDER RM RECPT
[2] RECPT. STORAGE/OUTSIDE			800	17	20	20	18			800	COUNTING RM RECPT
BREAK RM LIGHTS	1400			19	20	20	20	600			COUNTING RM RECPT
REST & MECH/ELEC RM LIGHTS		1400		21	20	20	22		20		LIGHTING CONTACTOR COIL [2]
CORRIDOR LIGHTS			900	23	20	20	24			800	CANOPY LIGHTS [1]
MANAGER & STORAGE RM LIGHTS	900			25	20	20	26	1100			COUNTING RM & VAULT LIGHTS
RECORDER RM & STAIR RM LIGHTS		900		27	20	20	28		1200		SUPV & A. MANAGERS RM LIGHTS
ELEV HOISTWAY PIT RECPT			200	29	20	20	30			400	ELEV. MCHNRY RM LIGHT & RCPT [4]
CABINET LGTS (COUNTING RM)	420			31	20	20	32	150			INTERCOM SYSTEM POWER
AHU SMOKE DETECTORS		360		33	20	20	34		100		SHUNT TRIP [2]
ELEVATOR FIRE ALARM RECALL			360	35	20	20	36			1600	ELEVATOR CAB CONTROL & LGTS. [2]
TVSS [2]	—			37	20	20	38	-			SPARE
		—		39		20	40		-		SPARE
			—	41		20	42			1100	GENERATOR HEATER & RECHARGER

G — — N

VOLTAGE: 208Y/120 3PH 4W SN MAIN BUS: 225 A
MAIN BREAKER: M.L.O. A. FRAME A. TRIP
MOUNTING: FLUSH
NOTE: 10,000 A.I.C. RATING

TOTAL WATTS A 9,670
TOTAL WATTS B 8,400
TOTAL WATTS C 10,360
TOTAL WATTS 28,510

PANEL LRP
LOC. MECH/ELEC ADMINISTRATION BUILDING

NOTES:

[1] CONNECT THROUGH LIGHTING CONTACTOR

[2] PROVIDE SURGE SUPPRESSOR PER SPECIFICATION SECTION 16700. SEE SHEET E04 FOR ADDITIONAL DETAILS.

[3] RE-FEED EXISTING POWER PANELS "W", "X", "Y" AND "Z" LOCATED IN TUNNEL.

[4] DEDICATED BRANCH CIRCUIT FOR ELEVATOR MACHINERY ROOM LIGHT AND RECEPTACLE PER ARTICLE 620-23 OF NEC.

[5] RE-FEED EXISTING SUMP PUMP PACKAGE UNIT LOCATED IN TUNNEL BASEMENT FROM NEW PANEL "D".

[6] IN THE EVENT THAT THE TECHNICAL SHOP IS NOT BUILT, PROVIDE BREAKER FOR FUTURE USE.

DIRECTORY	WATTS LOAD A	WATTS LOAD B	WATTS LOAD C	CKT. NO.	BKR. AMPS	BKR. AMPS	CKT. NO.	WATTS LOAD A	WATTS LOAD B	WATTS LOAD C	DIRECTORY
VAULT SCALE	700			1	20	20	2				SPARE
COIN COUNTER		500		3	20	20	4		???		FUTURE COMPUTER
CARD ACCESS CPU			700	5	20	20	6			180	CARD ACCESS PRINTER
VAULT & SUPV RM CCTV CAMERA	100			7	20	20	8	180			CARD ACCESS TERMINAL
COUNT & MANG RM CCTV CAMERA		100		9	20	20	10		60		CCTV MONITOR
RECORDER RM CCTV CAMERA			50	11	20	20	12				SPARE
[2] TECHNICAL SHOP CCTV CAMERAS	100			13	20	150	14	8000			PANEL W (EXISTING) [3]
				15			16		6500		
				17			18			6500	
				19			20				
				21			22				
				23			24				
				25			26				
				27			28				
				29			30				
				31			32				
				33			34				
				35			36				
				37		20	38	—			TVSS [2]
				39			40		—		
				41			42			—	

G — — N

VOLTAGE: 208Y/120 3PH 4W SN MAIN BUS: 225
MAIN BREAKER: 225 A. FRAME 225 A. TRIP
MOUNTING: FLUSH
NOTE: 10,000 A.I.C. RATING

TOTAL WATTS A 9,080
TOTAL WATTS B 7,160
TOTAL WATTS C 7,430
TOTAL WATTS 23,670

PANEL C
LOC. RECORDER ROOM ADMINISTRATION BUILDING

DIRECTORY	WATTS LOAD A	WATTS LOAD B	WATTS LOAD C	CKT. NO.	BKR. AMPS	BKR. AMPS	CKT. NO.	WATTS LOAD A	WATTS LOAD B	WATTS LOAD C	DIRECTORY
[3] PANEL X (EXISTING)	16100			1	150	150	2	11000			PANEL Z (EXISTING) [3]
		13210		3			4		13100		
			12210	5			6			11000	
SPARE				7	20	30	8	3000			AHU-3
SPARE				9	20		10		3000		
SPARE				11	20	20	12			1350	CU-3 [2]
[3] PANEL Y (EXISTING)	7000			13	150		14	1350			
		6850		15		20	16				SPARE
			5800	17		20	18				SPARE
[5] SUMP PUMP PACKAGE UNIT 20 HP (EXISTING)	1100			19	20	20	20				SPARE
		1100		21		20	22				SPARE
			1100	23			24				
				25			26				
				27			28				
				29			30				
				31			32				
				33			34				
				35			36				
				37		20	38	—			TVSS [2]
				39			40		—		
				41			42			—	

G — — N

VOLTAGE: 208Y/120 3PH 4W SN MAIN BUS: 600 A
MAIN BREAKER: 600 A. FRAME 400 A. TRIP
MOUNTING: FLUSH
NOTE: 10,000 A.I.C. RATING

TOTAL WATTS A 38,550
TOTAL WATTS B 38,800
TOTAL WATTS C 31,250
TOTAL WATTS 107,600

PANEL D
LOC. RECORDER ROOM ADMINISTRATION BUILDING

1-14-00

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	D.J.J.	09/09/99	DRAWN BY	S.K.M.	09/09/99
CHECKED BY	C.N.R.	09/09/99	CHECKED BY	C.N.R.	09/09/99

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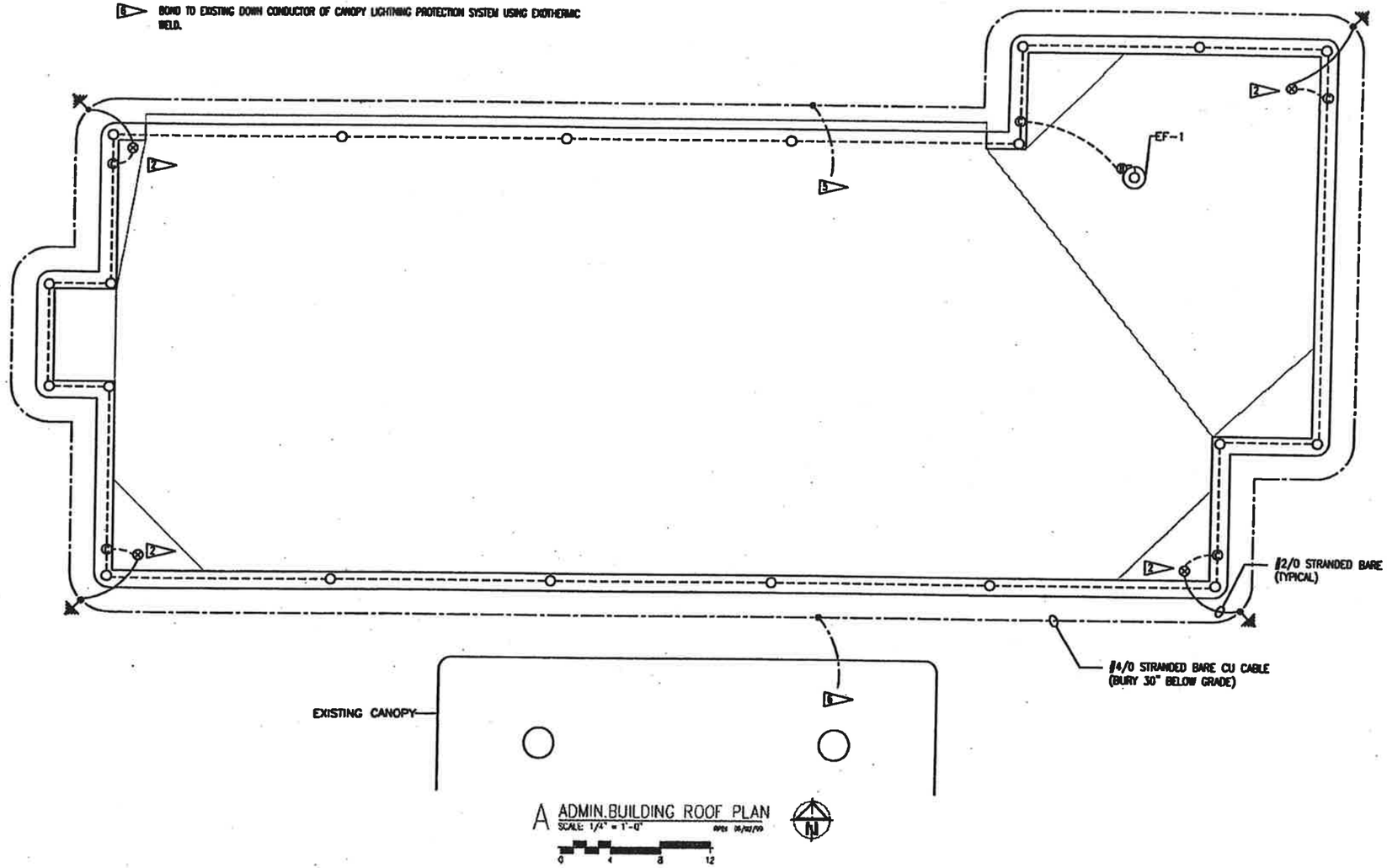
ADMINISTRATION BUILDING PANEL SCHEDULES

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E06

NOTES

1. ALL UNDERGROUND AND INACCESSIBLE CONNECTIONS OR BONDS SHALL BE THE EXOTHERMIC TYPE.
2. DOWN CONDUCTORS SHALL BE INSTALLED IN 1" PVC CONDUIT INSIDE WALL OR COLUMN AND ROUTED UNDERGROUND BARE TO THEIR RESPECTIVE GROUND ROD.
3. ALL CATALOG NUMBERS REFER TO HEARY BROTHERS. EQUAL MANUFACTURERS ARE ACCEPTABLE.
4. BOND ALL METAL OBJECTS TO LIGHTING PROTECTION SYSTEM THAT ARE ON THE ROOF BUT NOT SHOWN ON THIS DRAWING.
5. BOND LIGHTNING PROTECTION SYSTEM TO MAIN BUILDING GROUND BUS BAR. SEE SHEET E04.
6. BOND TO EXISTING DOWN CONDUCTOR OF CANOPY LIGHTNING PROTECTION SYSTEM USING EXOTHERMIC WELD.



A ADMIN. BUILDING ROOF PLAN
SCALE: 1/4" = 1'-0"
0 4 8 12

LEGEND:

- 5/8"x18" CU AIR TERMINAL AND BASE (HB-315C & HB-153C)
- 5/8" x 20' CU GROUND ROD WITH EXOTHERMIC WELDS
- THRU ROOF CONNECTOR (HB-1193C)
- PRESSURE TYPE TEE CONNECTOR (HB-1410C)
- BONDING PLATE (HB-54CR)
- COPPER CONDUCTOR, 28 STRANDS OF 13 GAUGE, 131,500 CIRCULAR MILLS, NET WEIGHT 420 LBS PER 1000 FEET (HB-28-13C)
- BURIED #4/0 BARE CU CABLE
- COPPER CONDUCTOR, 28 STRANDS OF 13 GAUGE, 131,500 CIRCULAR MILLS, NET WEIGHT 420 LBS PER 1000 FEET (HB-28-13C) (DOWN CONDUCTOR) 2
- EXOTHERMIC WELDS

1-14-00

REVISIONS

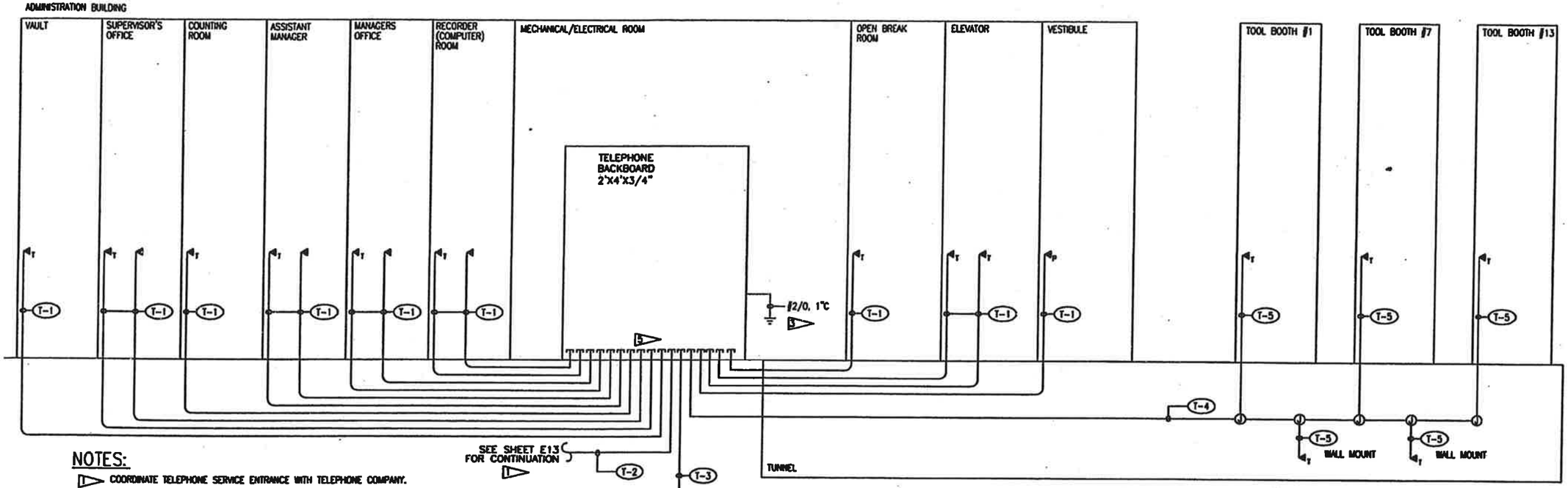
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	D.J.J.	09/09/99	DRAWN BY	S.K.M.	09/09/99
CHECKED BY	C.N.R.	09/09/99	CHECKED BY	C.N.R.	09/09/99
SUPERVISED BY :					

VOLKERT & ASSOCIATES, INC. architects • Engineers • Planners
MOBILE, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ADMINISTRATION BUILDING LIGHTNING PROTECTION PLAN

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E07

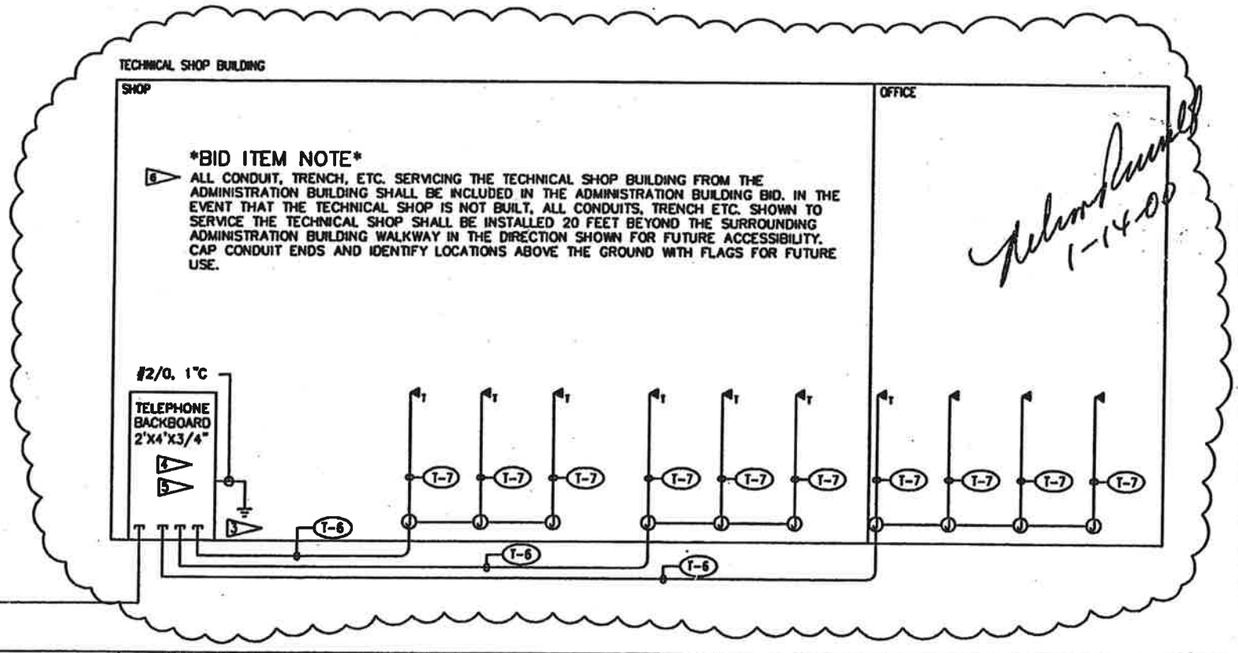


NOTES:

1. COORDINATE TELEPHONE SERVICE ENTRANCE WITH TELEPHONE COMPANY.
2. REFER TO SPECIFICATION SECTION 16760 FOR ADDITIONAL REQUIREMENTS. SEE SHEET E08, E16 AND E24 FOR TELEPHONE PLANS.
3. TO MAIN BUILDING GROUND BUS BAR. REFER TO SHEET E04.
4. INSTALL 110 CONNECTOR SYSTEM, 25 PAIR WIRING BLOCK FOR CROSSCONNET
5. PROVIDE SURGE SUPPRESOR PER SECTION 16709 ON ALL INCOMING TELEPHONE LINES. ALL CONDUITS STUB-UPS SHALL BE TERMINATED WITH INSULATED BUSHING 4" A.F.F. BELOW TERMINAL BOARD.

