

City of San Diego

CONTRACTOR'S NAME: _____
ADDRESS: _____
TELEPHONE NO.: _____ FAX NO.: _____
CITY CONTACT: **SIYAVASH HAGHKHAH, 600 B Street Suite 800, MS 908A, San Diego, CA 92101**
Email: shaghkhah@sandiego.gov, Phone: 619-533-5186, Fax: (619) 533-5176
CA/AR/egz

CONTRACT DOCUMENTS FOR



VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

VOLUME 1 OF 2

BID NO.: _____ **K-12-5264-DBB-3**
SAP NO.: _____ **B-00933**
CLIENT DEPARTMENT: _____ **1714**
COUNCIL DISTRICT: _____ **8**
PROJECT TYPE: _____ **GA**

THIS CONTRACT IS SUBJECT TO THE FOLLOWING:

- THE CITY'S SUBCONTRACTING PARTICIPATION REQUIREMENTS FOR SLBE PROGRAM.

The engineering Specifications and Special Provisions contained herein have been prepared by or under the direction of the following Professional Engineer or Licensed Architect:



Professional Engineer or Licensed Architect

Seal:



((((((((((((((((((((**ATTENTION**))))))))))))))))))

The 2010 edition of the City of San Diego Standard Specifications for Public Works Construction (“The WHITEBOOK”) now contains the following distinct Contract Documents:

- 1) ***Equal Opportunity Contracting Program Requirements*** - This Contract Document sets forth the standard requirements for the City’s equal opportunity contracting program. When additional requirements by the funding source e.g., federal or state agencies are physically included in the contract documents or by reference and there is a discrepancy, the funding source requirements shall govern unless specified otherwise in the Special Provisions.

- 2) ***City Supplement*** – The City Supplement shall be used in conjunction with the Standard Specifications for Public Works Construction (“The GREENBOOK”), 2009 Edition. The specifications contained in City Supplement take precedence over the specifications contained in The GREENBOOK, 2009 Edition.

Certain parts of the City Supplement have been highlighted in yellow for the convenience of the users only and shall not affect the interpretation of the Contract.

To obtain The GREENBOOK contact the publisher at: <http://www.bnibooks.com>

The WHITEBOOK is available only in electronic format under Engineering Documents and References at: <http://www.sandiego.gov/engineering-cip/>

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REQUIRED DOCUMENTS SCHEDULE

This table is intended to serve as a convenient tool for listing forms and documents required at different times. It is neither exhaustive nor must be considered a Contract Document by itself. Therefore, the users must review the entire Contract Documents and become familiar with the required documentation and the submittal schedule associated with each document.

Bidder's attention is directed to the City's Municipal Code §22.0807(e),(3)-(5) for important information regarding required documentation.

The specified EOC forms are all available for download from the EOC Program's web site at:

<http://www.sandiego.gov/eoc/forms/index.shtml>

ITEM	WHEN	BY	WHAT
1.	BID DUE DATE/TIME	ALL BIDDERS	Proposal (Bid)
2.	BID DUE DATE/TIME	ALL BIDDERS	Bid Bond
3.	BID DUE DATE/TIME	ALL BIDDERS	Non-collusion Affidavit to be Executed By Bidder and Submitted with Bid under 23 USC 112 and PCC 7106
4.	BID DUE DATE/TIME	ALL BIDDERS	Contractors Certification of Pending Actions
5.	BID DUE DATE/TIME	ALL BIDDERS	Equal Benefits Ordinance Certification of Compliance
6.	BID DUE DATE/TIME	ALL BIDDERS	Form AA35 - List of Subcontractors
7.	BID DUE DATE/TIME	ALL BIDDERS	Form AA40 - Named Equipment/Material Supplier List
8.	WITHING 3 WORKING DAYS OF BID OPENING	ALL BIDDERS	Form AA60 – List of Work Made Available
9.	WITHIN 3 WORKING DAYS OF BID OPENING	ALL BIDDERS	Proof of Valid DBE-MBE-WBE-DVBE Certification Status e.g., Certs.

REQUIRED DOCUMENTS SCHEDULE

ITEM	WHEN	BY	WHAT
10.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Names of the principle individual owners of the Apparent Low Bidder - In the event the firm is employee owned or publicly held, then the fact should be stated and the names of the firm's principals and officers shall be provided.
11.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	If the Contractor is a Joint Venture, the following information must be submitted: <ul style="list-style-type: none"> o Joint Venture Agreement o Joint Venture License
12.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Form BB05 - Work Force Report
13.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Contract Forms - Agreement
14.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Contract Forms - Payment and Performance Bond
15.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Certificates of Insurance and Endorsements
16.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Contractor Certification - Drug-Free Workplace
17.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Contractor Certification - American with Disabilities Act
18.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Contractors Standards - Pledge of Compliance

REQUIRED DOCUMENTS SCHEDULE

ITEM	WHEN	BY	WHAT
19.	BY 5th OF EACH MONTH	CONTRACTOR	Form CC20 - Monthly Employment Report
20.	BY 5th OF EACH MONTH	CONTRACTOR	Form CC25 - Monthly Invoicing Report
21.	PRIOR TO ACCEPTANCE	CONTRACTOR	Form CC10 - Contract Change Order (CCO)
22.	PRIOR TO ACCEPTANCE	CONTRACTOR	Form CC15 - Final Summary Report
23.	PRIOR TO ACCEPTANCE	CONTRACTOR	Affidavit of Disposal

SPECIAL NOTICE
SMALL LOCAL BUSINESS ENTERPRISES (SLBE)
AND
EMERGING LOCAL BUSINESS ENTERPRISES (ELBE)
PROGRAM

1. **INTRODUCTION.** This contract is subject to the requirements of the SLBE Program as specified in the SLBE-ELBE section of the City’s EOCP Requirements included in The WHITEBOOK.

1.1. The Bidders are required to review The WHITEBOOK and become familiar with the detailed specifications including the required documentation and the submittal schedule as related to SLBE-ELBE program.

2. **AMENDMENTS TO THE CITY’S GENERAL EOCP REQUIREMENTS.**

III. Equal Employment Opportunity Outreach Program (A). **DELETE** in its entirety and **SUBSTITUTE** with the following:

A. Competitive Bids. If a contract is competitively solicited, the Apparent Low Bidder shall submit a *Work Force Report (Form BB05)* or an Equal Employment Opportunity (EEO) Plan, within 10 Working Days after receipt by the Bidder of Contract forms to the City for approval as specified in the Notice of Intent to Award letter from the City.

3. **AMENDMENTS TO THE CITY’S EOCP SLBE-ELBE REQUIREMENTS.**

VIII. Subcontracting Efforts Review and Evaluation (2b). **DELETE** in its entirety and **SUBSTITUTE** with the following:

b) “Make information of forthcoming opportunities available to SLBE-ELBE firms and arrange time for contracts and establish delivery schedules, where requirements permit, in a way that encourages and facilitates participation by SLBE-ELBE firms in the competitive process. This includes posting solicitations for bids or proposals for a minimum of 10 Working Days before the Bid or Proposal due date.”

VIII. Subcontracting Efforts Review and Evaluation (3) and (4). **DELETE** in its entirety and **SUBSTITUTE** with the following:

3. Good Faith Effort Documentation Requirements

If the stated SLBE-ELBE subcontractor participation percentages are not met, the Bidder shall submit, within 3 Working Days of the Bid opening, information necessary to establish adequate good faith efforts were taken to meet the contract subcontractor participation percentages. The required documentation includes the following:

A. **ADVERTISEMENT REQUIREMENTS**

Advertisements for subcontract work must comply with the following requirements:

24. Advertisements must be published at least 10 Working Days prior to bid opening. Provide the names and dates of each publication of where the advertisement was published.