TELEPHONE SYSTEM CONDUIT & WIRE SCHEDULE

REF.	CONDUIT	WIRE	REMARKS
T-1	3/4"	4PR #24 AWG TELEPHONE CABLE	FOR TELEPHONE OUTLETS IN ADMINISTRATION BUILDING
T-2	(2) 2"	N/A	FOR TELEPHONE COMPANY USE
T-3	(2) 2"	16PR #24 AWG TELEPHONE CABLE IN ONE CONDUIT	TECHNICAL SHOP SERVICE FROM ADMINISTRATION BUILDING TELEPHONE BACKBOARD
T-4	1"		CONDUIT TO CONSOLIDATE TOLL PLAZA PHONE LINES BACK TO ADMINISTRATION BUILDING BACKBOARD
T-5	1"	4PR #24 AWG TELEPHONE CABLE	FOR TELEPHONE OUTLETS IN TOLL PLAZA TUNNEL AND BOOTH.
T-6	1"		CONDUIT TO CONSOLIDATE TECHNICAL SHOP PHONE LINES TO BUILDING BACKBOARD
T-7	3/4"	4PR #24 AWG TELEPHONE CABLE	FOR TELEPHONE OUTLETS IN TECHNICAL SHOP



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ADMINISTRATION BUILDING AND TECH SHOP TELEPHONE RISER DIAGRAM

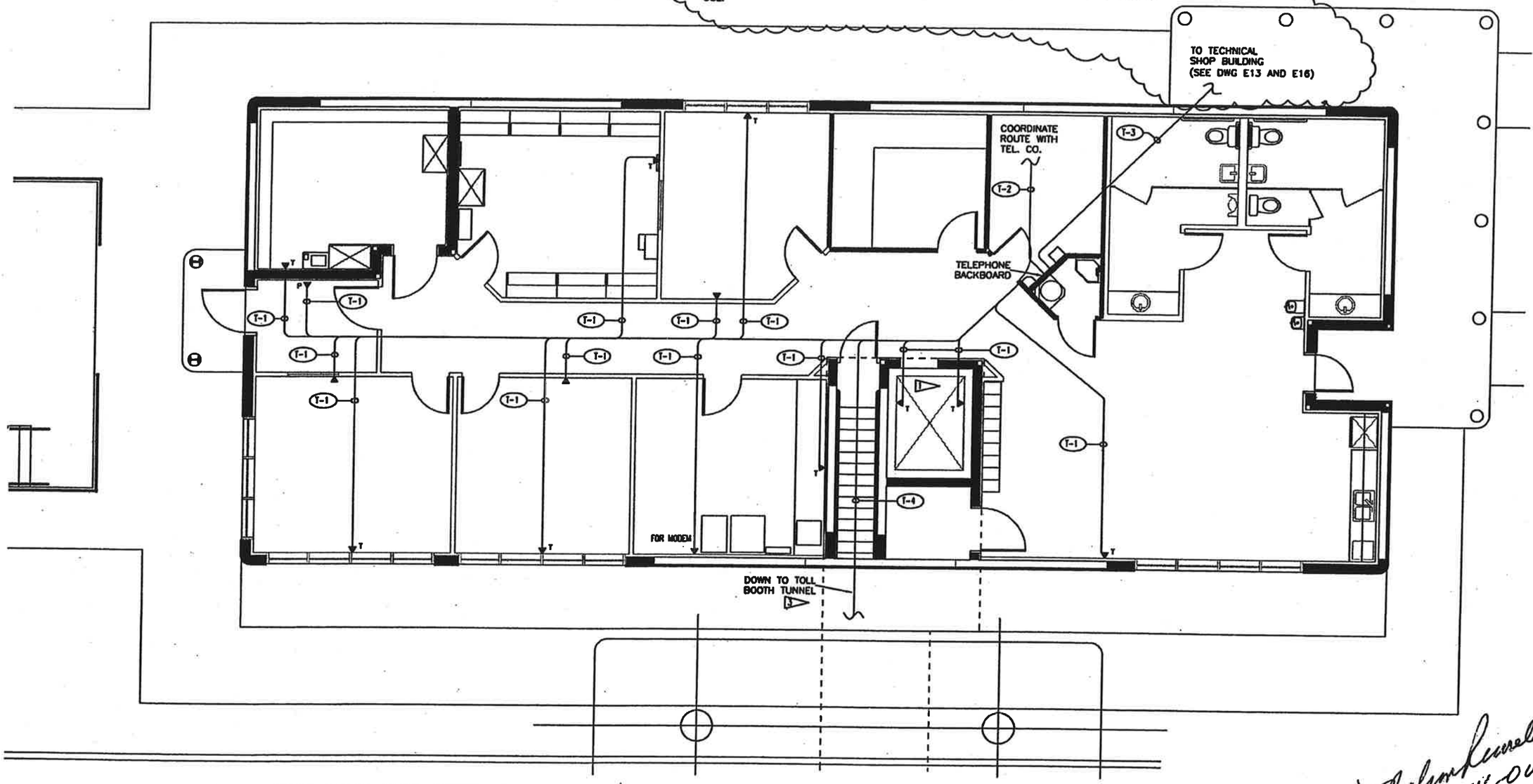
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E08

NOTES

1. TERMINATE TELEPHONE LINE IN ELEVATOR CONTROL UNIT CABINET. COORDINATE LOCATION WITH ELEVATOR CONTRACTOR. COORDINATE DETAILS OF ELEVATOR TELEPHONE MOUNTING WITH ELEVATOR CONTRACTOR.
2. SEE SHEET E07 FOR RISER DIAGRAM, SCHEDULES AND LEGEND.
3. SEE SHEET E24 FOR CONTINUATION OF TELEPHONE CONDUITS INTO TOLL BOOTH TUNNEL.
4. SEE SHEET E23 FOR TEMPORARY TELEPHONE SERVICE REQUIREMENTS.

BID ITEM NOTE

3. ALL CONDUIT, TRENCH, ETC. SERVICING THE TECHNICAL SHOP BUILDING FROM THE ADMINISTRATION BUILDING SHALL BE INCLUDED IN THE ADMINISTRATION BUILDING BID. IN THE EVENT THAT THE TECHNICAL SHOP IS NOT BUILT, ALL CONDUITS, TRENCH ETC. SHOWN TO SERVICE THE TECHNICAL SHOP SHALL BE INSTALLED 20 FEET BEYOND THE SURROUNDING ADMINISTRATION BUILDING WALKWAY IN THE DIRECTION SHOWN FOR FUTURE ACCESSIBILITY. CAP CONDUIT ENDS AND IDENTIFY LOCATIONS ABOVE THE GROUND WITH FLAGS FOR FUTURE USE.



ADMIN. BLDG. COMM. SYSTEM PLAN

SCALE: 1/4" = 1'-0"

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ADMINISTRATION BUILDING TELEPHONE PLAN

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E09

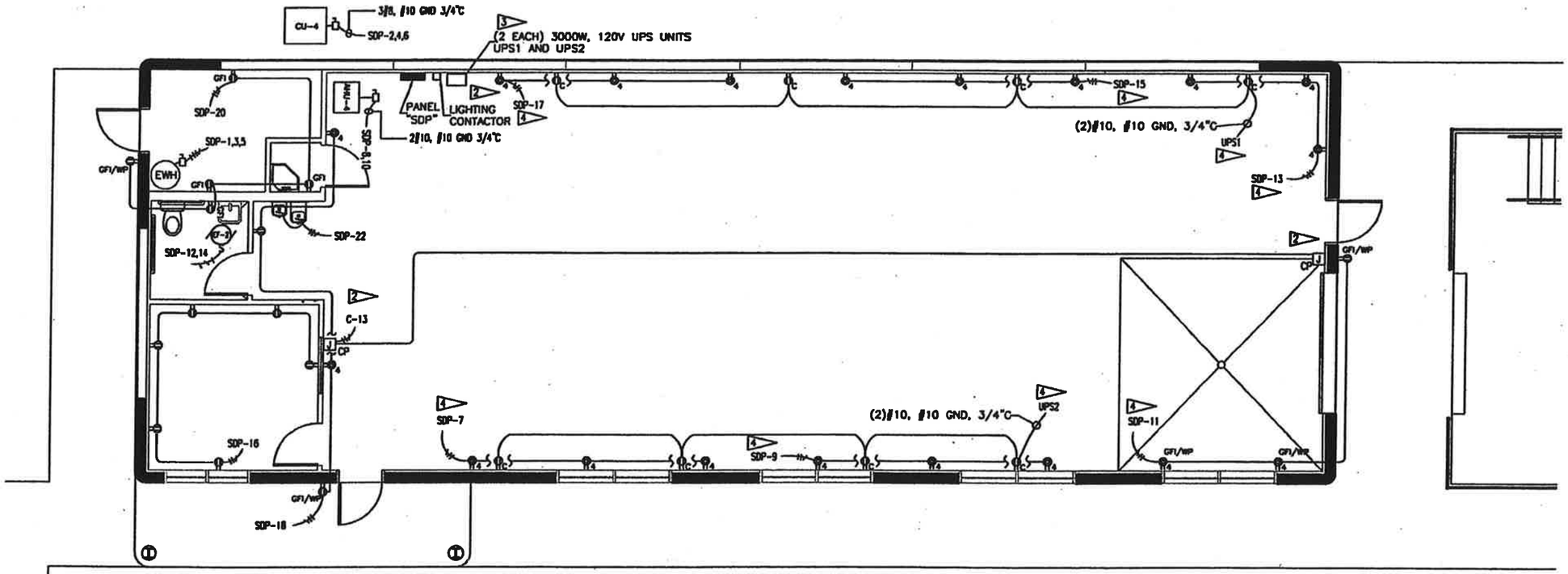
NOTES

1. FOR POWER RISER DIAGRAM SEE SHEET E04.

2. CCTV CAMERAS SHALL RECEIVE POWER FROM PANEL "C" LOCATED IN THE ADMINISTRATION BUILDING. SEE SHEETS E13, E19, E20, AND E21 FOR ROUTE, TYPE, AND SIZE OF CCTV & DATA SYSTEM CONDUITS. MOUNT CCTV POWER JUNCTION BOXES 9' ABOVE FINISHED FLOOR.

3. INSTALL 2 EACH 3000 WATT, 120V, UPS UNITS WITH 4-DUPLEX RECEPTACLES EACH. PROVIDE FRAME TO STACK MOUNT BOTH UNITS ADJACENT TO PANEL SDP.

4. ALL RECEPTACLES ON UPS1, UPS2 AND CIRCUITS 7, 9, 11, 13, 15 AND 17 SHALL BE MOUNTED 48" ABOVE FINISHED FLOOR.



TECHNICAL SHOP POWER PLAN

SCALE: 1/4" = 1'-0"

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Nelson Russell 1-14-00

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TECHNICAL SHOP POWER PLAN

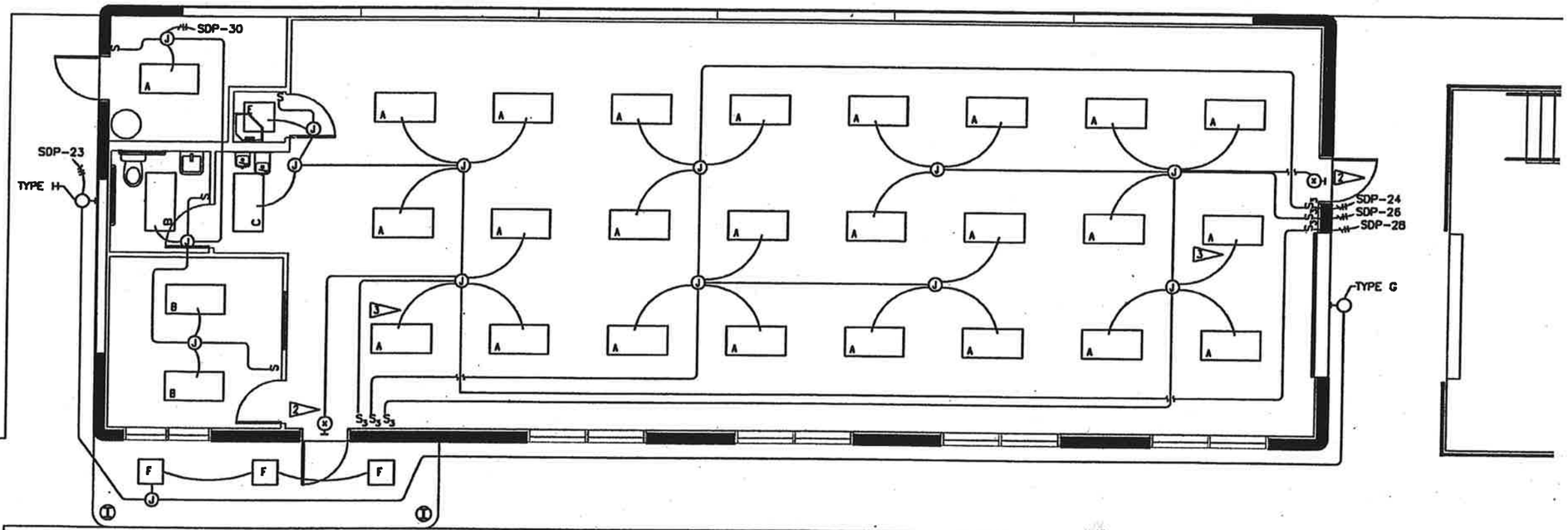
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E10

NOTES:

1. ALL CANOPY AND BUILDING OVERHANG JUNCTION BOXES ARE WEATHERPROOF UNLESS OTHERWISE NOTED.

2 > CONNECT ALL EXIT LIGHTS AHEAD OF SWITCH.

3 > CONNECT FIXTURE AHEAD OF SWITCH.



TECHNICAL SHOP LIGHTING PLAN

SCALE: 1/4" = 1'-0"

RC01 02/09/99

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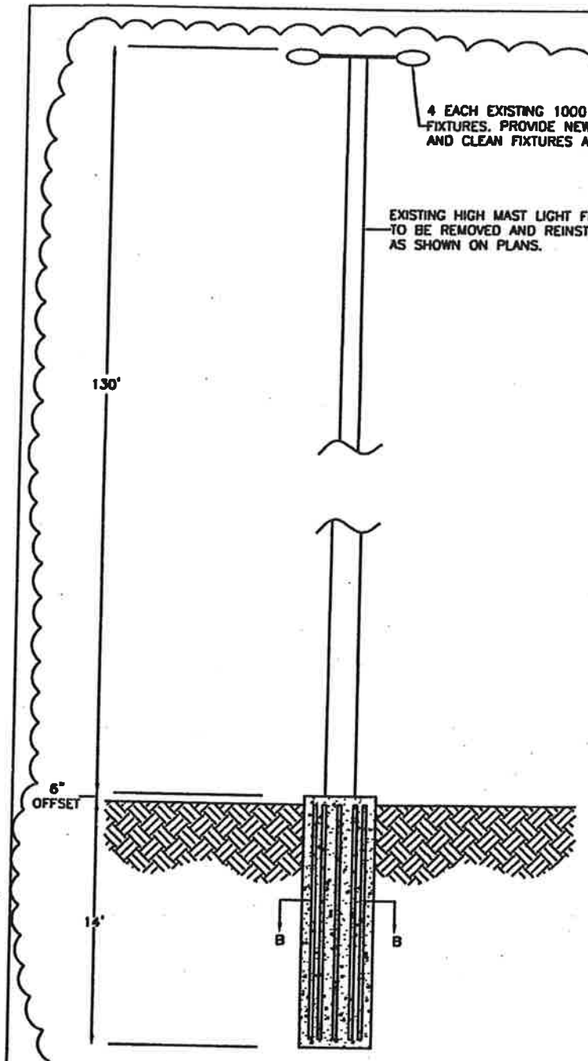
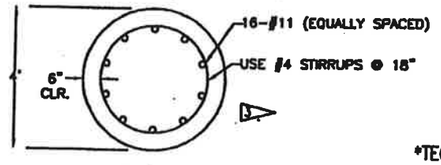
TECHNICAL SHOP LIGHTING PLAN

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E11



HIGH MAST FOUNDATION DETAIL
NOT TO SCALE



SECTION B-B
SCALE: 1/2" = 1'-0"

DIRECTORY	WATTS LOAD A	WATTS LOAD B	WATTS LOAD C	CKT. NO.	BKR. AMPS
ELECTRIC WATER HEATER	1500			1	20
		1500		3	
			1500	5	
RECPT. SHOP SOUTH WALL	1100			7	20
RECPT. SHOP SOUTH WALL		1100		9	20
RECPT. SHOP SOUTH WALL			1100	11	20
RECPT. SHOP NORTH WALL	1100			13	20
RECPT. SHOP NORTH WALL		1100		15	20
RECPT. SHOP NORTH WALL			1100	17	20
SPARE				19	20
LIGHT CONTACTOR		20		21	20
OUTSIDE LIGHTS			1500	23	20
MPS1	3000			25	30
SPARE				27	20
MPS2			3000	29	30
				31	
				33	
				35	
				37	
				39	
				41	
SUB - TOTAL →				G	N

BKR. AMPS	CKT. NO.	WATTS LOAD A	WATTS LOAD B	WATTS LOAD C	DIRECTORY
40	2	2780			CU-4
	4		2780		
	6			2760	
30	8	3120			AHU-4
	10		3120		
15	12			15	EF-2, 1/3DHP
	14	15			
20	16	1180			RECPT. OFFICE
20	18		1100		RECPT. SHOP WEST WALL
20	20	1100			RECPT. OUTSIDE STORAGE
20	22		1400		WATER COOLER
20	24			1800	SHOP LIGHTS
20	26	1800			SHOP LIGHTS
20	28		1800		SHOP LIGHTS
20	30			888	OFFICE, RESTRM, STOR. LIGHTS
20	32	-			SPARE
20	34		-		SPARE
20	36			360	AHU SMOKE DETECTORS
20	38	—			MVSS
	40		—		
	42			—	
← SUB - TOTAL					

VOLTAGE: 3PH 4W 5H — MAIN BUS: 225 A
MAIN BREAKER: 225 A. FRAME — 225 A. TRIP
MOUNTING: SURFACE
NOTE: 42,800 A.I.C. RATING. FEED FROM PANEL "MDP" IN ADMINISTRATION BUILDING.