Note: The advertisement is not required to be published everyday for the 10 Working Days prior to bid opening.

25. There must be at least 2 advertisements published, 1 advertisement in a trade publication and 1 in a focus group publication. Additional advertising for SLBE-ELBE participation may be placed in newspapers, trade papers and on the Internet. For a listing of publications accepting advertisements, please visit the City's EOC home page at <http://www.sandiego.gov/eoc/>

- 2.1 Newspaper advertisements must be in the Bids Wanted, Legal Notices section of the Classified Ads, Subcontracting Opportunities or Business Opportunities **NOT** the Employment Opportunities Section.

26. Advertisements must state which items or portions of work the Bidder is requesting subcontractor pricing.

- 3.1 It is the Bidder's responsibility to demonstrate that enough work sufficient to meet the SLBE-ELBE subcontractor participation percentage was made available to SLBE-ELBE firms. The Bidder shall make as many items of Work available as possible to meet specified subcontracting participation percentage and at a minimum an amount of work equal to the specified subcontracting participation amount. If necessary to reach the specified subcontracting participation percentage, the Work shall include those items normally performed by the Bidder with its own forces or supplies and even items with a dollar value below 1/2 of 1% of the total Bid. Bidders shall utilize Form AA60 to demonstrate compliance with this requirement and submit the completed form with Good Faith Effort documentation.

27. Advertisements must state that Plans and Specifications are available at no cost to interested SLBE-ELBE firms and how to obtain them.

28. Advertisements must state that assistance is available from the Bidder for SLBE-ELBE Subcontractors in obtaining necessary equipment, supplies, or materials.

29. Advertisements must state that assistance is available from the Bidder for SLBE-ELBE firms in obtaining bonding, lines of credit, or insurance.

30. Bidders MUST provide proof of publication of each advertisement by providing the publication affidavit which must include a legible copy of the entire advertisement and the original ENTIRE page of the publication in which the advertisement appears.

B. SLBE-ELBE WRITTEN SOLICITATION REQUIREMENTS

Bidders must directly solicit SLBE-ELBE firms on the City's approved SLBE-ELBE list. Solicitations for Subcontractor or Supplier work must comply with the following requirements:

1. The solicitation must be dated and list the name of the SLBE-ELBE firm. Solicitations must be made to the SLBE-ELBE firms at least 10 Working Days prior to bid opening.
2. Solicitation must state which items or portions of work the Bidder is requesting subcontractor pricing.
 - 2.1 It is the Bidder's responsibility to demonstrate that enough work sufficient to meet the SLBE-ELBE subcontractor participation percentage was made available to SLBE-ELBE firms. The Bidder shall make as many items of Work available as possible to meet the specified subcontractor participation percentage and at a minimum an amount of work equal to the subcontractor participation amount. If necessary to reach the specified subcontracting participation percentage, the Work shall include those items normally performed by the Bidder with its own forces, supplies and even items with a dollar value below 1/2 of 1% of the total Bid. Bidders shall utilize Form AA60 to demonstrate compliance with this requirement and submit the completed form with Good Faith Effort documentation.
3. Solicitation must state that Plans and Specifications are available at no cost to interested SLBE-ELBE firms and how to obtain them.
4. Solicitations must state that assistance is available from the Bidder for SLBE-ELBE subcontractors in obtaining necessary equipment, supplies, or materials.
5. Solicitations must state that assistance is available from the Bidder for SLBE-ELBE firms in obtaining bonding, lines of credit, or insurance.
6. Bidder must solicit **ALL** SLBE-ELBE firms on the City's approved list, who have the NAICS code for the subcontract work sought by the Contractor.

7. Bidders must provide copies of **ALL** solicitations with one of the following forms of verification that the solicitations were sent:
 - a) If mailed: provide copies of the metered envelopes or certified mail receipts.
 - b) If faxed: provide copies of the fax transmittal confirmation sheet(s).
 - c) If emailed: provide copies of the email delivery confirmation sheet(s).

No credit shall be given for error messages, busy, cancelled, undeliverable, etc.

C. **SLBE-ELBE WRITTEN SOLICITATION FOLLOW-UP REQUIREMENTS**

Bidders must follow-up with all SLBE – ELBE firms that were notified of the subcontracting opportunities to determine their level of interest and commitment to bid the Project. When following up with the SLBE – ELBE firms, the Bidder must do the following:

1. Follow up communications must start no less than 5 Working Days prior to bid opening.
2. Bidders must follow up with all SLBE-ELBE firms in writing. Bidders must provide copies of **ALL** written follow up notices with one of the following forms of verification that the follow up notices were sent:
 - a) If mailed: provide copies of the metered envelopes or certified mail receipts.
 - b) If faxed: provide copies of the fax transmittal confirmation sheet(s).
 - c) If emailed: provide copies of the email delivery confirmation sheet(s).

No credit shall be given for error messages, busy, cancelled, undeliverable, etc.

3. Bidders must make at least 3 follow-up telephone calls to each SLBE – ELBE firm at least 5 days prior to bid opening date. Bidders must submit a telephone log as identified below.
 - 3.1. Submit a telephone log, as proof of telephone call, with the following requirements: project name, name of person making the phone call, name of firm contacted, contact person's name, date of call, time

of call, and details of conversation.

D. SUBCONTRACT AWARD SUMMARY

Bidders must act in good faith with interested SLBE-ELBE firms and may only reject bids for legitimate business reasons. The Bidder must submit the following documentation:

1. A **DETAILED** summary sheet which includes Bid item number, scope of work, Subcontractor or Supplier name, bid amount, certification type, Subcontractor or Supplier selection and reason for selection or non-selection of all the Subcontractor or Supplier that responded.
2. Copies of all Subcontractor or Suppliers bids received including bids for areas of work that were not included in the outreach and quotes from both certified and non-certified Subcontractors or Suppliers. Subcontractor bid amounts **MUST** match the bid-listed dollar amounts on form AA35 and AA40 submitted with Bidders sealed bid and the summary sheet dollar amounts **MUST** also match these amounts. If the Bidder decides to self-perform a scope of work, the Bidder **MUST** submit a detailed quote to show that the Bidder's price is competitive to the price of the subcontractors that responded to outreach efforts. All dollar amounts and scopes of work on the Subcontractor or Supplier bid must not be altered by the prime Bidder. If a revision is necessary, a revised quote must be obtained and provided. All verbal quotes **MUST** be substantiated by corresponding written quote from the Subcontractor or Supplier.

E. OUTREACH ASSISTANCE REQUIREMENTS

Written notice of subcontractor opportunities must be forwarded to local organizations or groups to assist with outreach efforts. When contacting local organizations or groups, the Bidder **must do** the following:

1. Contact a minimum of 5 local organizations or groups to provide assistance in contacting, recruiting and using SLBE-ELBE firms by written notice. For a listing of organizations or groups offering assistance, please visit the City's EOC home page at <http://www.sandiego.gov/eoc/>
2. Written notice must indicate the date of the notice and name of the local organization or group. Written notices must be forwarded to the organizations or groups at least 10 Workings Days prior to bid opening.
3. Written notice must state which items or portions of work the Bidder is requesting subcontractor pricing.

3.1 It is the Bidder's responsibility to demonstrate that enough work sufficient to meet the SLBE-ELBE subcontractor participation percentage was made available to SLBE-ELBE firms. The Bidder shall make as many items of Work available as possible to meet the subcontractor participation percentage, and at a minimum an amount of work equal to the subcontracting participation amount. If necessary to reach the subcontractor participation percentage, the work should include those items normally performed by the Bidder with its own forces, supplies and even items with a dollar value below 1/2 of 1% of the total bid. Bidders shall utilize Form AA60 to demonstrate compliance with this requirement and submit the completed form with Good Faith Effort documentation.

4. Written notice must state that Plans and Specifications are available at no cost to interested SLBE-ELBE firms and how to obtain them.
5. Written notice must state that assistance is available from the Bidder for SLBE-ELBE Subcontractors in obtaining necessary equipment, supplies, or materials.
6. Written notice must state that assistance is available from the Bidder for SLBE-ELBE firms in obtaining bonding, lines of credit, or insurance.
7. Bidders must provide copies of **ALL** notices with one of the following forms of verification that the notices were sent:
 - a) If mailed: provide copies of the metered envelopes or certified mail receipts.
 - b) If faxed: provide copies of the fax transmittal confirmation sheet(s).
 - c) If emailed: provide copies of the email delivery confirmation sheet(s).

No credit shall be given for error messages, busy, cancelled, undeliverable, etc.

4. SUBCONTRACTING PARTICIPATION PERCENTAGES. The Bidders are encouraged to take positive steps to diversify and expand their subcontractor solicitation base and to offer contracting opportunities to all certified Subcontractors including SLBEs, ELBEs, DBEs, MBEs, WBEs, DVBEs and OBEs.

4.1. The City has incorporated **mandatory** SLBE-ELBE subcontractor participation percentages to enhance competition and maximize subcontracting opportunities. For the purpose of achieving the mandatory subcontractor participation percentages, a recommended breakdown of the SLBE and ELBE subcontractor participation

percentages based upon certified SLBE and ELBE firms has also been provided to achieve the mandatory subcontractor participation percentages:

- | | |
|----------------------------------|-------------|
| 1. SLBE participation | 2.6% |
| 2. ELBE participation | 4.8% |
| 3. Total mandatory participation | 7.4% |

- 4.2.** For the purpose of achieving the subcontractor participation level (percentage), Additive, Deductive, and Allowance Bid Items will not be included in the calculation.
- 5. PRE-BID CONFERENCE.** A Pre-Bid Conference is scheduled for this contract as specified in the Invitation to Bids. The purpose of this meeting is to inform Bidders of the submittal requirements and provisions relative to the SLBE Program. Bidders are strongly encouraged to attend the Pre-Bid Conference to better understand the Good Faith Effort requirements of this contract.
- 6. MANDATORY CONDITIONS.** Bid will be declared **non-responsive** if the Bidder fails the following mandatory conditions.
- 6.1.** Bidder's inclusion of SLBE-ELBE certified subcontractors at the overall mandatory participation percentage identified in this document; **OR**
- 6.2.** Bidder's submission of Good Faith Effort documentation demonstrating the Bidder made a good faith effort to outreach to and include SLBE-ELBE Subcontractors required in this document within 3 Working Day of the Bid opening if the overall mandatory participation percentage is not met.
- 7. BID DISCOUNT.** This contract is subject to the Bid Discount program as described in The WHITEBOOK, SLBE-ELBE Program Requirements, Section IV(2).
- 8. RESOURCES.** The current list of certified SLBE-ELBE firms can be found on the EOC Department website at <http://www.sandiego.gov/eoc/>

CITY OF SAN DIEGO, CALIFORNIA

INVITATION TO BIDS

1. **RECEIPT AND OPENING OF BIDS:** Bid(s) will be received at the Public Works Contracting Group (PWCG) at **1200 THIRD AVENUE, SUITE 200, SAN DIEGO, CA 92101 UNTIL 2:00 PM ON JUNE 27, 2012** for performing work on the following project (Project):

VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

2. **DESCRIPTION OF WORK:** The Work involves furnishing all labor, materials, equipment, services, and other incidental works and appurtenances for the construction of the Project as described below:

Upgrade existing building to current ADA and Title 24 requirements.

The Work shall be performed in accordance with:

- Bid No. **K-12-5264-DBB-3** and Plans numbered **35609-1-D through 35609-44-D**, inclusive.
 - All references to alternates shown on the plans shall be disregarded and included with the base bid.
3. **ENGINEER'S ESTIMATE:** The Engineer's estimate of the most probable price for this contract is **\$572,000**.
 4. **LOCATION OF WORK:** The location of Work is as follows:

301 Athey Avenue, San Ysidro, CA 92173

5. **CONTRACT TIME:** The Contract Time for completion of the Work shall be **100 Working Days**.
6. **CONTRACTOR'S LICENSE CLASSIFICATION:** In accordance with the provisions of California Law, the Contractor shall possess valid appropriate license(s) at the time that the Bid is submitted. Failure to possess the specified license(s) shall render the Bid as non-responsive and shall act as a bar to award of the Contract to any Bidder not possessing required license(s) at the time of Bid.

The City has determined the following licensing classification(s) for this contract:

- CLASS B

7. **PRE-BID CONFERENCE:** There will be a Pre-Bid Conference to discuss the scope of the project, bidding requirements, and Equal Opportunity Contracting Program requirements and reporting procedures in the Public Works Contracting Group Conference Room at 1200 Third Avenue, Suite 200, San Diego, CA 92101 **at 10:00 AM, on JUNE 8, 2012**.

All Bidders are encouraged to attend the Pre-Bid Conference.

To request a copy of the agenda on an alternative format, or to request a sign language or oral interpreter for this meeting, call the Public Works Contracting Group at (619) 236-6000 at least 5 Working Days prior to the Pre-Bid Conference to ensure availability.

8. **CITY PROJECT MANAGER CONTACT INFORMATION:** See the cover of the Contract Documents.

- 9. REFERENCE STANDARDS:** Except as otherwise noted or specified, the Work shall be completed in accordance with the following standards:

1. STANDARD SPECIFICATIONS

Document No.	Filed	Description
PITS0504091	05-04-09	Standard Specifications for Public Works Construction (The GREENBOOK), 2009 Edition
PITS090110-1	09-01-10	City of San Diego Standard Specifications for Public Works Construction (The WHITEBOOK), 2010 Update *
AEC1231064	12-31-06	California Department of Transportation, Manual of Uniform Traffic Control Devices (MUTCD 2006)
769023	09-11-84	Standard Federal Equal Employment Opportunity Construction Contract Specifications and the Equal Opportunity Clause

NOTE: The City of San Diego Supplement, 2010 Update now consolidates various City Public Works Construction Standard Specifications which in the past were included in the Supplementary Special Provisions. The Bidders' attention is directed to this edition of the City Supplement for a close review to ensure no important information is missed for the preparation of the Bids.

2. STANDARD DRAWINGS

Document No.	Filed	Description
AEC1230163	12-31-06	City of San Diego Standard Drawings*
N/A	Varies	City Standard Drawings - Updates Approved For Use (when specified)*
AEC0925061	09-25-06	Caltrans 2006 U.S. Customary Unit Standard Plans

NOTE: *Available online under Engineering Documents and References at: <http://www.sandiego.gov/engineering-cip>.