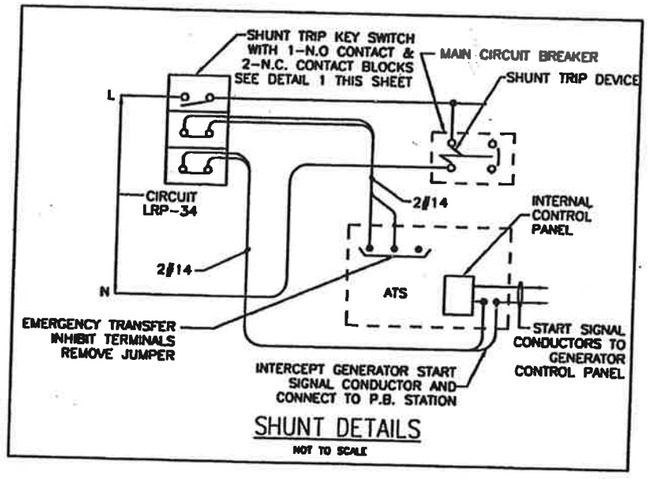
TOTAL WATTS A 15,495
TOTAL WATTS B 13,900
TOTAL WATTS C 15,035
TOTAL WATTS 44,430

PANEL "SDP"
LOC. SHOP TECH. SHOP BUILDING

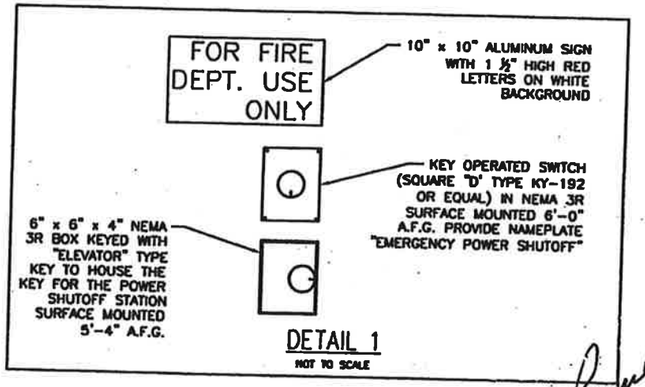
TECHNICAL SHOP BID ITEMS ONLY

GENERAL NOTES:

1. CONNECT THROUGH LIGHTING CONTACTOR
2. PROVIDE SURGE SUPPRESSOR PER SPECIFICATION SECTION 16709. SEE SHEET E04 FOR ADDITIONAL DETAILS.
3. BOLTS - 6 - 1 3/4"ø @ 25 1/2" BOLT CIRCLE - USE 92" EMBEDMENT TO DEVELOP FULL STRENGTH f'_c = 4000 PSI, GRADE 60 REBAR



SHUNT DETAILS
NOT TO SCALE



DETAIL 1
NOT TO SCALE

1-14-00

REVISIONS

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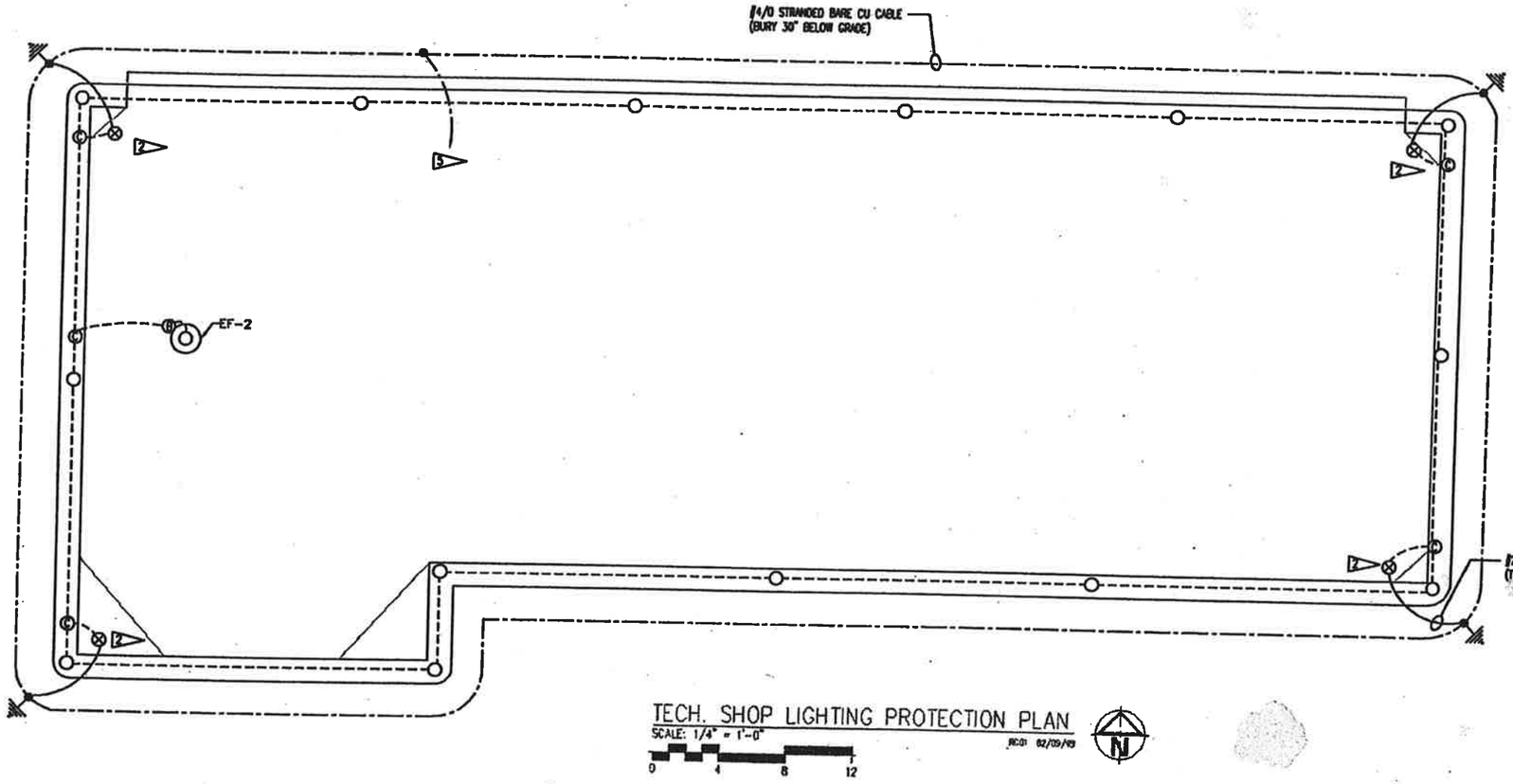
TECHNICAL SHOP BUILDING
PANEL SCHEDULES AND MISCELLANEOUS DETAIL

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E12

NOTES

1. ALL UNDERGROUND AND INACCESSIBLE CONNECTIONS OR BONDS SHALL BE THE EXOTHERMIC TYPE.
2. DOWN CONDUCTORS SHALL BE INSTALLED IN 1" PVC CONDUIT INSIDE WALL OR COLUMN AND ROUTED UNDERGROUND BARE TO THEIR RESPECTIVE GROUND ROD.
3. ALL CATALOG NUMBERS REFER TO HEARY BROTHERS. EQUAL MANUFACTURERS ARE ACCEPTABLE.
4. BOND ALL METAL OBJECTS TO LIGHTING PROTECTION STSTEM THAT ARE ON THE ROOF BUT NOT SHOWN ON THIS DRAWING.
5. BOND LIGHTING PROTECTION SYSTEM TO MAIN BUILDING GROUND BUS BAR. SEE SHEET E04.



TECH. SHOP LIGHTNING PROTECTION PLAN
SCALE: 1/4" = 1'-0"
RCD1 02/09/99
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LEGEND:

- 5/8"x18" CU AIR TERMINAL AND BASE (HB-315C & HB-15XC)
- 5/8" x 20' CU GROUND ROD WITH EXOTHERMIC WELDS
- THRU ROOF CONNECTOR (HB-1198C)
- PRESSURE TYPE TEE CONNECTOR (HB-1400C)
- BONDING PLATE (HB-54CR)
- COPPER CONDUCTOR, 28 STRANDS OF 13 GUAGE, 131,500 CIRCULAR MILLS, NET WEIGHT 420 LBS PER 1000 FEET (HB-28-13C)
- BURIED #4/0 BARE CU CABLE
- COPPER CONDUCTOR, 28 STRANDS OF 13 GUAGE, 131,500 CIRCULAR MILLS, NET WEIGHT 420 LBS PER 1000 FEET (HB-28-13C) (DOWN CONDUCTOR) 2
- EXOTHERMIC WELDS

1-14-00

REVISIONS

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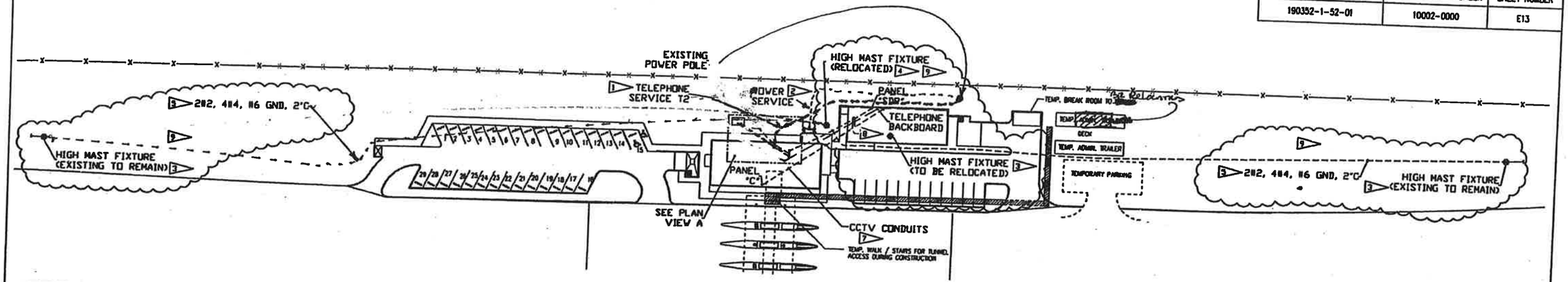
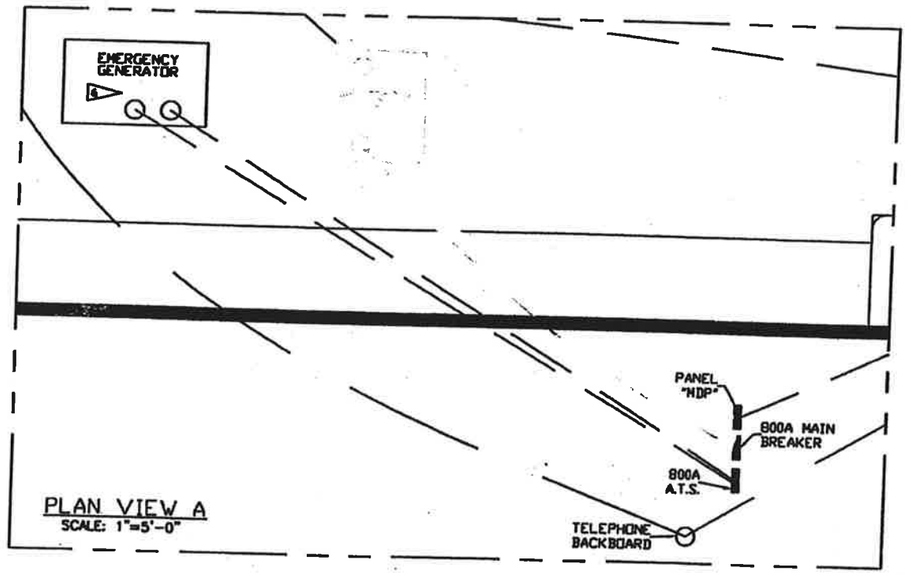
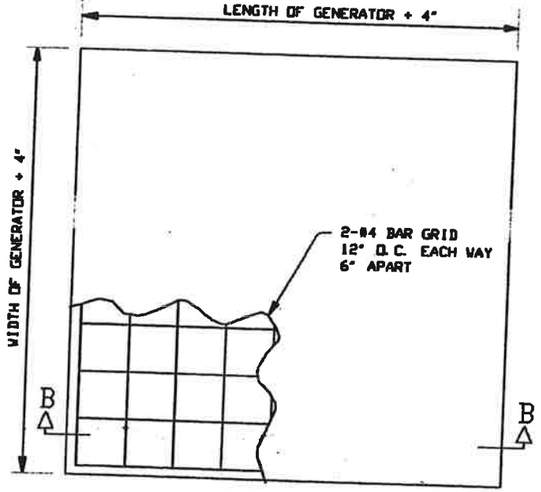
TECHNICAL SHOP LIGHTNING PROTECTION PLAN

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E13

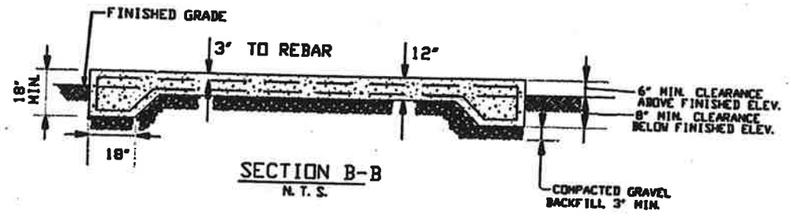




PLAN VIEW A
SCALE: 1"=5'-0"



GENERATOR FOUNDATION DETAIL
N.T.S.



SECTION B-B
N.T.S.

NOTES

1. REFER TO SHEET E07 FOR TELEPHONE RISER DIAGRAM. COORDINATE INCOMING TELEPHONE SERVICE WITH LOCAL TELEPHONE COMPANY.
2. REFER TO SHEET E04 FOR POWER RISER DIAGRAM. COORDINATE INCOMING POWER SERVICE WITH LOCAL UTILITY COMPANY.
3. DISCONNECT EXISTING HIGH MAST CIRCUIT CONDUCTORS FROM HIGH MAST FIXTURE TO BE RELOCATED AND EXISTING HIGH MAST FIXTURES TO THE EAST AND WEST OF RELOCATED FIXTURE. ABANDON DISCONNECTED HIGH MAST CIRCUIT CONDUCTORS IN PLACE. DISCONNECT AND ABANDON IN PLACE OTHER CIRCUITS CONDUCTORS INSTALLED WITH THE HIGH MAST CONDUCTORS. REMOVE CONCRETE FOUNDATION BELOW FINAL GRADE TO PREVENT INTERFERENCE WITH TECHNICAL SHOP BUILDING FOUNDATION.
4. RELOCATE EXISTING HIGH MAST FIXTURE AND POLE TO ALLEVIATE INTERFERENCE WITH CONSTRUCTION OF TECHNICAL SHOP BUILDING AS SHOWN ON THIS SHEET. SEE FOUNDATION DETAIL ON SHEET E11.
5. RE-FEED RELOCATED HIGH MAST FIXTURE FROM EXISTING HIGH MAST FIXTURE ON EAST SIDE AND CONTINUE CIRCUIT TO RE-FEED EXISTING HIGH MAST FIXTURE ON WEST SIDE. CONTINUE OTHER CIRCUITS DISRUPTED BY ABANDONMENT OF CONDUCTORS.
6. INSTALL GENERATOR FOUNDATION PER DETAIL THIS DRAWING.
7. REFER TO SHEET E20 FOR CCTV & DATA EMPTY CONDUIT RISER DIAGRAM.

LEGEND

- PROPOSED BURIED ELECTRICAL CONDUITS
- PROPOSED BURIED TELEPHONE CONDUITS

BID ITEM NOTES

8. ALL CONDUIT, TRENCH, ETC. SERVICING THE TECHNICAL SHOP BUILDING FROM THE ADMINISTRATION BUILDING SHALL BE INCLUDED IN THE ADMINISTRATION BUILDING BID. IN THE EVENT THAT THE TECHNICAL SHOP IS NOT BUILT, ALL CONDUITS, TRENCH ETC. SHOWN TO SERVICE THE TECHNICAL SHOP SHALL BE INSTALLED 20 FEET BEYOND THE SURROUNDING ADMINISTRATION BUILDING WALKWAY IN THE DIRECTION SHOWN FOR FUTURE ACCESSIBILITY. CAP CONDUIT ENDS AND IDENTIFY LOCATIONS ABOVE THE GROUND WITH FLAGS FOR FUTURE USE.
9. RELOCATION OF EXISTING HIGH MAST FIXTURE SHALL BE BID AS PART OF THE TECHNICAL SHOP ONLY.

1-14-00

REVISIONS

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ELECTRICAL SITE PLAN

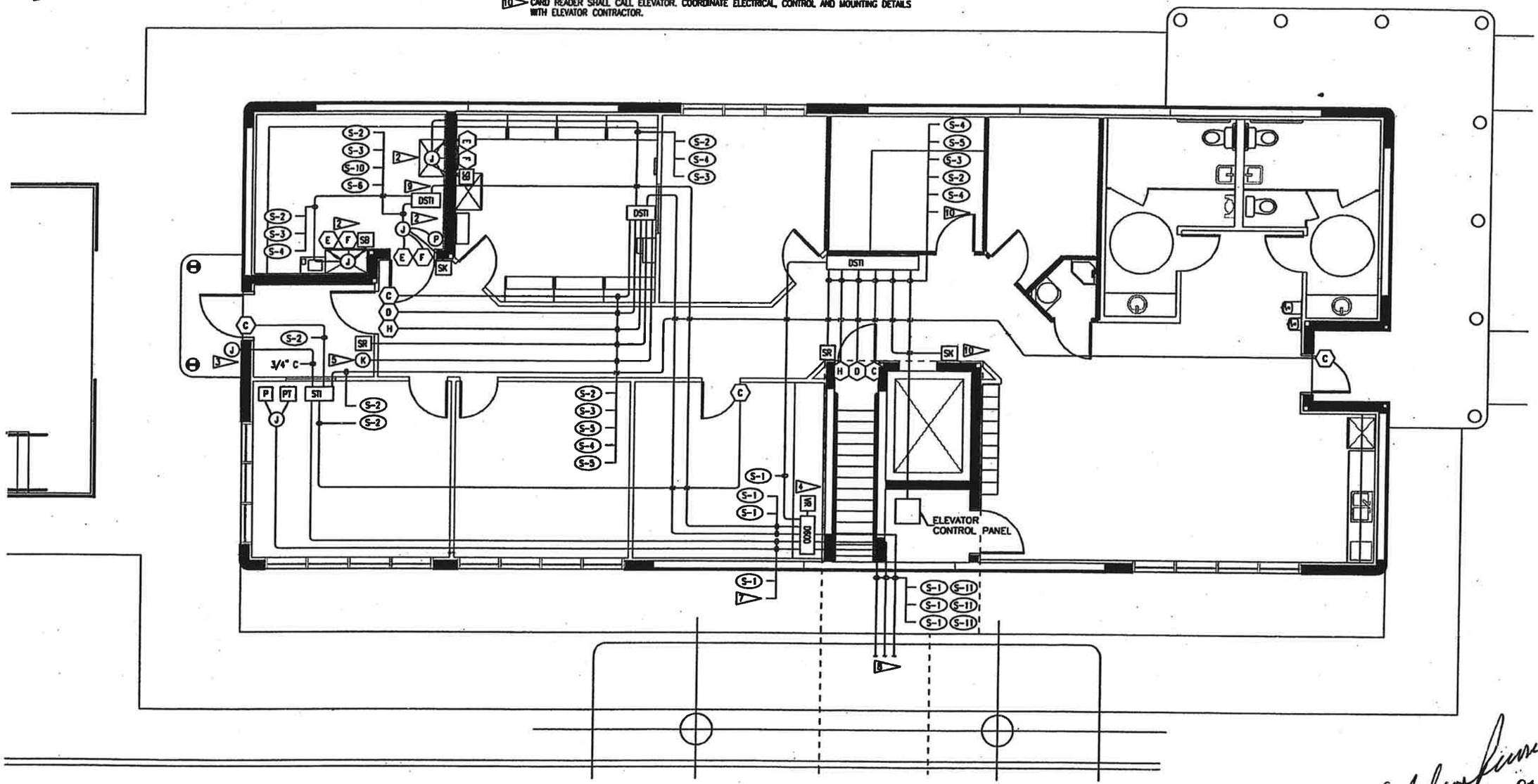
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E14

NOTES:

1. SEE SHEET E15 FOR RISER, SCHEDULE AND LEGEND.
2. SECURITY AND CARD ACCESS DEVICES ON THIS EQUIPMENT ARE SHOWN FOR REFERENCE AND CONNECTION ONLY. THE EQUIPMENT WILL BE FURNISHED WITH THESE DEVICES INCLUDED IN PLACE.
3. MOUNT ON DOOR FRAME 42" ABOVE FINISHED FLOOR. USED CARDKEY #557-AL BACKBOX.
4. PROVIDE VOLTAGE REGULATOR, G.E. MODEL OSF #9T9187151. HARDWIRED ON LINE SIDE OF CPU.
5. MOUNT KEY SWITCH ON DOOR FRAME, 60" ABOVE FINISHED FLOOR.

NOTES CONTINUED:

6. SEE SHEET SPECIFICATION SECTION 16720 FOR ADDITIONAL REQUIREMENTS.
7. PROVIDE (1) 2" CONDUIT FORM CPU TO J-BOX FOR PRINTER AND TERMINAL CABLES. EXACT LOCATION OF J-BOX TO BE DETERMINED IN THE FIELD.
8. SEE SHEET E18 FOR CONTINUATION OF CONDUITS INTO TOLL BOTH TUNNEL AND FOR TOLL BOOTH TUNNEL SECURITY AND CARD ACCESS PLAN.
9. LOCATE DSTI ON WALL INSIDE VAULT 6" BELOW CEILING.
10. CARD READER SHALL CALL ELEVATOR. COORDINATE ELECTRICAL, CONTROL AND MOUNTING DETAILS WITH ELEVATOR CONTRACTOR.



ADMIN. BLDG SECURITY ACCESS PLAN
SCALE: 1/4" = 1'-0"
RCD1 02/09/99

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1-14-00

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SUPERVISED BY:					

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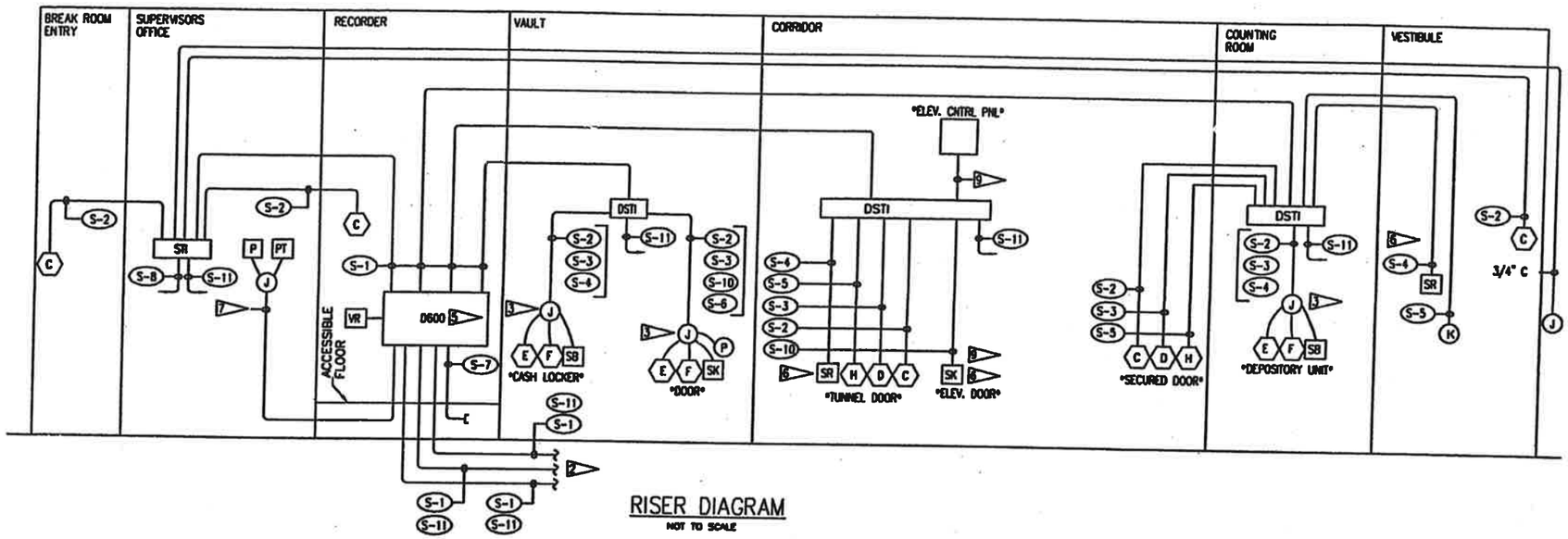
ADMINISTRATION BUILDING SECURITY & CARD ACCESS SYSTEM PLAN

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E15



RISER DIAGRAM
NOT TO SCALE

NOTES:

1. DEVICE FURNISHED AND INSTALLED AS PART OF THE BANKING EQUIPMENT. PREWIRED TO A J-BOX WITH TERMINALS.
2. SEE SHEET E-18 FOR INSTALLATION OF SECURITY SYSTEM IN TOLL BOOTH TUNNEL AND CONTINUATION OF CONDUITS.
3. SECURITY AND CARD ACCESS DEVICES ON THIS EQUIPMENT ARE SHOWN FOR REFERENCE AND CONNECTION ONLY. THE EQUIPMENT WILL BE FURNISHED WITH THESE DEVICES INCLUDED AND IN PLACE.
4. RUN ALL CABLES IN ONE 3/4" CONDUIT.
5. PROVIDE VOLTAGE REGULATOR. G.E. MODEL OSF *9T91B7151, 500VA, 120V.
6. MOUNT 42" ABOVE FINISHED FLOOR. USE CARDKEY BACKBOX *S57-AL BACKBOX.
7. PROVIDE (1) 2" CONDUIT FROM CPU TO J-BOX FOR PRINTER AND TERMINAL CABLES. EXACT LOCATION OF J-BOX TO BE DETERMINED IN THE FIELD.
8. SEE SHEET E14 FOR SYSTEM PLAN.
9. CARD READER SHALL CALL ELEVATOR. COORDINATE ELECTRICAL, CONTROL AND MOUNTING DETAILS WITH ELEVATOR CONTRACTOR.

SECURITY AND CARD ACCESS SYSTEM CONDUIT & WIRE SCHEDULE

REF.	CONDUIT	WIRE	REMARKS
S-1	3/4"	2 TWISTED/SHIELDED PAIRS, 4 CONDUCTORS, 22 AWG STRANDED, EACH CABLE. (TWO BELDEN 8723 CABLES)	HOMERUN FROM EACH DST/STI UNIT TO CPU
S-2	3/4"	2 CONDUCTOR, TWISTED/SHIELDED PAIRS, 22 AWG STRANDED WIRE. (BELDEN 8451)	DOOR OPEN DETECTOR (N.O. CONTACT) TO DST/STI
S-3	3/4"	2 CONDUCTOR, SHIELDED 18 AWG STRANDED WIRE. (BELDEN 8760)	DOOR MAGNETIC LOCK TO DST/STI
S-4	3/4"	2 SETS OF 3 CONDUCTOR, SHIELDED, 22 AWG STRANDED WIRE. (ALPHA 2254/3 EACH SET)	CARD READER W/O KEYPAD TO STI/DST
S-5	3/4"	2 CONDUCTOR, TWISTED/SHIELDED PAIRS, 22 AWG STRANDED WIRE. (BELDEN 8451)	BY-PASS SWITCH TO STI/DST
S-6	3/4"	2 CONDUCTOR, TWISTED/SHIELDED PAIRS, 22 AWG STRANDED WIRE. (BELDEN 8451)	PUSH TO EXIT BUTTON TO DST/STI
S-7	3/4"	N/A	FUTURE TOLL EQUIPMENT COMPUTER TO CARD ACCESS SYSTEM CPU (RS 232 INTF.)
S-8	3/4"	4 CONDUCTOR, SHIELDED 18 AWG STRANDED WIRE. (BELDEN 9418)	FIRE ALARM CONTROL PANEL (BY OTHERS) TO DST/STI
S-9	3/4"	2 CONDUCTOR, SHIELDED 18 AWG STRANDED WIRE. (BELDEN 8760)	ACCESS SYSTEM CPU TO REMOTE ALARM SIGNAL
S-10	3/4"	2 SETS OF 3 CONDUCTOR, SHIELDED, 22 AWG STRANDED WIRE. (ALPHA 2254/3 EACH SET) AND 1 SET 8 CONDUCTOR SHIELDED, 22 AWG STRANDED WIRE (ALPHA 5198)	CARD READER WITH KEYPAD TO STI/DST
S-11	3/4"	1 CONDUCTOR, GREEN INSULATED STRANDED WIRE 18 AWG. (BELDEN 9980)	GROUND WIRE STI/DST TO MAIN BUILDING GROUND BUS BAR

SECURITY AND CARD ACCESS EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	MFG.	CAT. NUMBER
SR	SURFACE MOUNT CARD READER WITHOUT KEY PAD -TRACK 3 HEAD	CARD KEY	L46-3 6
STI	SMART TERMINAL INTERFACE WITH BATTERY BACKUP	CARD KEY	STI WITH SB12B1A BATTERY PACK
C	NORMALLY CLOSED DOOR CONTACT	SENTROL	FLUSH MOUNT (FOR METAL AND WOOD DOORS: 1078C) SURFACE MOUNT (FOR GLASS DOORS:1085C)
D	MAGNETIC LOCK	SECURITON	MODEL NO. 62 12 VDC
P	PRINTER WITH PRINTER ADAPTER	D.E.C.	LA-424-CA AND H8571-C
D600	CPU WITH BATTERY BACKUP	CARD KEY	D600-2/AUI WITH PB-1, RS-232C, INTERFACE RSI-2, MODEM MCI-2 5
PT	TERMINAL VDU & KEYBOARD	D.E.C.	VT 510-AA AND LK 411-AA
J	JUNCTION BOX		3
P	"PUSH TO EXIT" BUTTON	CARD KEY	LHH-A
SK	SURFACE MOUNT CARD READER WITH KEY PAD -TRACK 3 HEAD	CARD KEY	D46-3
H	PANIC HARDWARE SWITCH (BY-PASS)	REFER TO ARCHITECT HARDWARE SCH.	REFER TO ARCHITECTURAL HARDWARE SCHEDULE

SECURITY AND CARD ACCESS EQUIPMENT SCHEDULE CONTINUED

SYMBOL	DESCRIPTION	MFG.	CAT. NUMBER
DSTI	DUAL SMART TERMINAL INTERFACE WITH BATTERY BACKUP	CARD KEY	DST-S1 WITH TWO SB12B1A BATTERY PACK
E	NORMALLY CLOSED DOOR CONTACT		3
F	MAGNETIC LOCK		3
SB	SURFACE MOUNT CARD READER WITHOUT KEY PAD -TRACK 3 HEAD	CARD KEY	3
K	KEY SWITCH (BY-PASS)	REFER TO ARCHITECT HARDWARE SCH.	REFER TO ARCHITECTURAL HARDWARE SCHEDULE

1-14-00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	D.J.J.	09/09/99	DRAWN BY	S.K.M.	09/09/99
CHECKED BY	C.N.R.	09/09/99	CHECKED BY	C.N.R.	09/09/99

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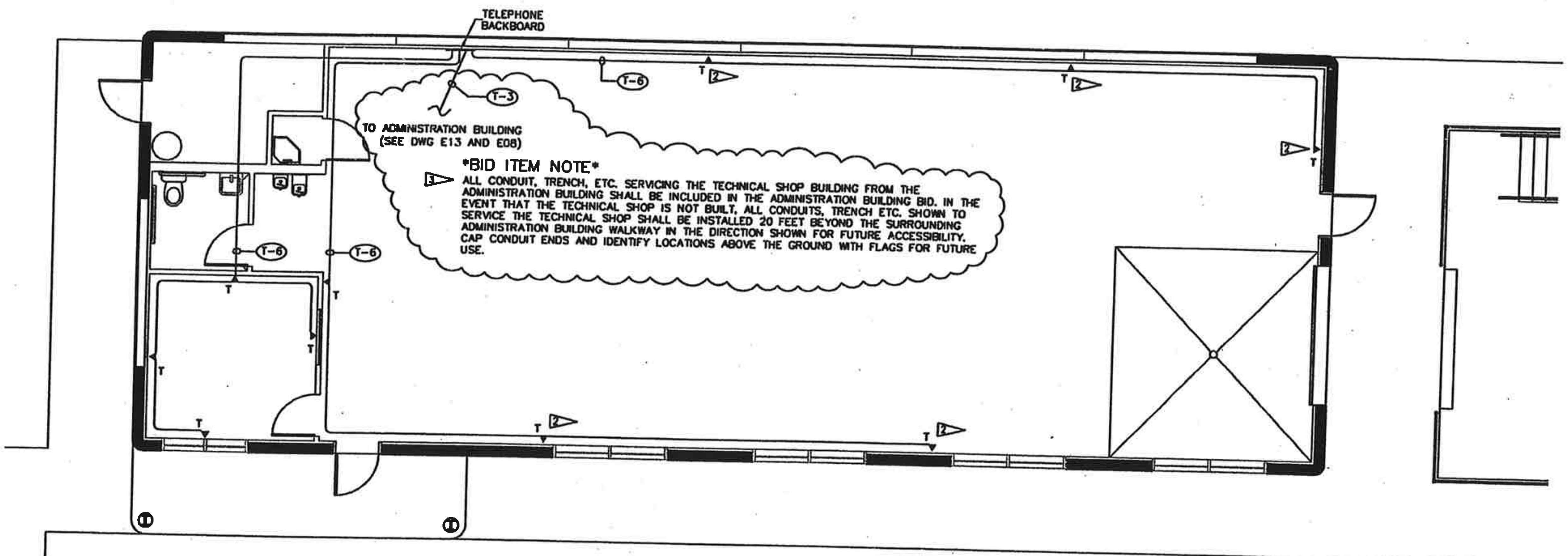
ADMINISTRATION BUILDING - SECURITY & CARD ACCESS SYSTEM RISER DIAGRAM

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E16

NOTES

1. SEE SHEET E07 FOR RISER DIAGRAM, SCHEDULES, AND LEGEND.

2 WALL MOUNT TELEPHONE 60" ABOVE FINISHED FLOOR.



TECH. SHOP COMM. SYSTEM PLAN

SCALE: 1/4" = 1'-0"

0 4 8 12

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

REVISIONS

	NAME	DATE		NAME	DATE
DESIGNED BY	D.J.J.	09/09/99	DRAWN BY	S.K.M.	09/09/99
CHECKED BY	C.N.R.	09/09/99	CHECKED BY	C.N.R.	09/09/99

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TECHNICAL SHOP TELEPHONE PLAN

1-14-00

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E17

NOTES:

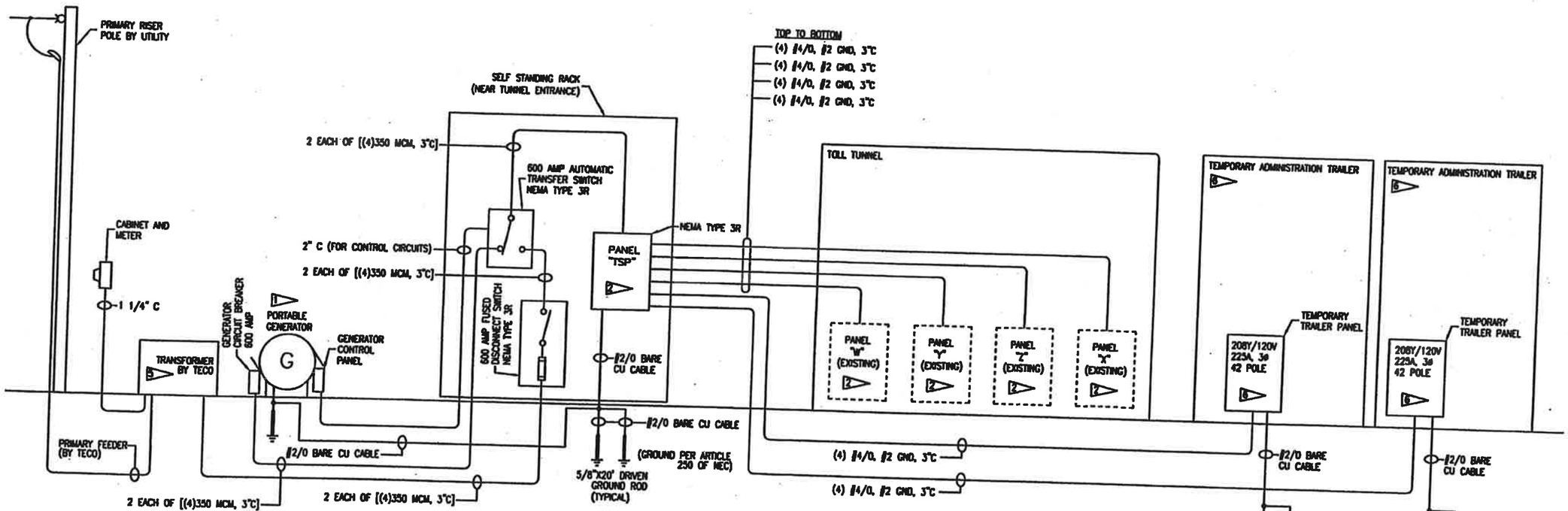
1. PORTABLE STANDBY GENERATOR SET, 180KW (225KVA 0.8 P.F.), 208Y/120V, 4W.
2. EXISTING PANELS "W", "X", "Y" AND "Z" AND CONDUIT IN TUNNEL TO REMAIN. INSTALL TEMPORARY SERVICE PANEL "TSP" TO SUPPLY POWER TO EXISTING PANELS "W", "X", "Y" AND "Z". TEMPORARY PANEL "TSP" SHALL BE FEED FROM SITE SERVICE VIA A 600 AMP FUSED DISCONNECT SWITCH AND A 600 AMP AUTOMATIC TRANSFER SWITCH. PANEL "TSP" SHALL BE USED TO KEEP TRAFFIC ISLANDS IN OPERATION DURING DEMOLITION OF EXISTING ADMINISTRATION BUILDING AND CONSTRUCTION OF NEW ADMINISTRATION BUILDING. MOUNT PANEL "TSP", DISCONNECT SWITCH AND AUTOMATIC TRANSFER SWITCH ON SELF-STANDING RACK NEAR TEMPORARY WALKWAY ENTRANCE.
3. SECONDARY SERVICE, METERING, SERVICE DISCONNECTING MEANS AND ANY OTHER FEATURES OF TEMPORARY SERVICE POWER SUPPLY SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE POWER COMPANY.
4. PEDESTAL MOUNTED METER. PROVIDE CONCRETE FOUNDATION PER POWER COMPANY REQUIREMENTS. METER SOCKET FURNISHED BY POWER CO. AND INSTALLED BY CONTRACTOR.
5. CONCRETE TRANSFORMER PAD BY CONTRACTOR PER POWER COMPANY REQUIREMENTS.
6. TEMPORARY TRAILERS PANELS ARE FOR SERVICE TO TOLL EQUIPMENT. LIGHT AND POWER PANELS FOR EACH TRAILER WILL BE PROVIDED WITH THE TRAILER. THESE PROVIDED PANELS ARE 120/240V, 225A, 1ø, 3W. CONTRACTOR SHALL ARRANGE WITH UTILITY AND PROVIDE FOR SERVICE TO THESE PANELS. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, NECESSARY EQUIPMENT AND SERVICES TO PROVIDE SERVICE TO THESE PANELS.
7. REFER TO SHEET E23 FOR TEMPORARY ELECTRICAL SERVICE SITE PLAN.