- 10. WAGE RATES:** Prevailing wages are not applicable to this project unless specified otherwise on the cover page of these specifications and when included in these specifications. See Funding Agency Provisions that follow this Invitation to Bid for more information.

11. PRE-BID SITE VISIT: The prospective Bidders are encouraged to visit the Work Site with the Engineer. The purpose of the Site visit is to acquaint Bidders with the Site conditions. To request a sign language or oral interpreter for this visit, call the Public Works Contracting Group at (619) 236-6000 at least 5 Working Days prior to the meeting to ensure availability. A Pre-Bid Site Visit is offered when the details are provided as follows:

Time: 2:00 PM
Date: JUNE 8, 2012
Location: 301 Athey Avenue, San Diego CA 92173

12. INSURANCE REQUIREMENTS: Upon receipt of the City’s Notice of Intent to Award letter, the Contractor will be asked to submit all certificates of insurance and endorsements to the City.

Refer to sections 7-3, “LIABILITY INSURANCE”, and 7-4, “WORKERS’ COMPENSATION INSURANCE” of the Supplementary Special Provisions (SSP) for the insurance requirements which must be met.

You must ensure all required insurance certificates and endorsements are submitted accurately and on time. Failure to provide the requisite insurance documents by the date stated in the City’s Notice of Intent to Award will result in delay of contract award and may result in annulment of the contract award or other more severe sanctions as provided in the City’s Municipal Code §22.0807(e),(3)-(5).

Tony Heinrichs, Director
Public Works Department

INSTRUCTIONS TO BIDDERS

- 1. PREQUALIFICATION OF CONTRACTORS:** The contractor(s) who intend to submit Bid or Proposal in response to this invitation to bid, or RFP's for GRC or As-Needed Design-Build Task Orders valued over \$50,000, must be pre-qualified for total amount proposed, inclusive of all alternate bid items or the specified Task Order limits prior to the date of Bid submittal.

Bids from contractors who have not been pre-qualified as applicable, and Bids that exceed the maximum dollar amount at which contractors are pre-qualified, will be deemed **non-responsive** and ineligible for award or a Task Order authorization. Complete information and prequalification questionnaires are available at:

<http://www.sandiego.gov/engineering-cip/services/consultcontract/prequal.shtml>

The completed questionnaire, financial statement, and bond letter or a copy of the contractor's SLBE-ELBE certification and bond letter, must be submitted no later than 2 weeks prior to the bid opening to the Public Works Department – Engineering and Capital Projects Prequalification Program, 1010 Second Avenue, Suite 1200, San Diego, CA 92101. For additional information or the answer to questions about the prequalification program, please contact David Stucky at 619-533-3474 or dstucky@sandiego.gov.

- 2. CONTRACTOR REGISTRATION:** Prospective bidder(s) as well as existing contractors and suppliers are required to register with the City's EOCP. Refer to 2-17, "CONTRACTOR REGISTRATION" for details.
- 3. CITY'S RESPONSES AND ADDENDA:** The City at its option, may respond to any or all questions submitted in writing, via letter, or FAX in the form of an addendum. No oral comment shall be of any force or effect with respect to this solicitation. The changes to the Contract Documents through addendum are made effective as though originally issued with the Bid. The Bidders shall acknowledge the receipt of Addenda on the form provided for this purpose in the Bid.
- 4. CITY'S RIGHTS RESERVED:** The City reserves the right to cancel the Invitation to Bids at any time, and further reserves the right to reject submitted Bids, without giving any reason for such action, at its sole discretion and without liability. Costs incurred by the Bidder(s) as a result of preparing Bids under the Invitation to Bid shall be the sole responsibility of each bidder. The Invitation to Bid creates or imposes no obligation upon the City to enter a contract.
- 5. CONTRACT PRICING FORMAT:** This solicitation is for a Lump Sum contract with Unit Price provisions as set forth in the Bid Proposal Form(s), Volume 2 unless specified otherwise such as as-needed contracts e.g., GRC in the Contract Documents.
- 6. SUBMITTAL OF "OR EQUAL" ITEMS:** See 4-1.6, "Trade Names or Equals."
- 7. AWARD PROCESS:** The Award of this contract is contingent upon the Contractor's compliance with all conditions precedent to Award, including the submittal of acceptable insurance and surety bonds pursuant to San Diego Municipal Code § 22.3007. If the responsible Bid does not exceed the City's engineering estimate, the City will, in most cases, prepare contract documents for execution within 3 weeks of the date of the Bid opening and award the Contract within 5 Working Days of receipt of properly executed Contract, bond, and insurance documents.

This contract is deemed to be awarded, and effective, only upon the signing of the Contract by the Mayor or designee of the City.

- 8. SUBCONTRACT LIMITATIONS:** The Bidder's attention is directed to Standard Specifications for Public Works Construction, Section 2-3, "SUBCONTRACTS" which requires the Contractor to perform not less than the amount therein stipulated with its own forces. Failure to comply with these requirements may render the Bid **non-responsive** and ineligible for award.
- 9. AVAILABILITY OF PLANS AND SPECIFICATIONS:** Contract Documents may be obtained by visiting the City's website: <http://www.sandiego.gov/engineering-cip/services/consultcontract/advertising.shtml>. Plans and Specifications for this contract are also available for review in the office of the City Clerk or Public Works Contracting Group.
- 10. QUESTIONS:** Questions about the meaning or intent of the Contract Documents as related to the scope of Work and of technical nature shall be directed to the Project Manager prior to Bid opening. Interpretations or clarifications considered necessary by the Project Manager in response to such questions will be issued by Addenda, which will be uploaded to eBidboard (or mailed or delivered to all parties recorded by the City as having received the Contract Documents for Minor Construction contracts).

The Director (or designee), Public Works Department is the officer responsible for opening, examining, and declaring of competitive Bids submitted to the City for the acquisition, construction and completion of any public improvement except when otherwise set forth in these documents. Questions in these areas of responsibility (e.g., i.e. Pre-qualification, SCOPE information, bidding activities, bonds and insurance, etc. as related to this contract shall be addressed to the Contract Administration, Public Works Contracting Group, 1200 Third Avenue, Suite 200, San Diego, California, 92101, Telephone No. (619) 236-6000.

Questions received less than 14 days prior to the date for opening of Bids may not be answered. Only questions answered by formal written addenda will be binding. Oral and other interpretations or clarifications will be without legal effect. It is the Bidder's responsibility to become informed of any addenda that have been issued and to include all such information in its Bid.

- 11. ELIGIBLE BIDDERS:** No person, firm, or corporation shall be allowed to make, file, or be interested in more than 1 Bid for the same work unless alternate Bids are called for. A person, firm or corporation who has submitted a sub-proposal to a Bidder, or who has quoted prices on materials to a Bidder, is not hereby disqualified from submitting a sub-proposal or quoting prices to other Bidders or from submitting a Bid in its own behalf.
- 12. SAN DIEGO BUSINESS TAX CERTIFICATE:** All Contractors, including Subcontractors, not already having a City of San Diego Business Tax Certificate for the work contemplated shall secure the appropriate certificate from the City Treasurer, Civic Center Plaza, first floor, before the Contract can be executed.
- 13. PROPOSAL FORMS:** Bid shall be made only upon the Bidding Documents i.e., Proposal form attached to and forming a part of the specifications. The signature of each person signing shall be in longhand.