DIRECTORY	WATTS LOAD A	WATTS LOAD B	WATTS LOAD C	CKT. NO.	BKR. AMPS
PANEL "W" (EXISTING)	8000			1	150
		6480		3	
			6400	5	
PANEL "Y" (EXISTING)	7000			7	150
		6500		9	
			5808	11	
TEMPORARY TRAILER PANEL 6				13	225
				15	
				17	
TEMPORARY TRAILER PANEL 6				19	225
				21	
				23	
				25	
				27	
				29	
				31	
				33	
				35	
				37	
				39	
				41	

A B C — C — N

BKR. AMPS	CKT. NO.	WATTS LOAD A	WATTS LOAD B	WATTS LOAD C	DIRECTORY
150	2	16100			PANEL "X" (EXISTING)
	4		13400		
	6			12000	
150	8	11000			PANEL "Z" (EXISTING)
	10		13100		
	12			11000	
20	14				SPARE
20	16				SPARE
20	18			1400	WALKWAY LIGHTS
	20				
	22				
	24				
	26				
	28				
	30				
	32				
	34				
	36				
	38				
	40				
	42				

VOLTAGE: 208Y/120 3PH 4W SN | MAIN BUS: 600 A | TOTAL WATTS A 42,100
MAIN BREAKER: 600 A. FRAME 600 A. TRIP | TOTAL WATTS B 38,100
MOUNTING: SURFACE, NEMA TYPE 3R ENCLOSURE | TOTAL WATTS C 36,600
NOTE: 42,000 A.I.C. RATING. | TOTAL WATTS 117,800
PANEL TSP
LOC. NEAR TEMPORARY WALKWAY ENTRANCE



RISER DIAGRAM
NOT TO SCALE

REVISIONS												
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	

	NAME	DATE		NAME	DATE
DESIGNED BY	D.J.J.	09/09/99	DRAWN BY	S.K.M.	09/09/99
CHECKED BY	C.N.R.	09/09/99	CHECKED BY	C.N.R.	09/09/99
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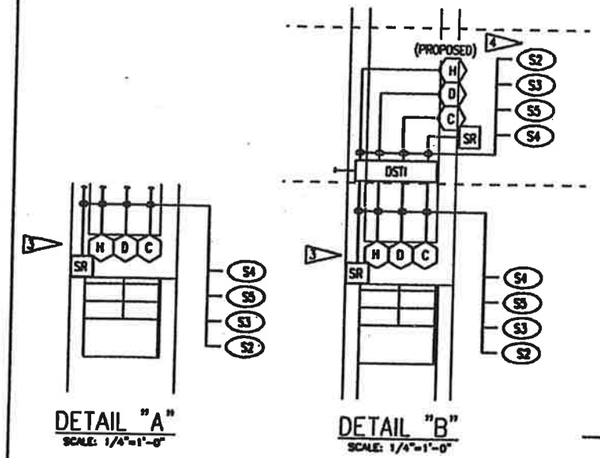
TEMPORARY ELECTRICAL SERVICE RISER DIAGRAM

1-14-00

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E18

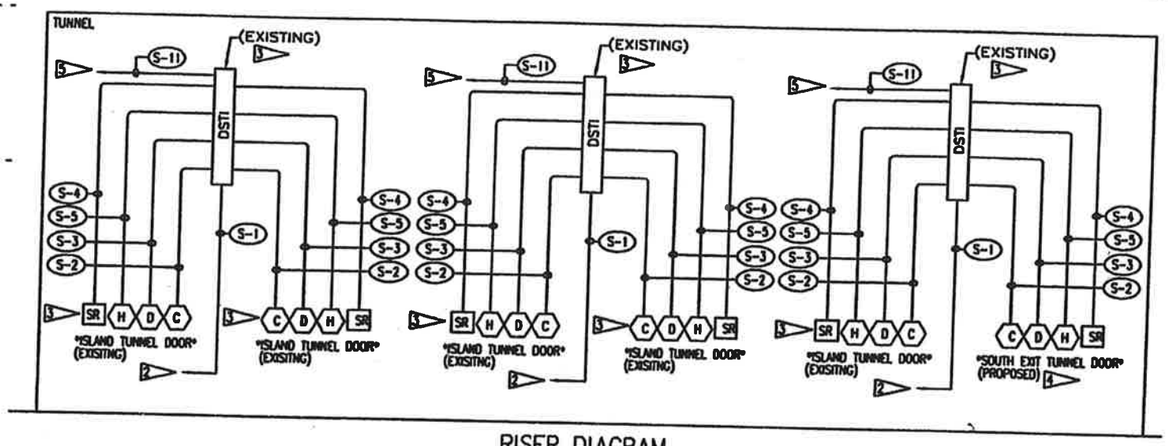
NOTES:

1. SEE SHEET E15 FOR SCHEDULES AND LEGEND.
2. SEE SHEET E14 FOR CONTINUATION OF CONDUITS TO CPU IN ADMINISTRATION BUILDING.
3. RE-USE EXISTING SECURITY AND CARD ACCESS EQUIPMENT LOCATED IN TUNNEL AND AT TUNNEL DOORS.
4. INSTALL NEW SECURITY EQUIPMENT AT EXIT DOOR ON SOUTH END OF TUNNEL.
5. GROUND WIRE TO MAIN BUILDING GROUND BUS BAR.

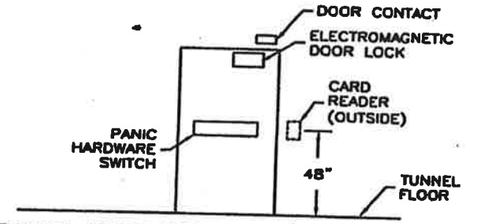


DETAIL "A"
SCALE: 1/4"=1'-0"

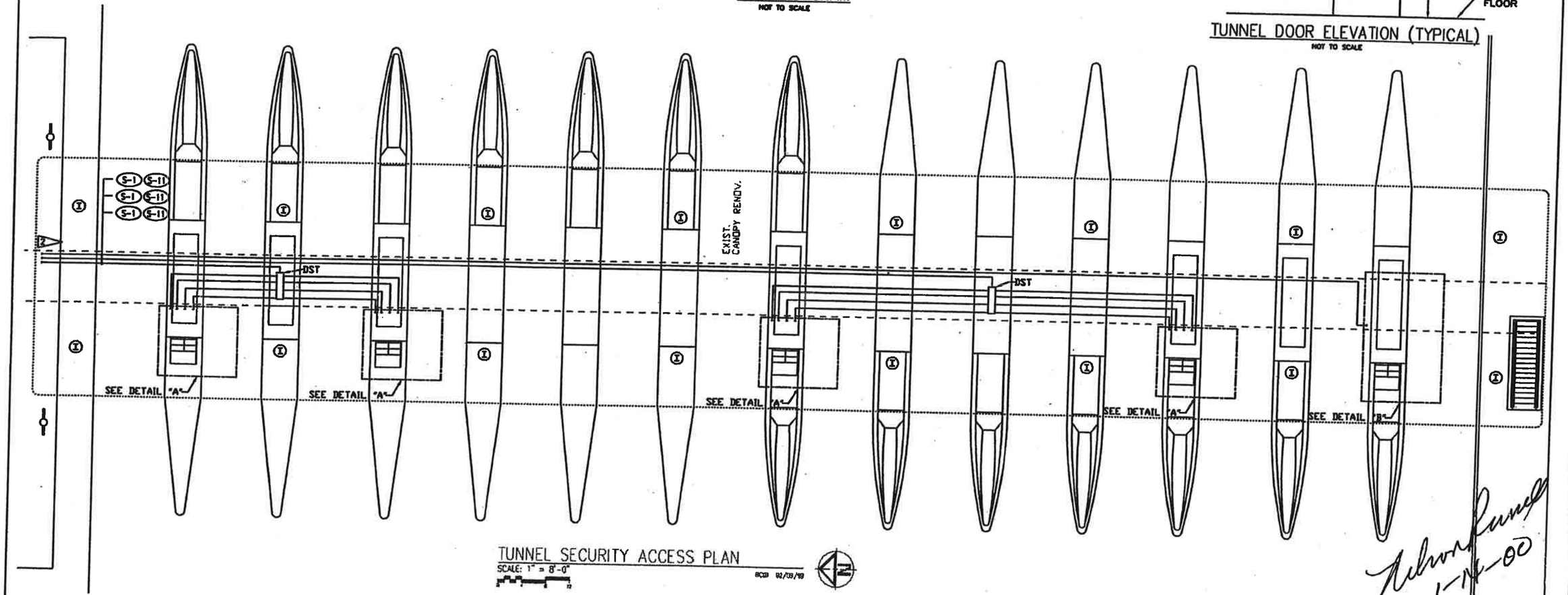
DETAIL "B"
SCALE: 1/4"=1'-0"



RISER DIAGRAM
NOT TO SCALE



TUNNEL DOOR ELEVATION (TYPICAL)
NOT TO SCALE



TUNNEL SECURITY ACCESS PLAN
SCALE: 1" = 8'-0"

1-14-00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	D.J.J.	09/09/99	DRAWN BY	S.K.M.	09/09/99
CHECKED BY	C.N.R.	09/09/99	CHECKED BY	C.N.R.	09/09/99

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TOLL BOOTH TUNNEL SECURITY & CARD ACCESS PLAN

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E19

NOTES:

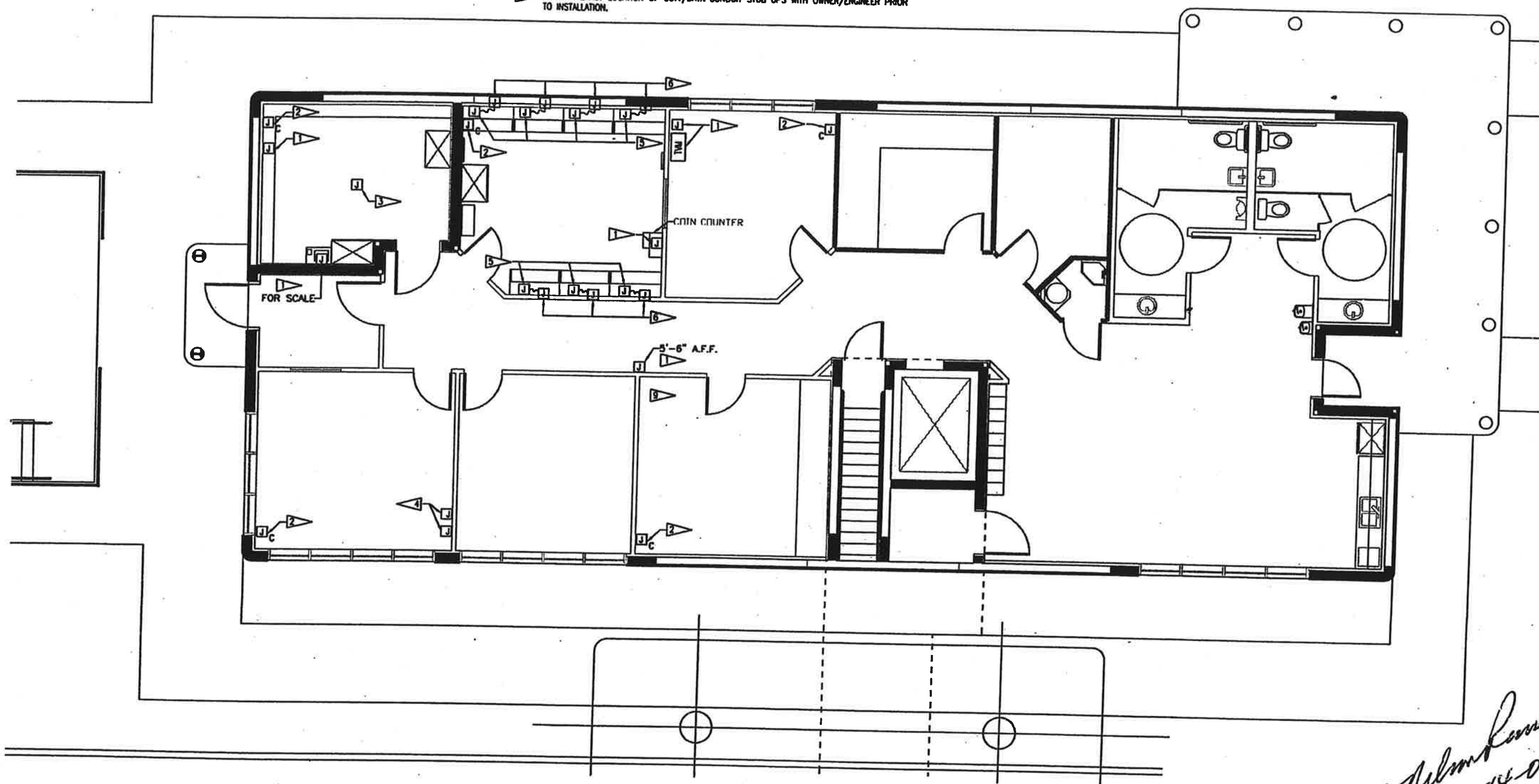
1. 4" SQ X 2 1/8" DEEP OUTLET BOX WITH BLANK COVER PLATE MOUNTED FLUSH WITH FINISH WALL BOTTOM AT 16" A.F.F. (UNLESS NOTED OTHERWISE).
2. PROVIDE 4" SQ X 2 1/8" DEEP OUTLET BOX WITH BLANK COVER PLATE FOR CAMERA. LABEL COVER "CCTV SIGNAL". SURFACE MOUNTED. 6" ABOVE CEILING. (EXCEPT FOR VAULT, WHICH SHALL BE MASONARY BOX MOUNTED, FLUSH WITH WALL, 6" BELOW CEILING).
3. 4" SQ. X 2 1/8" DEEP MASONARY OUTLET BOX MOUNTED FLUSH WITH CEILING FOR FUTURE MOTION DETECTOR. PROVIDE BLANK COVER PLATE WITH BUSHED HOLE. LABEL COVER "MOTION DETECTOR".
4. 4-GANG X 2 1/8" DEEP. OUTLET BOX WITH BLANK COVER PLATE, MOUNTED FLUSH WITH FINISH WALL BOTTOM AT 16" A.F.F. LABEL COVER PLATE "DATA".

NOTES CONTINUED:

5. OUTLET BOX FURNISHED WITH COIN COUNTER. SEE ARCHITECTURAL DETAIL ON SHEET A26.
6. PROVIDE FLUSH OUTLET BOX AND CONNECT TO BOX INSTALLED BY 5 WITH FLEXIBLE CONDUIT.
7. SEE SHEET E20 FOR RISER AND LEGEND.
8. SEE SHEET E02 FOR POWER PLAN.
9. CONFIRM EXACT LOCATION OF CCTV/DATA CONDUIT STUB UPS WITH OWNER/ENGINEER PRIOR TO INSTALLATION.

LEGEND

TVM	OUTLET BOX FOR CCTV MONITOR (FUTURE)
J C	OUTLET BOX FOR CCTV CAMERA (FUTURE)
J	OUTLET BOX



ADMIN. BLDG CCTV & DATA EMPTY CONDUIT SYSTEM PLAN

SCALE: 1/4" = 1'-0"

0 4 8 12

SC01 02/08/99

Nelson Russell 1-14-00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CHECKED BY	C.N.R.	09/09/99	CHECKED BY	C.N.R.	09/09/99
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ADMINISTRATION BUILDING
CCTV & DATA EMPTY CONDUIT SYSTEM PLAN

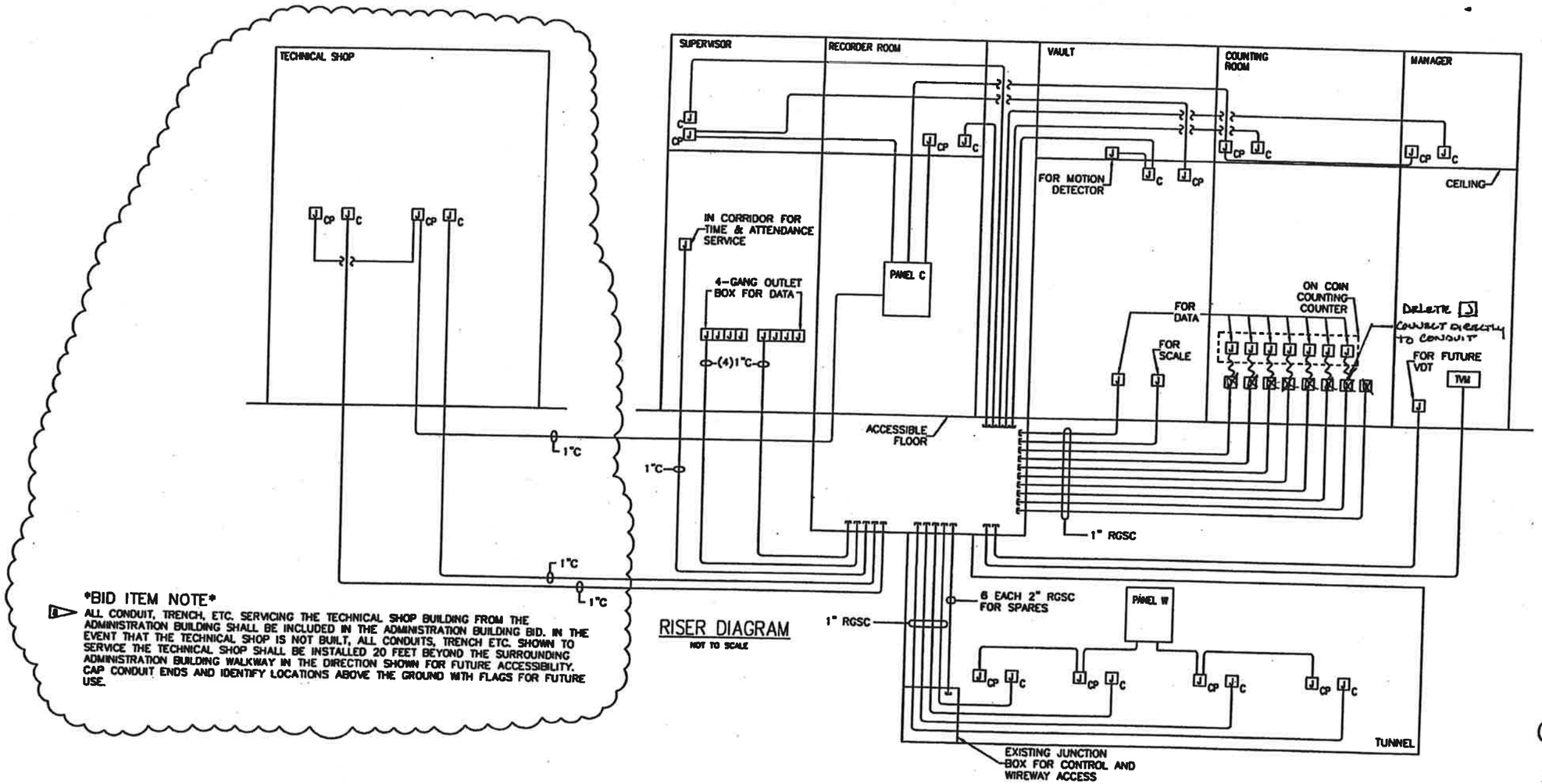
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E20

NOTES:

1. PROVIDE PULL WIRE IN ALL EMPTY CONDUIT.
2. ALL CONDUIT SHALL BE 1" UNLESS OTHERWISE NOTED.
3. SEE SHEET E19 AND E21 FOR CCTV & DATA EMPTY CONDUIT SYSTEM PLANS FOR ADMINSTRATION AND TECHNICAL SHOP BUILDINGS.
4. SEE SHEET E13 FOR ELECTRICAL SITE PLAN.
5. SEE SHEET E02 FOR ADMINISTRATION BUILDING POWER PLAN.
6. SEE SHEET E22 FOR TUNNEL CCTV & DATA PLAN.
7. SEE SHEET E09 FOR TECHNICAL SHOP POWER PLAN.

LEGEND

- TVM — OUTLET BOX FOR CCTV MONITOR (FUTURE)
- J_C — OUTLET BOX FOR CCTV CAMERA (FUTURE)
- J_{CP} — OUTLET BOX FOR CCTV CAMERA POWER (FUTURE)
- J — OUTLET BOX



RISER DIAGRAM
NOT TO SCALE

BID ITEM NOTE

ALL CONDUIT, TRENCH, ETC. SERVICING THE TECHNICAL SHOP BUILDING FROM THE ADMINISTRATION BUILDING SHALL BE INCLUDED IN THE ADMINISTRATION BUILDING BID. IN THE EVENT THAT THE TECHNICAL SHOP IS NOT BUILT, ALL CONDUITS, TRENCH ETC. SHOWN TO SERVICE THE TECHNICAL SHOP SHALL BE INSTALLED 20 FEET BEYOND THE SURROUNDING ADMINISTRATION BUILDING WALKWAY IN THE DIRECTION SHOWN FOR FUTURE ACCESSIBILITY. CAP CONDUIT ENDS AND IDENTIFY LOCATIONS ABOVE THE GROUND WITH FLAGS FOR FUTURE USE.

1-14-00

REVISIONS											
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MOBILE, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ADMINISTRATION BUILDING
CCTV & DATA EMPTY CONDUIT RISER DIAGRAM

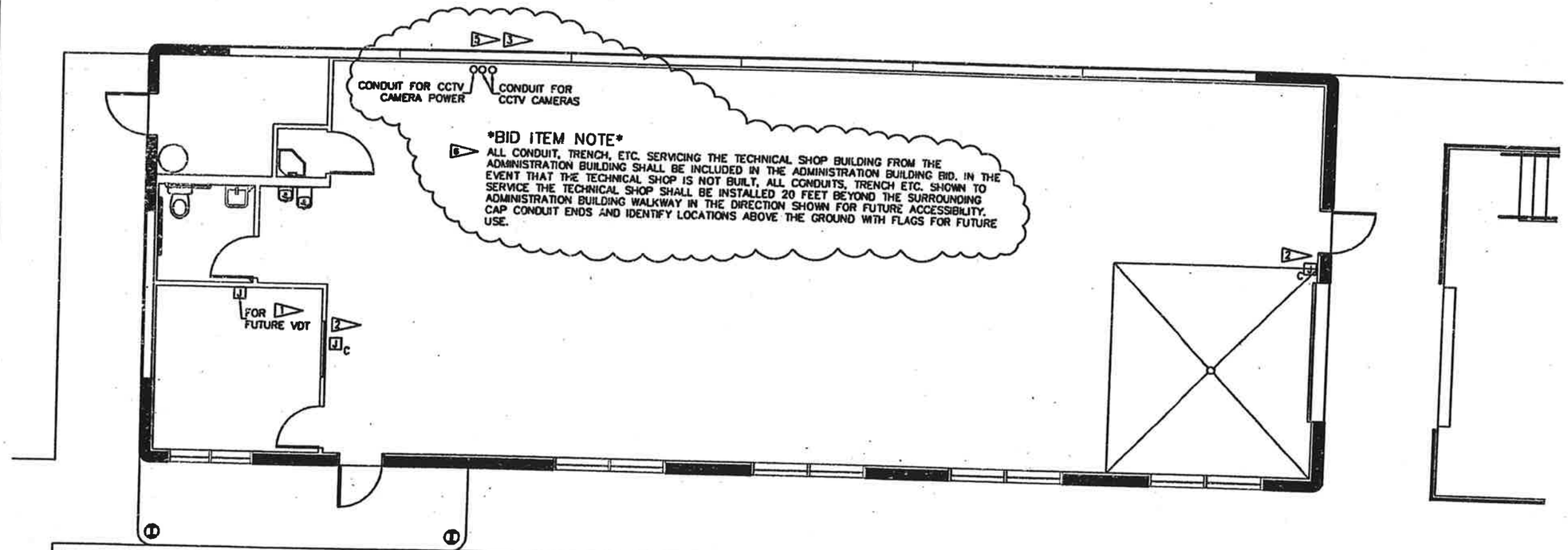
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E21

NOTES:

1. 4" SQ X 2 1/8" DEEP OUTLET BOX WITH BLANK COVER PLATE MOUNTED FLUSH WITH FINISH WALL BOTTOM AT 16" A.F.F. (UNLESS NOTED OTHERWISE).
2. PROVIDE 4" SQ X 2 1/8" DEEP OUTLET BOX WITH BLANK COVER PLATE FOR CAMERA. LABEL COVER "CCTV SIGNAL". FLUSH WITH WALL. 9 FEET ABOVE CEILING.
3. SEE SHEET E20 FOR CCTV & DATA EMPTY CONDUIT RISER, LEGEND AND CONDUIT SIZE.
4. SEE SHEET E09 FOR TECHNICAL SHOP POWER PLAN AND FOR CCTV POWER OUTLET BOX PROVISIONS.
5. SEE SHEET E13 FOR ELECTRICAL SITE PLAN AND ROUTE OF CCTV CONDUITS. STUB CCTV CONDUITS UP NEXT TO TELEPHONE BACKBOARD OF TECHNICAL SHOP.

LEGEND

- J_C OUTLET BOX FOR CCTV CAMERA (FUTURE)
- J OUTLET BOX
- o UNDERGROUND CONDUIT TURNING UP. ROUTED FROM RECORDER ROOM IN THE ADMINISTRATION BUILDING.



TECH. SHOP CCTV & DATA EMPTY CONDUIT SYSTEM PLAN

SCALE: 1/4" = 1'-0"

RCD 02/09/99

0 4 8 12

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Nelson Russell 1-14-00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
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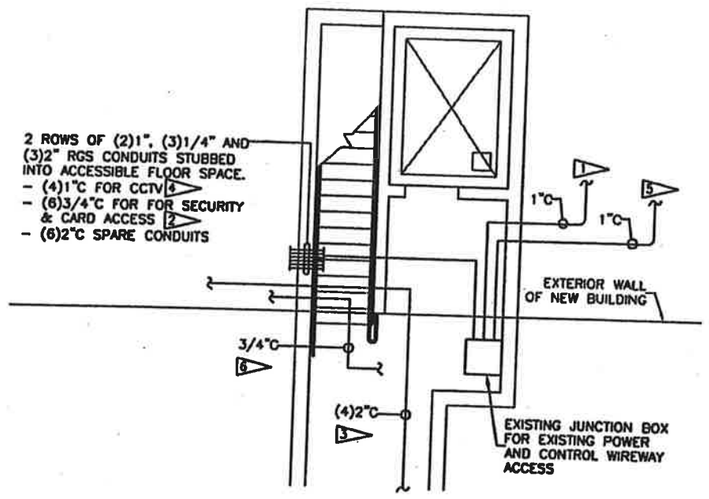
TECHNICAL SHOP
CCTV & DATA EMPTY CONDUIT SYSTEM PLAN

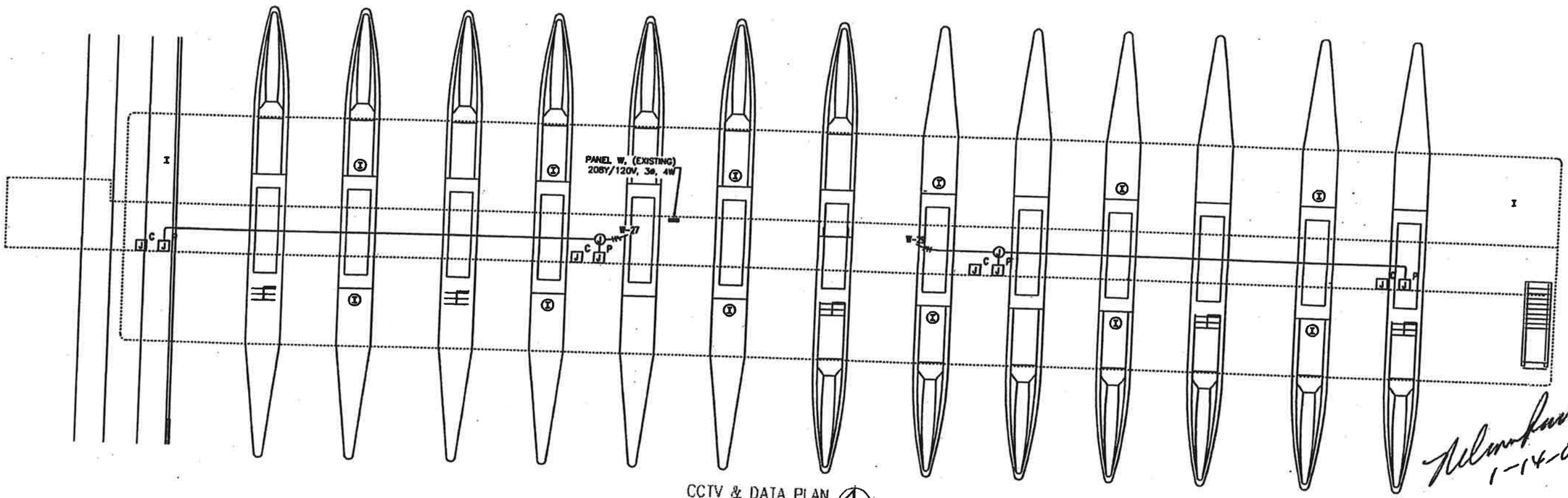
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E22



BASEMENT PLAN VIEW
INSTALLATION
NOT TO SCALE

NOTES

1. 1" CONDUITS FOR TELEPHONE SYSTEM. SEE SHEET E07 FOR INTERCOM PLANS.
2. (6) 3/4" CONDUITS FOR SECURITY AND CARD ACCESS SYSTEM. SEE SHEETS E14, E15, AND E18 FOR CONDUIT ROUTES.
3. (4) 2" CONDUITS FOR FEEDERS TO EXISTING TUNNEL POWER PANELS. SEE SHEET E04 RISER DIAGRAM.
4. (4) 1" CONDUITS FOR CCTV & DATA SYSTEM. SEE SHEETS E20 FOR RISER DIAGRAM.
5. 1" CONDUITS FOR INTERCOM SYSTEM. SEE SHEET E24 FOR INTERCOM PLANS.
6. 3/4"" CONDUIT FOR SUMP PUMP. SEE SHEET E02 FOR POWER PLAN.



CCTV & DATA PLAN
SCALE: 1" = 8'-0" RCVD 02/09/99

1-14-00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	D.J.J.	09/09/99	DRAWN BY	S.K.M.	09/09/99
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ADMINISTRATION BUILDING BASEMENT
MISCELLANEOUS SYSTEMS PLAN

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E23

NOTES

1. INSTALL 4 EACH 2" CONDUITS FROM TEMPORARY TRAILER TO TOLL PLAZA (3 FOR USE BY OTHERS AND ONE FOR TEMPORARY TELEPHONE SERVICE). EXACT ROUTE SHALL BE DETERMINED BY FIELD ENGINEER AT TIME OF INSTALLATION. INSTALL PULL STRINGS IN ALL EMPTY CONDUITS.
2. REFER TO SHEET E17 FOR TEMPORARY ELECTRICAL SERVICE RISER DIAGRAM. EXACT ROUTE OF CONDUITS SHALL BE DETERMINED BY FIELD ENGINEER AT TIME OF INSTALLATION. INSTALL PULL STRINGS IN ALL EMPTY CONDUITS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING A TEMPORARY TELEPHONE SERVICE TO BOTH THE TEMPORARY ADMINISTRATION TRAILERS AND BREAK ROOM AND TO EACH TOLL PLAZA BOOTH AND THE TUNNEL DURING THE CONSTRUCTION PHASE. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, NECESSARY EQUIPMENT AND SERVICES TO PROVIDE A COMPLETE AND WORKING TEMPORARY TELEPHONE SYSTEM. TEMPORARY SERVICE SHALL INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING:

   A. CONTRACTOR SHALL UTILIZE EXISTING ADMINISTRATION BUILDING CONTROL UNIT FOR TEMPORARY TELEPHONE SERVICE. LOCATION OF CONTROL UNIT SHALL BE IN TEMPORARY TRAILER. EXACT LOCATION OF CONTROL UNIT SHALL DETERMINED BY OWNER AND FIELD ENGINEER AT TIME OF INSTALLATION.

   B. CONTRACTOR SHALL RE-USE/RE-LOCATE EXISTING TELEPHONE INSTRUMENTS. THE EXACT LOCATION AND NUMBER OF TELEPHONE INSTRUMENTS FOR TEMPORARY TELEPHONE SERVICE SHALL BE DETERMINED BY OWNER AT TIME OF INSTALLATION. 24 TELEPHONE INSTRUMENTS ARE ESTIMATED TO BE RELOCATED AND/OR RECONNECTED.

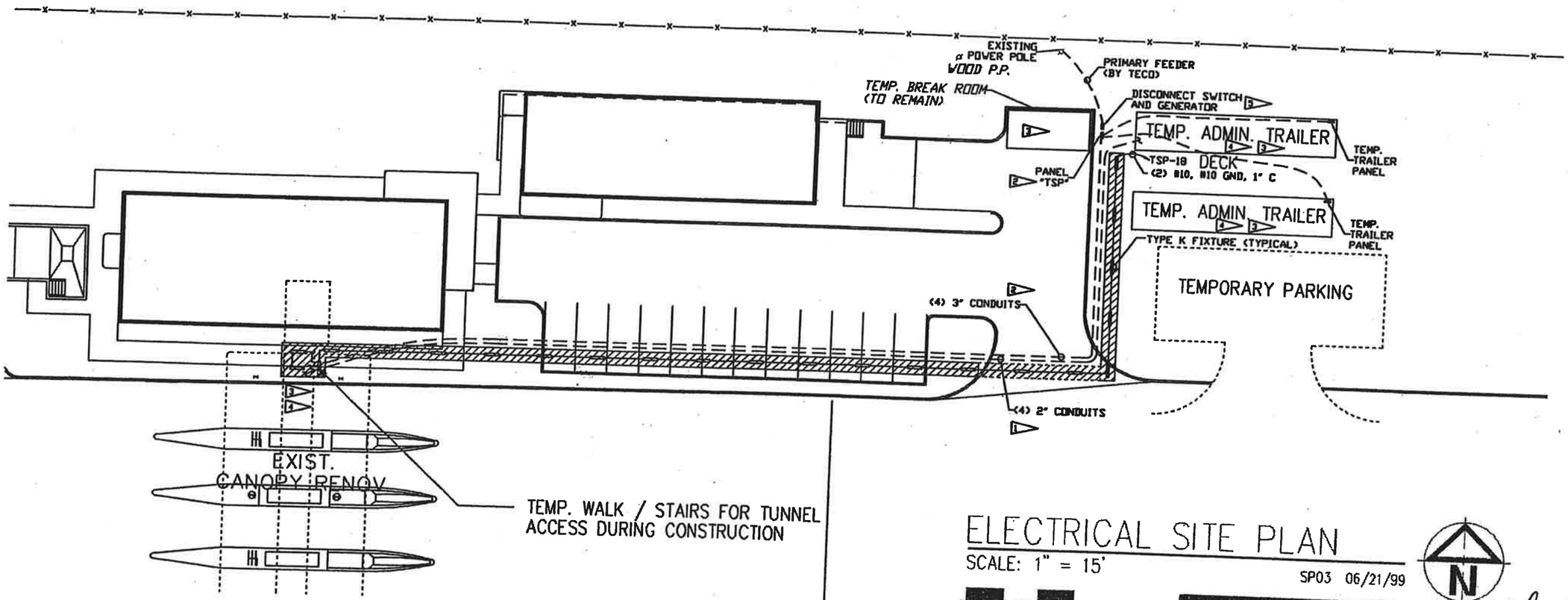
   C. CONTRACTOR SHALL COORDINATE ALL WORK WITH CORRESPONDING TELEPHONE POINT OF CONTACT.

NOTES CONTINUED

4. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING A TEMPORARY SECURITY AND CARD ACCESS SYSTEM FOR BOTH THE ADMINISTRATION TRAILERS AND TOLL PLAZA TUNNEL. CONTRACTOR SHALL RELOCATE AND/OR RECONNECT EXISTING SECURITY AND CARD ACCESS EQUIPMENT AND SHALL PROVIDE ALL LABOR, MATERIAL, NECESSARY EQUIPMENT AND SERVICES TO PROVIDE A COMPLETE AND WORKING TEMPORARY SECURITY AND CARD ACCESS SYSTEM AS REQUIRED TO SATISFY FIELD ENGINEER.
5. EXACT LOCATION OF DISCONNECT SWITCH AND TEMPORARY GENERATOR SHALL BE AS GENERALLY SHOWN, HOWEVER EXACT LOCATION SHALL BE FIELD DETERMINED.

LEGEND

- - - - PROPOSED BURIED ELECTRICAL CONDUIT



ELECTRICAL SITE PLAN

SCALE: 1" = 15'

SP03 06/21/99

0 30 60 120

N

1-14-00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

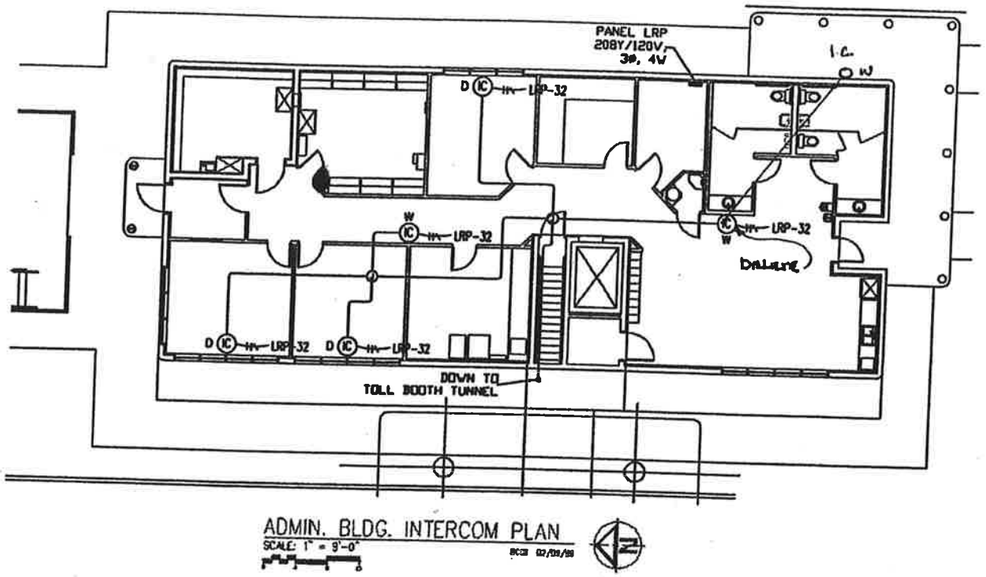
	NAME	DATE		NAME	DATE
DESIGNED BY	D.J.J.	09/09/99	DRAWN BY	S.K.M.	09/09/99
CHECKED BY	C.N.R.	09/09/99	CHECKED BY	C.N.R.	09/09/99

SUPERVISED BY:

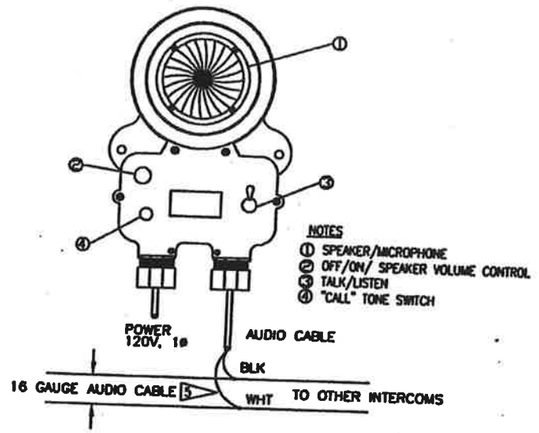
DAVID VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MOBILE, ALABAMA, BIRMINGHAM, METAIRIE, TAMPA

TEMPORARY ELECTRICAL SERVICE SITE PLAN

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E24



ADMIN. BLDG. INTERCOM PLAN
SCALE: 1" = 9'-0"