The entire specifications for the bid package do not need to be submitted with the bid. Bidder shall complete and submit, only, all pages in the "Bidding Document" Section (see Volume 2) as their Bid per the schedule given under "Required Documents Schedule," (see Volume 1). Bidder is requested to retain for their reference other portions of the Contract Documents that are not required to be submitted with the Bid.

The City may require any Bidder to furnish a statement of experience, financial responsibility, technical ability, equipment, and references.

Bids and certain other specified forms and documents shall be enclosed in a sealed envelope and shall bear the title of the work and name of the Bidder and the appropriate State Contractors License designation which the Bidder holds.

Bids may be withdrawn by the Bidder prior to, but not after, the time fixed for opening of Bids.

- 14. BIDDERS' GUARANTEE OF GOOD FAITH (BID SECURITY):** With the exception of the contracts valued \$5,000 or less, GRC and Design-Build contracts, and contracts subject to the Small and Local Business Program of \$250,000 or less e.g., ELBE contracts, each Bidder shall accompany its Bid with either a cashier's check upon some responsible bank, or a check upon such bank properly certified or an approved corporate surety bond payable to the City of San Diego, for an amount of not less than 10% of the aggregate sum of the Bid, which check or bond, and the monies represented thereby shall be held by the City as a guarantee that the Bidder, if awarded the contract, will in good faith enter into such contract and furnish the required final bonds.

The Bidder agrees that in case of Bidder's refusal or failure to execute this contract and give required final bonds, the money represented by a cashier's or certified check shall remain the property of the City, and if the Bidder shall fail to execute this contract, the Surety agrees that it will pay to the City damages which the City may suffer by reason of such failure, not exceeding the sum of 10% of the amount of the Bid.

A Bid received without the specified bid security will be rejected as being **non-responsive**.

- 15. AWARD OF CONTRACT OR REJECTION OF BIDS:** This contract may be awarded to the lowest responsible and reliable Bidder (for Design-Build contracts refer to the RFP for the selection and award information). Bidders shall complete the entire Bid schedule (e.g., schedule of prices). Incomplete price schedules will be rejected as being **non-responsive**.

The City reserves the right to reject any or all Bids, and to waive any informality or technicality in Bids received and any requirements of these specifications as to bidding procedure.

Bidders will not be released on account of their errors of judgment. Bidders may be released only upon receipt by the City from the Bidder within 3 Working Days, excluding Saturdays, Sundays, and state holidays, after the opening of Bids, of written notice which includes proof of honest, credible, clerical error of material nature, free from fraud or fraudulent intent, and of evidence that reasonable care was observed in the preparation of the Bid.

A non-selected Bidder may protest award of the Contract to the selected Bidder by submitting a written "Notice of Intent to Protest" including supporting documentation which shall be received by Public Works Contracting Group no later than 10 days after the City's announcement of the selected Bidder or no later than 10 days from the date that the City issues notice of designation of a Bidder as non-responsive in accordance with San Diego Municipal Code Chapter 2, § 22.3029, "Protests of Contract Award."

The City of San Diego will not discriminate with regard to race, religious creed, color, national origin, ancestry, physical handicap, marital status, sex or age, in the award of contracts.

Each Bid package properly executed as required by these specifications shall constitute a firm offer, which may be accepted by the City within the time specified in the Invitation to Bids.

The City reserves the right to evaluate all Bids and determine the lowest Bidder (or winner for Design-Build contracts) on the basis of any proposed alternates, additive items or options, at its discretion.

- 16. BID RESULTS:** The Bid opening by the City shall constitute the public announcement of the Apparent Low Bidder (or Apparent Winner in case of Design-Build contracts). In the event that the Apparent Low Bidder (or Apparent Winner in case of Design-Build contracts) is subsequently deemed non-responsive or non-responsible, a public announcement will be posted in the City's web page, with the name of the newly designated Apparent Low Bidder (or Apparent Winner in case of Design-Build contracts).

To obtain Bid results, either attend Bid opening, review the results on the City's web site, or provide a self-addressed, stamped envelope, referencing Bid number, and Bid tabulation will be mailed to you upon verification of extensions. Due to time constraints, Bid results cannot be given out over the telephone.

- 17. THE CONTRACT:** The Bidder to whom award is made shall execute a written contract with the City of San Diego and furnish good and approved bonds and insurance certificates specified by the City within 10 Working Days after receipt by Bidder of a form of contract for execution unless an extension of time is granted to the Bidder in writing.

If the Bidder takes longer than 10 Working Days to fulfill these requirements, then the additional time taken shall be added to the Bid guarantee. The Contract shall be made in the form adopted by the City, which includes the provision that no claim or suit whatsoever shall be made or brought by Contractor against any officer, agent, or employee of the City for or on account of anything done or omitted to be done in connection with this contract, nor shall any such officer, agent, or employee be liable hereunder.

If the Bidder to whom the award is made fails to enter into the contract as herein provided, the award may be annulled and the Bidder's Guarantee of Good Faith will be subject to forfeiture. An award may be made to the next lowest responsible and reliable Bidder who shall fulfill every stipulation embraced herein as if it were the party to whom the first award was made.

For contracts that are not Design-Build, pursuant to the San Diego City Charter section 94, the City may only award a public works contract to the lowest responsible and reliable Bidder. The City will require the Apparent Low Bidder to (i) submit information to determine the Bidder's responsibility and reliability, (ii) execute the Contract in form provided by the City, and (iii) furnish good and approved bonds and insurance certificates specified by the City within 10 Working Days, unless otherwise approved by the City, in writing after the Bidder receives notification from the City, designating the Bidder as the Apparent Low Bidder and formally requesting the above mentioned items.

The award of the Contract is contingent upon the satisfactory completion of the above mentioned items and becomes effective upon the signing of the Contract by the Mayor or designee. If the Apparent Low Bidder does not execute the Contract or submit required documents and information, the City may award the Contract to the next lowest responsible and reliable Bidder who shall fulfill every condition precedent to award. A corporation designated as the Apparent Low Bidder shall furnish evidence of its corporate existence and evidence that the officer signing the Contract and bond for the corporation is duly authorized to do so.

18. EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE OF WORK: The Bidder shall examine carefully the Project Site, the Plans and Specifications, the GRC Unit Price Books if applicable, other materials as described in the Special Provisions, Section 2-7, and the proposal forms (e.g., Bidding Documents) therefore. The submission of a Bid or GRC Task Order Proposal shall be conclusive evidence that the Bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and scope of Work, the quantities of materials to be furnished, and as to the requirements of the Bidding Documents Proposal, Plans, and Specifications.

19. DRUG-FREE WORKPLACE:

a) General:

City projects are subject to City of San Diego Resolution No. R-277952 adopted on May 20, 1991. Bidders shall become aware of the provisions of Council Policy 100-17 which was established by Resolution No. R-277952. The policy applies equally to the Contractor and Subcontractors. The elements of the policy are outlined below.

b) Definitions:

"Drug-free workplace" means a site for the performance of work done in connection with a contract let by City of San Diego for the construction, maintenance, or repair of any facility or public work by an entity at which employees of the entity are prohibited from engaging in the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance in accordance with the requirements of this section.

"Employee" means the employee of a contractor directly engaged in the performance of work pursuant to a contract as described in Section 3, "City Contractor Requirements."

"Controlled substance" means a controlled substance in schedules I through V of Section 202 of the Controlled Substances Act (21 U.S.C. Sec. 812).

"Contractor" means the department, division, or other unit of a person or organization responsible to the contractor for the performance of a portion of the work under the contract.

c) City Contractor Requirements:

Every person or organization awarded a contract or grant by the City of San Diego for the provision of services shall certify to the City that it will provide a drug-free workplace by doing all following:

- a. Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited in the person's organization's workplace and specifying the actions that will be taken against employees for violations of the prohibition.

- b. Establishing a drug-free awareness program to inform employees about all of the following:
 - i. The dangers of drug abuse in the workplace.
 - ii. The person's or organization's policy of maintaining a drug-free workplace.
 - iii. Any available drug counseling, rehabilitation, and employee assistance programs.
 - iv. The penalties that may be imposed upon employees for drug abuse violations.
- c. Posting the statement required by subdivision (1) in a prominent place at contractor's main office. For projects large enough to necessitate a construction trailer at the job site, the required signage would also be posted at the Site.

The Contractor shall include in each subcontract agreement language which indicates the Subcontractor's agreement to abide by the provisions of subdivisions a) through c) above. The Contractors and Subcontractors shall be individually responsible for their own drug-free workplace programs.

Note: The requirements of a drug-free awareness program can be satisfied by periodic tailgate sessions covering the various aspects of drug-abuse education. Although an in-house employee assistance program is not required, contractors should be able to provide a listing of drug rehabilitation and counseling programs available in the community at large.

Questions about the City's Drug-free Workplace Policy shall be referred to the Contract Specialist, Public Works Contracting Group.

20. AMERICANS WITH DISABILITIES ACT:

- a) General: City projects are subject to City of San Diego Resolution No. R-282153 adopted on June 14, 1993. The Bidders shall become aware of the provisions of Council Policy 100-04 which was established by Resolution No. R-282153. The policy applies equally to the Contractor and all Subcontractors. The elements of the policy are outlined below.
- b) Definitions:
 - "Qualified individual with a disability" means an individual with a disability who satisfies the requisite skill, experience, education and other job-related requirements of the employment position such individual holds or desires, and who, with or without reasonable accommodation, can perform the essential functions of such position.
 - "Employee" means the employee of the Contractor directly engaged in the performance of Work.
- c) The City Requirements: Every person or organization entering into a contractual agreement with or receiving a grant from the City of San Diego shall certify to the City of San Diego that it will comply with the ADA by adhering to all of the provisions of the ADA listed below.

- i. The Contractor shall not discriminate against qualified persons with disabilities in any aspects of employment, including recruitment, hiring, promotions, conditions and privileges of employment, training, compensation, benefits, discipline, layoffs, and termination of employment.
- ii. No qualified individual with a disability may be excluded on the basis of disability, from participation in, or be denied the benefits of services, programs, or activities by the Contractor or Subcontractors providing services for the City.
- iii. The Contractor shall post a statement addressing the requirements of the ADA in a prominent place at the worksite. The Contractor shall include in each subcontract agreement, language which indicates the Subcontractor's agreement to abide by the provisions of subdivisions (a) through (c) inclusive of Section 3. The Contractor and Subcontractors shall be individually responsible for their own ADA employment programs. Questions about the City's ADA Policy should be referred to the Contract Administrator.

21. CONTRACTOR STANDARDS – PLEDGE OF COMPLIANCE: This contract is subject to City of San Diego Municipal Code §22.3224 as amended 11/24/08 by ordinance O-19808. Bidders shall become aware that the requirements apply to Contractors and Subcontractors for contracts greater than \$50,000 in value.

Upon award, amendment, renewal, or extension of this contract, the Contractors shall complete a Pledge of Compliance attesting under penalty of perjury that they complied with the requirements of this section.

The Contractors shall ensure that their Subcontractors whose subcontracts are greater than \$50,000 in value complete a Pledge of Compliance attesting under penalty of perjury that they complied with the requirements of this section. Subcontractors may access the Pledge of Compliance at:

http://www.sandiego.gov/purchasing/pdf/contractor_standards_questionnaire.pdf.

The Contractors shall include in each subcontract agreement, language which requires Subcontractors to abide by the provisions of City of San Diego Municipal Code §22.3224. A sample provision is as follows:

“**Compliance with San Diego Municipal Code §22.3224:** Subcontractor acknowledges that it is familiar with the requirements of San Diego Municipal Code §22.3224 (“Contractor Standards”), and agrees to comply with requirements of that section. The Subcontractor further agrees to complete the Pledge of Compliance, incorporated herein by reference.”

22. NOTICE OF LABOR COMPLIANCE PROGRAM APPROVAL: The City of San Diego received initial approval as a Labor Compliance Program on August 11, 2003. The Labor Compliance Program Manual is available at:

<http://www.sandiego.gov/eoc/laborcompliance/#manual>.

The limited exemption from prevailing wages pursuant to Labor Code §1771.5(a) does not apply to contracts under jurisdiction of the Labor Compliance Program. Inquiries, questions, or assistance about the Labor Compliance Program should be directed to: Equal Opportunity Contracting Program, 1200 Third Ave., Suite 200 MS56P, San Diego, CA 92101, Tel. 619-236-6000.

- 23. PAYROLL RECORDS:** The Contractor's attention is directed to the City of San Diego Labor Compliance Program, Section IV, pages 4-7, and the State of California Labor Code §§ 1771.5(b) and 1776 (Stats. 1978, Ch. 1249). These require, in part, that the Contractor and Subcontractors maintain and furnish to the City, at a designated time, a certified copy of each weekly payroll containing a statement of compliance signed under penalty of perjury.

The Contractor and Subcontractors shall submit weekly certified payrolls online via Prism® i.e., the City's web-based labor compliance program. Instructions on how to use the system will be provided to the Contractor after the award.

The Contractor shall be responsible for the compliance with these provisions by Subcontractors. The City shall withhold contract payments when payroll records are delinquent or inadequate, or when it is established after investigation that underpayment has occurred.

- 24. APPRENTICES ON PUBLIC WORKS:** The Contractor shall abide by the requirements of §§1777.5, 1777.6, and 1777.7 of the State of California Labor Code concerning the employment of apprentices by contractors and subcontractors performing public works contracts.

- 25. EQUAL BENEFITS:** This contract is subject to the City's Equal Benefits Ordinance (EBO), Chapter 2, Article 2, Division 43 of the San Diego Municipal Code (SDMC).

In accordance with the EBO, Bidders shall certify they will provide and maintain equal benefits as defined in SDMC §22.4302 for the duration of the Contract (SDMC §22.4304(f)). Failure to maintain equal benefits is a material breach of the Contract (SDMC §22.4304(e)). The Contractor shall notify employees of their equal benefits policy at the time of hire and during open enrollment periods and shall post a copy of the following statement in an area frequented by employees:

“During the performance of a contract with the City of San Diego, this employer will provide equal benefits to its employees with spouses and its employees with domestic partners.”

The Contractor shall give the City access to documents and records sufficient for the City to verify the contractors are providing equal benefits and otherwise complying with EBO requirements.

Full text of the EBO and the Rules Implementing the Equal Benefits Ordinance are posted on the City's website at www.sandiego.gov/purchasing/ or can be requested from the Equal Benefits Program at (619) 533-3948.

- 26. PRE-AWARD ACTIVITIES:**

Pre-award Submittals - The Apparent Low Bidder (or winner in case of Design-Build contracts) shall provide the information required within the time specified in “Required Documents,” of this bid package. Failure to provide the information within the time specified may result in the Bid being rejected as **non-responsive**.