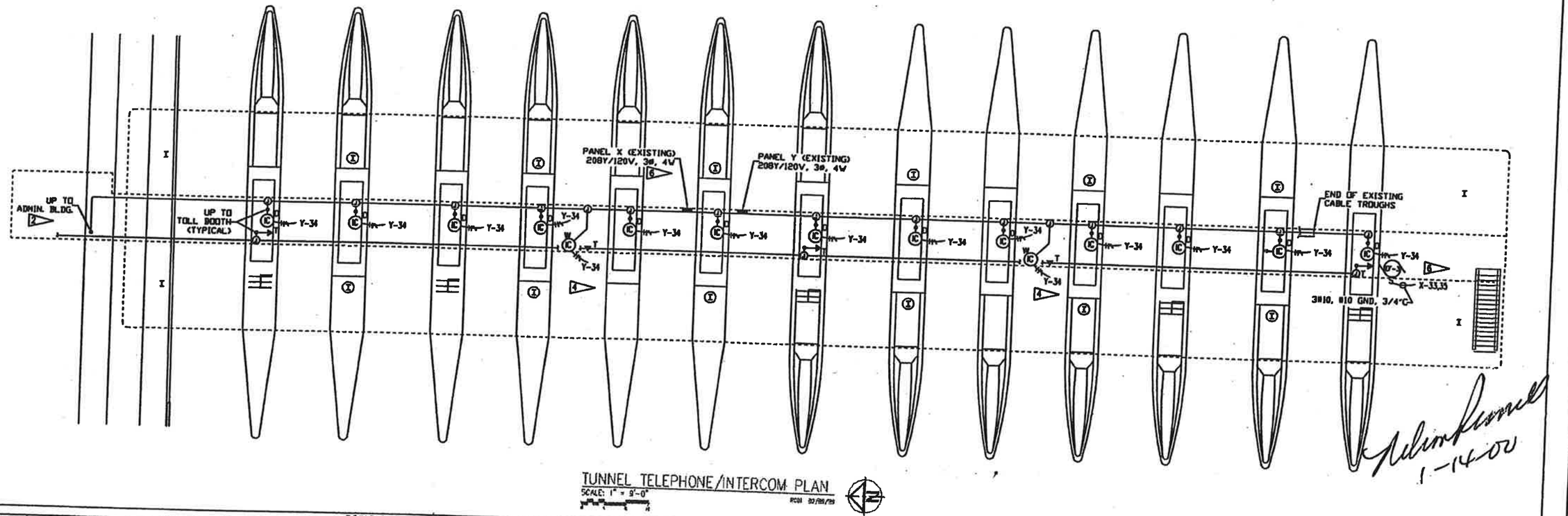
INTERCOM WIRING DIAGRAM-WALL MOUNT
NOT TO SCALE

NOTES:

1. ALL TUNNEL JUNCTION BOXES ARE WEATHERPROOF.
2. SEE SHEET E08 FOR CONTINUATION OF TELEPHONE CONDUITS TO ADMINISTRATION BUILDING.
3. ROUTING OF CONDUIT IS DIAGRAMMATIC. ACTUAL ROUTING AND BEST MEANS OF SUPPORT SHALL BE DETERMINED IN FIELD. EXACT LOCATION OF ELECTRICAL EQUIPMENT SHALL BE FIELD DETERMINED.
4. WALL MOUNT TELEPHONE AND INTERCOM UNITS IN TUNNEL.
5. CONNECT ALL INTERCOMS TOGETHER PER MANUFACTURERS RECOMMENDATIONS WITH MINIMUM 16 GAUGE LOW VOLTAGE AUDIO CABLE. MINIMUM CONDUIT SIZE IS 1".
6. ADD ONE EACH 15 AMP, 208V, 2 POLE CIRCUIT BREAKER IN EXISTING PANEL X. MATCH EXISTING BREAKERS IN TYPE, MANUFACTURER AND A.I.C. RATING. UTILIZE BREAKER TO POWER EXHAUST FAN EF-3. ROUTE FEED (X-33,35) TO EXHAUST FAN EF-3 THROUGH EXISTING CABLE DUCT WHENEVER POSSIBLE. REFER TO SHEET M03 FOR INTERLOCK REQUIREMENTS.

LEGEND:

- • - CONDUIT TURNING UP
- • - CONDUIT TURNING DOWN
- W IC - INDUSTRIAL INTERCOM, 120V, 1Φ, (ATKINSON DYNAMICS # AD-27) WALL MOUNT 5' A.F.F.
- D IC - INDUSTRIAL INTERCOM, 120V, 1Φ, (ATKINSON DYNAMICS # AD-271) DESKTOP UNIT
- ④ - JUNCTION BOX
- T▼ - TELEPHONE OUTLET WITH TELEPHONE INSTRUMENT MOUNT 18" A.F.F.



TUNNEL TELEPHONE/INTERCOM PLAN
SCALE: 1" = 9'-0"

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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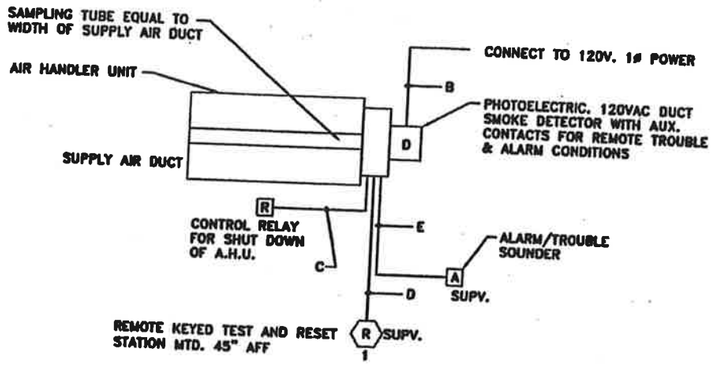
DESIGNED BY	D.J.J.	09/09/99	DRAWN BY	D.J.J.	09/09/99
CHECKED BY	C.N.R.	09/09/99	CHECKED BY	C.N.R.	09/09/99

SUPERVISED BY :

VOLKERT & ASSOCIATES, INC. Architects · Engineers · Planners
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ADMINISTRATION BUILDING & TUNNEL TELEPHONE/INTERCOM PLAN

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E25

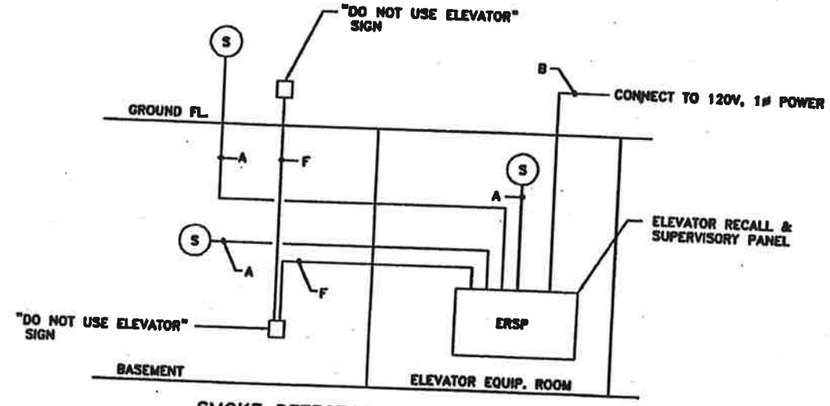


DUCT MOUNTED SMOKE DETECTOR DETAIL

N.T.S.

(TYPICAL FOR AHU-1, 2, 3 & 4)

NOTE: REFER TO DWGS. E26 & E27 FOR EQUIPMENT LOCATION, CONDUIT & WIRE CONNECTIONS.



SMOKE DETECTOR WIRING DETAIL

N.T.S.

NOTE: REFER TO DWGS. E26 & E27 FOR EQUIPMENT LOCATION, CONDUIT & WIRE CONNECTIONS.

SMOKE DETECTION WIRE SCHEDULE	
TYPE	DESCRIPTION
A	2ø14 THHN (INITIATING CIRCUIT)
B	2ø12 THHN (120V POWER)
C	2ø14 THHN (AHU SHUT DOWN CIRCUIT)
D	5ø14 THHN (REMOTE INDICATOR/TEST)
E	3ø14 THHN (REMOTE ALARM TROUBLE SOUNDER)
F	2ø14 THHN ("DO NOT USE ELEV." SIGN CIRCUIT)

SMOKE DETECTION SYSTEM NOTES

1. ALL COMPONENTS SHALL BEAR THE U.L. LABEL FOR FIRE SERVICE USE AND SHALL BE COMPATIBLE FOR USE WITH INTERCONNECTING EQUIPMENT.
2. THE COMPLETE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, N.E.C., N.F.P.A., A.D.A., A.N.S.I., S.F.B.C. AND ALL LOCAL CODES.
3. SHOP DRAWINGS SHALL BE PROVIDED TO THE ENGINEER PRIOR TO BEGINNING ANY WORK. THESE SHOP DRAWINGS SHALL SHOW WIRE COUNTS, CONDUCTOR TYPES, RACEWAY LOCATIONS AND SIZES, EQUIPMENT CATALOG NUMBERS AND DESCRIPTIONS CLEARLY HIGHLIGHTED TO SPECIFICALLY INDICATE WHICH PRODUCTS ARE PROPOSED FOR USE. AFTER SATISFACTORY REVIEW BY THE ENGINEER, THE CONTRACTOR SHALL SEEK APPROVAL BY THE DEPARTMENT. AFTER SATISFACTORY REVIEW BY THE DEPARTMENT WORK SHALL COMMENCE.
4. MINIMUM CONDUIT SIZE SHALL BE ½". CONDUIT SHALL BE SIZED AS REQUIRED BY CONDUCTOR COUNT. CONDUCTORS SHALL LOOP ALL DEVICES AND SHALL BE CONNECTED AS SHOWN ON THE PLANS AND SYSTEM INSTALLER'S DIRECTIONS.
5. ALL CONDUCTORS SHALL BE COPPER.
6. CONDUCTOR INSULATION FOR CABLES THAT PENETRATE INTO OR THROUGH PLENUM AREAS USED FOR TRANSFER OF ENVIRONMENTAL AIR SHALL BE TYPE FFLP, TEFLON, INSULATED TYPE.
7. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT, CONDUIT SYSTEM, CONDUCTORS DEVICES, ETC. AND ALL OTHER ACCESSORIES REQUIRED FOR AN ACCEPTABLE AND FULLY FUNCTIONAL SYSTEM.
8. ALL EQUIPMENT SHALL BE AS INDICATED ON THE PRODUCTS SCHEDULE. DUCT SMOKE DETECTORS SHALL BE FOR 120V OPERATION.

1-14-00

PRODUCTS SCHEDULE				
LEGEND	EQUIPMENT	MANUFACTURER AND CATALOG NO.		
ERSP	ELEVATOR RECALL CONTROL & SUPERVISORY PANEL	SIMPLEX 4004 SERIES	EQUAL BY EDWARDS	EQUAL BY FIRE LITE
S	AREA SMOKE DETECTOR	SIMPLEX 4098-9601	EQUAL BY EDWARDS	EQUAL BY FIRE LITE
	AREA SMOKE DETECTOR BASE	SIMPLEX 4098-9788	EQUAL BY EDWARDS	EQUAL BY FIRE LITE
S D	DUCT SMOKE DETECTOR	SIMPLEX 4098-9681	EQUAL BY EDWARDS	EQUAL BY FIRE LITE
	DUCT SMOKE PWR. ADAPTER	SIMPLEX 2098-9747	EQUAL BY EDWARDS	EQUAL BY FIRE LITE
R	AHU CONTROL RELAY	SIMPLEX 2088-9007	EQUAL BY EDWARDS	EQUAL BY FIRE LITE
A	ALARM TROUBLE SOUNDER	SIMPLEX 2902-9836	EQUAL BY EDWARDS	EQUAL BY FIRE LITE
R	REMOTE TEST STATION	SIMPLEX 4098-9835	EQUAL BY EDWARDS	EQUAL BY FIRE LITE

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	D.J.J.	09/09/99	DRAWN BY	D.J.J.	09/09/99
CHECKED BY	C.N.R.	09/09/99	CHECKED BY	C.N.R.	09/09/99
SUPERVISED BY :					

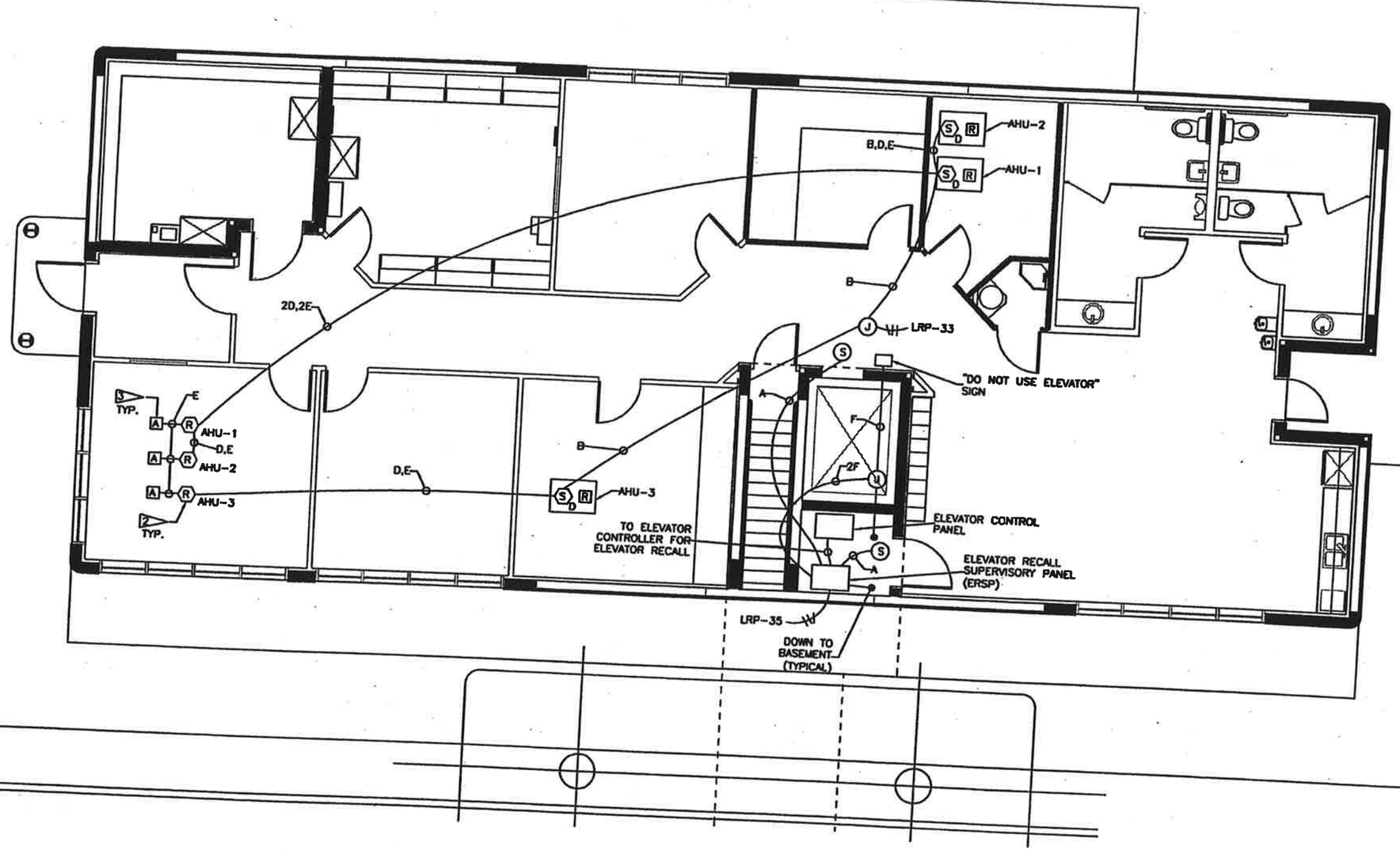
VOLKERT ASSOCIATES, INC. Architects · Engineers · Planners
MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

FIRE ALARM SYSTEM DETAILS AND SCHEDULES

NOTES

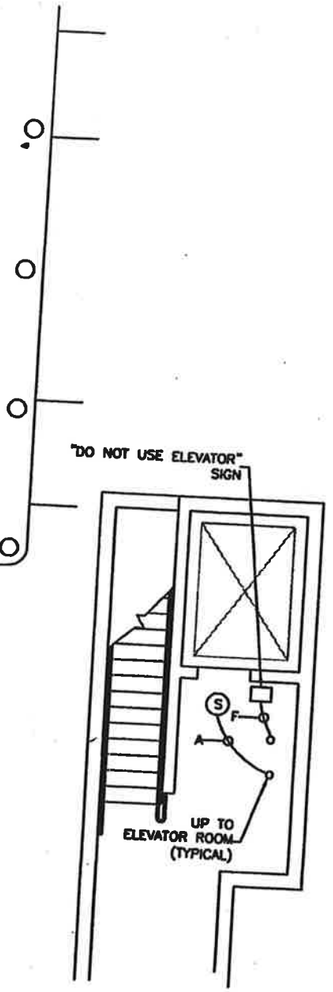
1. SEE SHEET E25 FOR FIRE ALARM DETAILS AND SCHEDULES.
2. REMOTE INDICATOR FOR AIR HANDLER UNIT AS SHOWN.
3. REMOTE ALARM TROUBLE SOUNDER FOR DUCT DETECTOR AS SHOWN.

FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-32-01	10002-0000	E26



ADMIN. BLDG. FIRE ALARM PLAN
SCALE: 1/4" = 1'-0"
RCDI 07/09/99

0 4 8 12



FIRE ALARM PLAN
BASEMENT
NOT TO SCALE

1-14-00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	D.J.J.	09/09/99	DRAWN BY	S.K.M.	09/09/99
CHECKED BY	C.N.R.	09/09/99	CHECKED BY	C.N.R.	09/09/99
SUPERVISED BY:					

VOLKERT & ASSOCIATES, INC. Architects • Engineers • Planners
MOBILE, MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

ADMINISTRATION BUILDING
FIRE ALARM PLAN

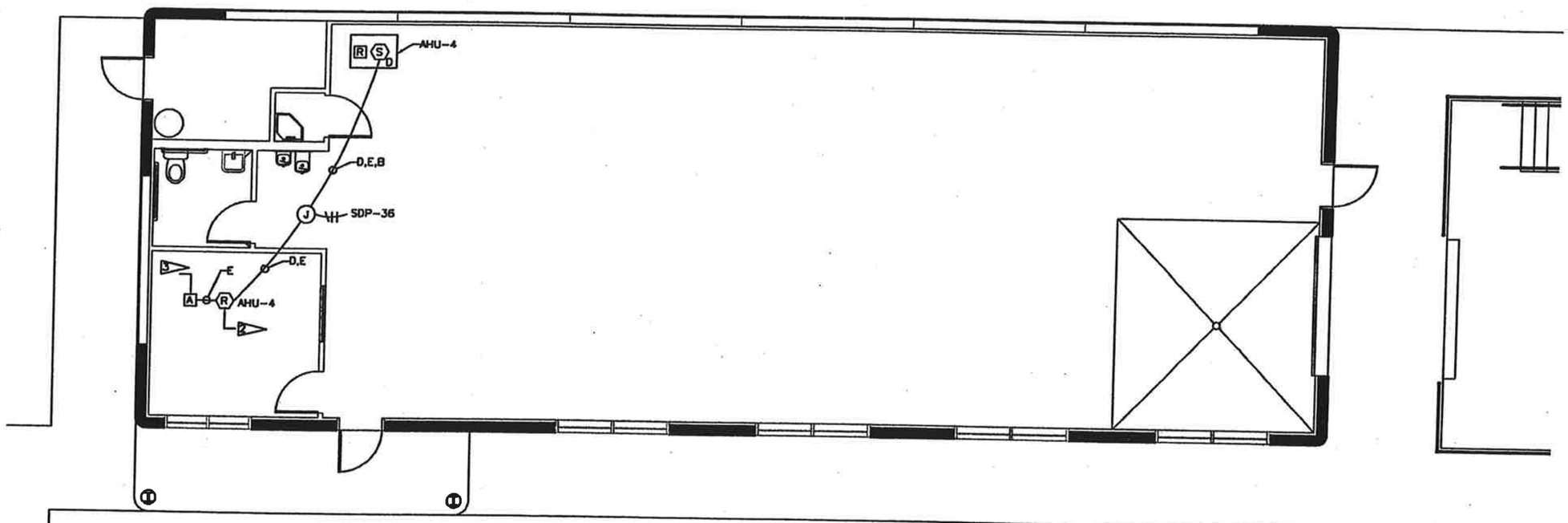
FINANCIAL PROJECT NUMBER	STATE PROJECT NUMBER	SHEET NUMBER
190352-1-52-01	10002-0000	E27

NOTES

1. SEE SHEET E25 FOR FIRE ALARM DETAILS AND SCHEDULES.

[2] REMOTE INDICATOR FOR AIR HANDLER UNIT AS SHOWN.