If the Bid is rejected as non-responsive, the Apparent Low Bidder (or winner in case of Design-Build contracts) shall forfeit the Bid Security required under Invitation to Bids, of this bid package. The decision that the Apparent Low Bidder (or winner in case of Design-Build contracts) is non-responsive for failure to provide the information required within the time specified shall be at the sole discretion of the City.

CONTRACT FORMS AGREEMENT

CONSTRUCTION CONTRACT

This contract is made and entered into between THE CITY OF SAN DIEGO, a municipal corporation, herein called "City", and APR Construction, Inc., herein called "Contractor" for construction of **Vista Terrace Pool Accessibility Improvements**; Bid No. **K-12-5264-DBB-3**; in the amount of **THREE HUNDRED SIXTY SEVEN THOUSAND DOLLARS AND 00/100 (\$367,000.00)**, which is comprised of the Base Bid alone.

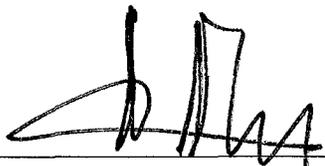
IN CONSIDERATION of the payments to be made hereunder and the mutual undertakings of the parties hereto, City and Contractor agree as follows:

1. The following are incorporated into this contract as though fully set forth herein:
 - (a) The attached Faithful Performance and Payment Bonds.
 - (b) The attached Proposal included in the Bid documents by the Contractor.
 - (c) That certain documents entitled **Vista Terrace Pool Accessibility Improvements**, on file in the Public Works Contracting Group as Document No. **B-00933**, as well as all matters referenced therein.
2. Contractor shall perform and be bound by all the terms and conditions of this contract and in strict conformity therewith shall perform and complete in a good and workmanlike manner **Vista Terrace Pool Accessibility Improvements**, Bid Number **K-12-5264-DBB-3**, San Diego, California.
3. For such performances, the City shall pay to Contractor the amounts set forth at the times and in the manner and with such additions or deductions as are provided for in this contract, and Contractor shall accept such payment in full satisfaction of all claims incident to such performances.
4. No claim or suit whatsoever shall be made or brought by Contractor against any officer, agent, or employee of the City for or on account of anything done or omitted to be done in connection with this contract, nor shall any such officer, agent, or employee be liable hereunder.
5. This contract is effective as of the date that the Mayor or designee signs the agreement.

**CONTRACT FORMS (continued)
AGREEMENT**

IN WITNESS WHEREOF, this agreement is signed by the City of San Diego, acting by and through its Mayor or designee, pursuant to Municipal Code §22.3102 authorizing such execution.

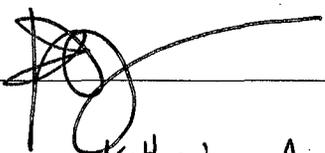
THE CITY OF SAN DIEGO

By  _____
Print Name: Albert P. Rechany
Program Manager

Date: 8/31/2012

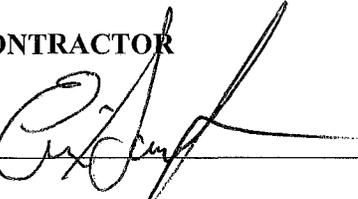
APPROVED AS TO FORM AND LEGALITY

Jan I. Goldsmith, City Attorney

By  _____
Print Name: Katherine A. Malcolm
Deputy City Attorney

Date: 9/4/12

CONTRACTOR

By  _____
Print Name: ERIC SCARBROUGH

Title: PRESIDENT

Date: 8/8/12

City of San Diego License No.: B2007003664

State Contractor's License No.: 940651

Bond No.: GSM 26324
Premium: \$6,505.00

CONTRACT FORMS (continued)
PERFORMANCE BOND AND LABOR AND MATERIALMEN'S BOND

FAITHFUL PERFORMANCE BOND AND LABOR AND MATERIALMEN'S BOND:

APR Construction, Inc., a corporation, as principal,
and The Gray Insurance Company, a corporation authorized to
do business in the State of California, as Surety, hereby obligate themselves, their successors and
assigns, jointly and severally, to The City of San Diego a municipal corporation in the sum of
THREE HUNDRED SIXTY SEVEN THOUSAND DOLLARS AND 00/100 (\$367,000.00) for the
faithful performance of the annexed contract, and in the sum of THREE HUNDRED SIXTY SEVEN
THOUSAND DOLLARS AND 00/100 (\$367,000.00) for the benefit of laborers and materialmen
designated below.

Conditions:

If the Principal shall faithfully perform the annexed contract Vista Terrace Pool
Accessibility Improvements, Bid Number K-12-5264-DBB-3, San Diego, California then the
obligation herein with respect to a faithful performance shall be void; otherwise it shall remain in full
force.

If the Principal shall promptly pay all persons, firms and corporations furnishing materials for
or performing labor in the execution of this contract, and shall pay all amounts due under the
California Unemployment Insurance Act then the obligation herein with respect to laborers and
materialmen shall be void; otherwise it shall remain in full force.

The obligation herein with respect to laborers and materialmen shall inure to the benefit of all
persons, firms and corporations entitled to file claims under the provisions of Chapter 3 of Division 5
of Title I of the Government Code of the State of California or under the provisions of Section 3082
et seq. of the Civil Code of the State of California.

Changes in the terms of the annexed contract or specifications accompanying same or
referred to therein shall not affect the Surety's obligation on this bond, and the Surety hereby waives
notice of same.

CONTRACT FORMS (continued)
PERFORMANCE BOND AND LABOR AND MATERIALMEN'S BOND

The Surety shall pay reasonable attorney's fees should suit be brought to enforce the provisions of this bond.

Dated August 21, 2012

Approved as to Form and Legality

APR Construction, Inc.

Principal

By

ERIC SCARBROUGH

Printed Name of Person Signing for Principal

Jan I. Goldsmith, City Attorney

By

9/4/12
Deputy City Attorney

The Gray Insurance Company

Surety

By

Dana Michaelis

Attorney-in-fact Dana Michaelis

Approved:

Albert P. Reckany
Program Manager

One East Camelback Road #550

Local Address of Surety

Phoenix, AZ 85016

Local Address (City, State) of Surety

602-354-3117

Local Telephone No. of Surety

Premium \$ 6,505.00

Bond No. GSM 26324

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

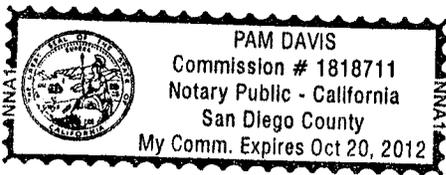
STATE OF CALIFORNIA

County of San Diego



On August 21, 2012 before me, Pam Davis, Notary Public,
Date Here Insert Name and Title of the Officer

personally appeared Dana Michaelis
Name(s) of Signer(s)



Place Notary Seal Above

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

Witness my hand and official seal.