[3] REMOTE ALARM TROUBLE SOUNDER FOR DUCT DETECTOR AS SHOWN.



TECH. SHOP FIRE ALARM PLAN
SCALE: 1/4" = 1'-0"
0 4 8 12

1-14-00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	D.J.J.	09/09/99	DRAWN BY	S.K.M.	09/09/99
CHECKED BY	C.N.R.	09/09/99	CHECKED BY	C.N.R.	09/09/99

SUPERVISED BY :

VOLKERT & ASSOCIATES, INC. architects • engineers • planners
MOBILE, ALEXANDRIA, BIRMINGHAM, METAIRIE, TAMPA

TECHNICAL SHOP
FIRE ALARM PLAN

CERTIFICATION REGARDING SCRUTINIZED COMPANIES LISTS

This certification is required pursuant to Florida Statute, Section 287.135.

By executing this form and each and every renewal hereof (if renewal is separately provided for herein), pursuant to section 287.135, Florida Statutes, Consultant certifies, represents, and warrants that: (a) it is not on the Scrutinized Companies with Activities in Sudan List, (b) it is not on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, (c) it is not on the Scrutinized Companies with Activities in Iran Terrorism Sectors List, (d) that it does not have Business operations or is engaged in business in Cuba or Syria, and (e) that it is not engaged or engaging in a Boycott of Israel, and that all such certifications were true at the time it submitted its bid or proposal for this Agreement, as of the Effective Date of this Agreement, and as of the effective date of any renewal of this Agreement. Notwithstanding anything contained in this Agreement to the contrary, the Authority may terminate this Agreement immediately for cause if: (1) Consultant is found to have submitted a false certification regarding (a) – (e) above in accordance with section 287.135(5), Florida Statutes, (2) Consultant is found to have been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or is or has been engaged in Business operations in Cuba or Syria or a Boycott of Israel, or (3) Consultant is found to have been placed on a list created pursuant to section 215.473, Florida Statutes, relating to scrutinized active business operations in Iran. Such termination shall be in addition to any and all remedies available to the Authority at law or in equity. The terms "Boycott of Israel" and "Business operations" used in this section are defined as in Section 287.135, Florida Statutes. The Lists referred to in this section are those Lists in and maintained pursuant to section 287.135, Florida Statutes.

Firm: _____

Firm FID or EIN: _____

Address: _____

City: _____ State: _____ Zip: _____

I hereby warrant that I am duly authorized to sign and bind on behalf of the company listed above as the "Firm".

I hereby certify and affirm that the company listed above as the "Firm" certifies, represents, and warrants that: (a) it is not on the Scrutinized Companies with Activities in Sudan List, (b) it is not on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, (c) it is not on the Scrutinized Companies with Activities in Iran Terrorism Sectors List, (d) that it does not have Business operations or is engaged in business in Cuba or Syria, and (e) that it is not engaged or engaging in a Boycott of Israel, and that all such certifications were true at the time it submitted its bid or proposal for this Agreement, as of the Effective Date of this Agreement, and as of the effective date of any renewal of this Agreement. I understand pursuant to Florida Statue, Section 287.135, the submission of a false certification may subject the Respondent/Bidder to civil penalties, attorney's fees and/or costs.

Firm:

By: _____
(Authorized Signature)

_____
(Printed Name of Signer)

_____
(Title of Signer)

_____
(Date Signed)

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we _____

(Here In after called the "Principal") and _____

(Hereinafter called the "Surety"), a Corporation chartered and existing under the laws of the State of _____with its principal offices in the City of _____
and authorized to do business in the State of Florida are held firmly bound unto the Tampa-Hillsborough County Expressway Authority, in the full and just sum of _____Dollars ($_____), equal to 10% of the bid amount, good and lawful money of the United Statesof America, to be paid upon demand of the Tampa-Hillsborough County Expressway Authority, to which payment well and truly to be made we bind ourselves, our heirs, executors, administrators, and assigns, jointly and severally by these presents.

WHEREAS, the Principal is about to submit, or has submitted to the Tampa-Hillsborough County Expressway Authority, a proposal for the

_____

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

"NOW, THEREFORE: The conditions of this obligation are such that if the Proposal is accepted, the Principal shall, within ten (10) days after the date of receipt of a written notice of Award of Contract, execute a contract in accordance with the Proposal and upon the terms, conditions and prices set forth therein in the form and manner required by the Tampa-Hillsborough County Expressway Authority and execute a sufficient and satisfactory Public Construction Bond, payable to the Tampa-Hillsborough County Expressway Authority and deliver documents which are condition to commencing the work... ". then this obligation to be void; otherwise to be and remain In full force and virtue in law; and the Surety shall, upon failure within the time specified above, immediately pay to the aforesaid Expressway Authority 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

(Seal) BY: _____

_____
Surety

(Seal) BY: _____

_____
Countersigned

CERTIFICATE AND AFFIDAVIT FOR SURETY BOND INSURER

TO: TAMPA-HILLSBOROUGH EXPRESSWAY AUTHORITY
RE: REQUEST FOR PROPOSALS NO. _____; PROJECT: _____
_____

BIDDER: Name: _____
Address: _____
Telephone: _____

AMOUNT OF BOND: _____
SURETY BOND INSURER
Name: _____
Address: _____
Telephone: _____

Before me, the undersigned authority, personally appeared, _____ on this _____ day of _____, 20___ who hereby certifies that, in accordance with Section 287.0935, Florida Statutes, the insurer named above:

1. Is licensed to do business in the State of Florida;
2. Holds a certificate of authority authorizing it to write surety bonds in Florida;
3. Has twice the minimum surplus and capital required by the Florida Insurance Code at the time the invitation to bid is Issued;
4. Is otherwise in compliance with the provisions of the Florida Insurance Code; and
5. Holds a currently valid certificate of authority issued by the United States Department of the Treasury under Section 9304-9308 of Title 31 of the United States Code.

_____
Signature of Officer of Surety Insure

STATE OF: _____

COUNTY OF: _____
THE FOREGOING INSTRUMENT was sworn to, subscribed and acknowledged before me this _____ day of _____, 20____ by who is personally known to me or _____ has produced _____ as identification and did take an oath.

(Notary, check appropriate blank; and if obtaining identification, fill in appropriate identification number.)

_____
Notary Public

_____
(Printed Name of Notary)

My Commission Expires:

_____
Serial Number, if any)

INSURANCE REQUIREMENTS, COVERAGES and LIMITS
for
Tampa-Hillsborough County Expressway Authority

Consultants, Contractors and Vendors, hereinafter referred to collectively and individually as "Insured" conducting business with the Tampa-Hillsborough County Expressway, "THEA" are required to maintain adequate insurance coverage and provide insurance certification to THEA.

A. INSURANCE REQUIREMENTS:

1) All insurance shall be from responsible insurance companies eligible to do business in the State of Florida and having an AM Best rating of A- or better and a financial size category of VII or better. Utilization of non-rated companies or companies with AM Best ratings lower than A- or a financial size category lower than VII may be approved on a case by case basis. If the insurer does not meet these requirements, THEA retains the right to approve or disapprove the use of the insurer.

2) INSURED'S liability policies, other than the Workers' Compensation and Professional Liability, shall provide that THEA, its officials, officers and employees are additional named insureds as to the operations of the INSURED under this AGREEMENT.

3) INSURED'S liability policies, other than the Workers' Compensation and Professional Liability, shall provide the "Severability of Interest" provision (a/k/a "Separation of Insureds" provision).

4) The INSURED'S Certificate of Insurance(s) shall provide THEA as an additional certificate holder for all policies issued.

5) The INSURED'S Certificate of Insurance(s) shall state the description of the operations, i.e., "Name of Agreement" between THEA and "Name of Insured" and shall state the Contract Number assigned for the AGREEMENT between THEA and the INSURED.

6) The INSURED shall deliver to THEA, within ten (10) days from the receipt of a Notice of Award of this AGREEMENT, properly executed Certificate(s) of Insurance on insurance industry standard certificate of insurance form(s) (example: ACORD form) setting forth the insurance coverages and limits required herein. All of the required insurance coverages shall be issued as required by law and shall be endorsed, where necessary, to comply with the minimum requirements contained herein.

7) Except as otherwise specified in the AGREEMENT, the insurance will commence on or prior to the effective date of the AGREEMENT and will be maintained in force throughout the duration of the AGREEMENT. Three years' completed operations coverage may be required to be maintained on specific commercial general liability policies and/or professional liability policies effective on the date of substantial completion or the termination of the AGREEMENT, whichever is earlier.

8) Aggregate Policy Limits on policies required of INSURED shall apply exclusively for this AGREEMENT.

9) INSURED authorizes THEA to verify its insurance information with its insurance agents, brokers, surety, and insurance carriers. At THEA'S request, INSURED shall provide copies of the policies at no cost to THEA, subject to redaction by the INSURED of any proprietary information.

10) All insurance coverages of the INSURED shall be primary to any insurance or self-insurance programs carried by THEA; and any THEA insurance or coverages shall not be contributory to INSURED'S insurance requirements in this AGREEMENT.

11) The insurance coverages and limits required of the INSURED under this AGREEMENT are designed to meet the minimum requirements of THEA. They are not designed as a recommended insurance program for the INSURED. The INSURED alone shall be responsible for the sufficiency of its own insurance program.

12) All policies of insurance required herein will be specifically endorsed to require the insurer provide THEA with thirty (30) days notice prior to any cancellation, intent not to renew any policy and/or any change that will reduce the insurance coverages required in this AGREEMENT, except for the application of the Aggregate Limits Provisions.

The endorsement will specify that such notice will be sent to:

Tampa-Hillsborough County Expressway, (THEA)
Contracts & Procurement Manager
1104 East Twiggs St, Suite 300
Tampa, FL 33602

13) THEA accepts no responsibility for determining whether the INSURED'S insurance is in full compliance with the insurance required by the AGREEMENT. Neither the approval by THEA nor the failure to disapprove the insurance furnished by the INSURED will relieve the INSURED of their full responsibility to provide the insurance required by this AGREEMENT.

14) If the INSURED fails to provide or maintain the insurance coverages required in this AGREEMENT, THEA may terminate or suspend this AGREEMENT, or, at the THEA'S sole discretion, may obtain such coverages and invoice the INSURED and include a 15% administrative cost. If not paid within 45 days, the amount will be deducted from INSURED'S invoice. The decision of THEA to purchase such insurance coverages shall in no way be construed as a waiver of its rights under this AGREEMENT.

15) INSURED shall fully comply with the insurance requirements of this AGREEMENT unless excused in writing by THEA. Any deductible applicable to any claim shall be the responsibility of the INSURED.

16) Any liability insurance aggregate limits are to be confirmed in writing by the respective insurance company that to their knowledge, as of the date of the AGREEMENT, there are no pending claims or legal actions against the INSURED, which if resolved in favor of the claimant would impair the insurance company's ability to cover the minimum insurance limits stated herein.

17) Current Insurance Service Office (ISO) policies, forms, and endorsements or broader shall be used where applicable. Notwithstanding the foregoing, the wording of all policies, forms, and endorsements must be acceptable to THEA without restrictive endorsement.

18) The INSURED will not commence work, use or occupy THEA premises in connection with the AGREEMENT until the required insurance is in force, preliminary evidence of insurance acceptable to THEA has been provided to THEA and THEA has granted permission to the INSURED to commence work or use or occupy the premises in connection with the AGREEMENT.

19) Upon request, the INSURED shall promptly make available a certified, true and exact copy of the insurance policy and endorsements issued to the policy and any renewal thereof for THEA'S review and inspection. In the event of cancellation or non-renewal of this insurance, the INSURED agrees to purchase the maximum "extended claims reporting period" permitted under the policy within the time allowed, unless replacement coverage is obtained with retroactive coverage applicable as of the date the INSURED services started under this AGREEMENT.

20) All insurance minimum coverage limits extend to any subcontractor and the Prime INSURED is responsible for all subcontractors.

B. INSURANCE COVERAGES and LIMITS:

For the term of this AGREEMENT the INSURED shall procure and maintain insurances of the types and limits specified herein.

1) **Workers' Compensation and Employers' Liability Insurance** - The minimum limits of Worker's Compensation/Employer's Liability Insurance (inclusive of any amount provided by an umbrella or excess policy) are:

Workers' Compensation	Florida Statutory Requirements
Employers' Liability	
Each Accident	$500,000
Disease – Policy Limit	$500,000
Disease - Each Employee	$500,000

2) **Commercial General Liability Insurance -** The minimum limits of Commercial General Liability Insurance (inclusive of any amount provided by an umbrella or excess policy) are:

General Aggregate	$1,000,000
Per Person	$1,000,000
Each Occurrence	$2,000,000
Personal Injury	$1,000,000
Property Damage	$1,000,000
Products & Completed Operations	$1,000,000

The General Aggregate Limit must be specifically applicable to the AGREEMENT between THEA and the INSURED.

The Certificate must reflect whether the policy is "claims made" or "occurrence".

Products & Completed Operations coverage to be maintained for three (3) years after final completion of the work under this AGREEMENT.

3) **Business Automobile Liability Insurance -** The minimum limits of Business Automobile Liability Insurance (inclusive of any amount provided by an umbrella or excess policy) covering ownership, maintenance, use, loading and unloading of all its owned, non-owned, leased or hired vehicles are:

Bodily Injury	
Each Person	$1,000,000
Each Accident	$1,000,000
Property Damage	$1,000,000
Bodily Injury & Property Damage Combined	$1,000,000

4) **Umbrella Liability Insurance or Excess Liability Insurance –** Umbrella Liability Insurance or Excess Liability Insurance must provide the same coverages as required for the underlying Commercial General, Business Automobile and Employers' Liability Coverages with no gaps in continuity of coverages or limits.

Bodily Injury & Property Damage Combined	
Each Occurrence	$2,000,000
Aggregate (specific to this AGREEMENT)	$2,000,000
Aggregate (not specific to this AGREEMENT)	$1,000,000

5) **Professional Liability Insurance, also known as "Errors and Omissions".** The minimum limits of Professional Liability Insurance covering all work of the INSURED without any exclusions unless approved in writing by THEA are:

Professional Liability	
Each Claim	$1,000,000
Aggregate	$1,000,000

Any deductible applicable to any claim shall be the responsibility of the INSURED and shall not be greater than $100,000 unless approved by THEA in writing. This coverage shall be maintained by the INSURED for a period of not less than three (3) years from the date the INSURED has completed and THEA has accepted the services under this AGREEMENT.

6) **Environmental Impairment (Pollution) Liability, (if required)** – Environmental Impairment (Pollution) Liability insurance is required **only** if specifically stated in the Instructions and Submittal Documents package.

If required, the minimum limits of Environmental Impairment (Pollution) Liability insurance coverage (inclusive of any amount provided by an umbrella or excess policy) for liability resulting from pollution or other environmental impairment in connection with operations performed by or on behalf of INSURED under this AGREEMENT or the use or occupancy of THEA premises by or on behalf of the INSURED are:

Each Occurrence	$1,000,000
Annual Aggregate	$1,000,000

[END OF INSURANCE REQUIREMENTS, COVERAGES AND LIMITS]

EXPERIENCE AND REFERENCES				
	Experience	Total Dollar Vaue	Number of Contracts	Number of Government Contracts
1	State the total work volume and value that your organization has been responsible for in the past five (5) years in:			
2	List the dollar volume and number of government projects you have completed in the past five (5) years:			
3	Provide the following information on at least three (3) projects that Bidder has performed within the past five (5) years that were similar to this project. List chronologically, starting with the last project. Complete a new questionnaire for each representative project.			

EXPERIENCE AND REFERENCES

3.1 Project Title:

a.	Date Project Completed:	
b.	Project Name:	
c.	Total Project Cost:	
d.	Owner Address:	
e.	Owner Telephone:	
f.	Name of Reference for this Project:	
g.	Relationship of Reference to Owner:	
h.	Title and Position Reference held for this Project:	
i.	Firm name where Reference was employed for this Project:	
j.	Reference's Email:	
k.	Reference's Telephone:	
l.	List any other special criteria i.e specialized repair or equipment, etc. worked:	
m.	Describe your specific scope of work:	
n.	Specific scope of work cost:	
o.	Your Participation was: circle one	Prime / Sub
p.	Penalties imposed? (Yes or No; if Yes, explain):	
q.	Any liens, claims, or lawsuits? (Yes or No; if Yes, explain):	
r.	Any other pertinent information?	

EXPERIENCE AND REFERENCES		
	3.2 Project Title:	
a.	Date Project Completed:	
b.	Project Name:	
c.	Total Project Cost:	
d.	Owner Address:	
e.	Owner Telephone:	
f.	Name of Reference for this Project:	
g.	Relationship of Reference to Owner:	
h.	Title and Position Reference held for this Project:	
i.	Firm name where Reference was employed for this Project:	
j.	Reference's Email:	
k.	Reference's Telephone:	
l.	List any other special criteria i.e specialized repair or equipment, etc. worked:	
m.	Describe your specific scope of work:	
n.	Specific scope of work cost:	
o.	Your Participation was: circle one	Prime / Sub
p.	Penalties imposed? (Yes or No; if Yes, explain):	
q.	Any liens, claims, or lawsuits? (Yes or No; if Yes, explain):	
r.	Any other pertinent information?	

EXPERIENCE AND REFERENCES

3.3 Project Title:

a.	Date Project Completed:	
b.	Project Name:	
c.	Total Project Cost:	
d.	Owner Address:	
e.	Owner Telephone:	
f.	Name of Reference for this Project:	
g.	Relationship of Reference to Owner:	
h.	Title and Position Reference held for this Project:	
i.	Firm name where Reference was employed for this Project:	
j.	Reference's Email:	
k.	Reference's Telephone:	
l.	List any other special criteria i.e specialized repair or equipment, etc. worked:	
m.	Describe your specific scope of work:	
n.	Specific scope of work cost:	
o.	Your Participation was: circle one	Prime / Sub
p.	Penalties imposed? (Yes or No; if Yes, explain):	
q.	Any liens, claims, or lawsuits? (Yes or No; if Yes, explain):	
r.	Any other pertinent information?	

CONFLICT OF INTEREST STATEMENT

Check one of the boxes below:

☐ To the best of our knowledge, the undersigned bidder has no potential conflict of interest due to any other clients, contracts, or property interest for this solicitation and project.

OR

☐ The undersigned bidder, by attachment to this form, submits information which **may** be a potential conflict of interest due to other clients, contracts or property interest for this solicitation and project.

BIDDER:

By: _____
Authorized Signature

_____
Printed Name of Signer

_____
Title of Signer

_____
Date Signed