Signature *Pam Davis*
Signature of Notary Public Pam Davis

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: _____

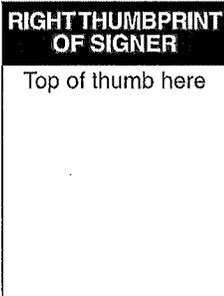
Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____

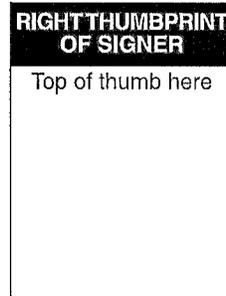
- Individual
- Corporate Officer — Title(s): _____
- Partner — Limited General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: _____



Signer Is Representing:

Signer's Name: _____

- Individual
- Corporate Officer — Title(s): _____
- Partner — Limited General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: _____



Signer Is Representing:

THE GRAY INSURANCE COMPANY
THE GRAY CASUALTY & SURETY COMPANY

167007

GENERAL POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, THAT The Gray Insurance Company and The Gray Casualty & Surety Company, corporations duly organized and existing under the laws of Louisiana, and having their principal offices in Metairie, Louisiana, do hereby make, constitute, and appoint **Anne Wright, Cyndi Beilman, and Dana Michaelis of LaMesa, California jointly or severally** on behalf of each of the Companies named above its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its deed, bonds, or other writings obligatory in the nature of a bond, as surety, contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed the amount of \$10,000,000.

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both The Gray Insurance Company and The Gray Casualty & Surety Company at meetings duly called and held on the 26th day of June, 2003.

“RESOLVED, that the President, Executive Vice President, any Vice President, or the Secretary be and each or any of them hereby is authorized to execute a power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings, and all contracts of surety, and that each or any of them is hereby authorized to attest to the execution of such Power of Attorney, and to attach the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be binding upon the Company now and in the future when so affixed with regard to any bond, undertaking or contract of surety to which it is attached.

IN WITNESS WHEREOF, The Gray Insurance Company and The Gray Casualty & Surety Company have caused their official seals to be hereinto affixed, and these presents to be signed by their authorized officers this 12th day of September, 2011.



By:

Michael T. Gray

Michael T. Gray
President, The Gray Insurance Company
and
Vice President,
The Gray Casualty & Surety Company

Attest:

Mark S. Manguno

Mark S. Manguno
Secretary,
The Gray Insurance Company,
The Gray Casualty & Surety Company



State of Louisiana

ss:

Parish of Jefferson

On this 12th day of September, 2011, before me, a Notary Public, personally appeared Michael T. Gray, President of The Gray Insurance Company and Vice President of The Gray Casualty & Surety Company, and Mark S. Manguno, Secretary of The Gray Insurance Company and The Gray Casualty & Surety Company, personally known to me, being duly sworn, acknowledged that they signed the above Power of Attorney and affixed the seals of the companies as officers of, and acknowledged said instrument to be the voluntary act and deed, of their companies.



Lisa S. Millar

Lisa S. Millar, Notary Public, Parish of Orleans
State of Louisiana
My Commission is for Life

I, Mark S. Manguno, Secretary of The Gray Insurance Company and The Gray Casualty & Surety Company, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney given by the companies, which is still in full force and effect.

IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this 21st day of August, 2012 .



Mark S. Manguno

Mark S. Manguno, Secretary
The Gray Insurance Company
The Gray Casualty & Surety Company

CONTRACTOR CERTIFICATION

DRUG-FREE WORKPLACE

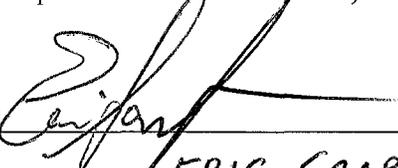
PROJECT TITLE: Vista Terrace Pool Accessibility Improvements

I hereby certify that I am familiar with the requirements of San Diego City Council Policy No. 100-17 regarding Drug-Free Workplace as outlined in INSTRUCTION TO BIDDERS, "Drug-Free Workplace", of the project specifications, and that;

APR CONSTRUCTION, INC.

(Name under which business is conducted)

has in place a drug-free workplace program that complies with said policy. I further certify that each subcontract agreement for this project contains language which indicates the subcontractor's agreement to abide by the provisions of subdivisions a) through c) of the policy as outlined.

Signed 
Printed Name ERIC SCARBROUGH
Title PRESIDENT

CONTRACTOR CERTIFICATION

AMERICAN WITH DISABILITIES ACT (ADA) COMPLIANCE CERTIFICATION

PROJECT TITLE: Vista Terrace Pool Accessibility Improvements

I hereby certify that I am familiar with the requirements of San Diego City Council Policy No. 100-4 regarding the American With Disabilities Act (ADA) outlined in the INSTRUCTION TO BIDDERS, "American With Disabilities Act", of the project specifications, and that;

APR CONSTRUCTION, INC.

(Name under which business is conducted)

has in place workplace program that complies with said policy. I further certify that each subcontract agreement for this project contains language which indicates the subcontractor's agreement to abide by the provisions of the policy as outlined.

Signed



Printed Name

ERIC SCARBROUGH

Title

PRESIDENT

CONTRACTOR CERTIFICATION

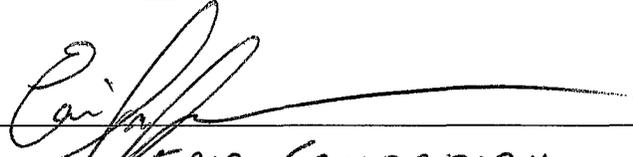
CONTRACTOR STANDARDS – PLEDGE OF COMPLIANCE

PROJECT TITLE: Vista Terrace Pool Accessibility Improvements

I declare under penalty of perjury that I am authorized to make this certification on behalf of APR CONSTRUCTION, INC, as Contractor, that I am familiar with the requirements of City of San Diego Municipal Code § 22.3224 regarding Contractor Standards as outlined in INSTRUCTION TO BIDDERS ("Contractor Standards"), of the project specifications, and that Contractor has complied with those requirements.

I further certify that each of the Contractor's subcontractors whose subcontracts are greater than \$50,000 in value has completed a Pledge of Compliance attesting under penalty of perjury of having complied with City of San Diego Municipal Code § 22.3224.

Dated this 8 Day of AUGUST, 2012.

Signed  _____

Printed Name ERIC SCARBROUGH _____

Title PRESIDENT _____

AFFIDAVIT OF DISPOSAL

WHEREAS, on the _____ DAY OF _____, 2____, the undersigned entered into and executed a contract with the City of San Diego, a municipal corporation, for:

Vista Terrace Pool Accessibility Improvements

(Project)

as particularly described in said contract and identified as Bid No. **K-12-5264-DBB-3**; Sap No. (WBS/IO/CC) **B-00933**; and **WHEREAS**, the specifications of said contract requires the Contractor to affirm that "all brush, trash, debris, and surplus materials resulting from this project have been disposed of in a legal manner"; and **WHEREAS**, said contract has been completed and all surplus materials disposed of:

NOW, THEREFORE, in consideration of the final payment by the City of San Diego to said Contractor under the terms of said contract, the undersigned Contractor, does hereby affirm that all surplus materials as described in said contract have been disposed of at the following location(s)

and that they have been disposed of according to all applicable laws and regulations.

Dated this _____ DAY OF _____, 2_____.

Contractor
by

ATTEST:

State of _____
County of _____

On this _____ DAY OF _____, 2____, before the undersigned, a Notary Public in and for said County and State, duly commissioned and sworn, personally appeared _____ known to me to be the _____ Contractor named in the foregoing Release, and whose name is subscribed thereto, and acknowledged to me that said Contractor executed the said Release.

Notary Public in and for said County and State

SUPPLEMENTARY SPECIAL PROVISIONS (SSP)

THESE SUPPLEMENTARY SPECIAL PROVISIONS CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (THE GREENBOOK) CURRENTLY ADOPTED BY THE CITY, INCLUDING ITS CURRENT SUPPLEMENT AMENDMENTS (CITY SUPPLEMENTS INCLUDED IN THE WHITEBOOK), EXCEPT FOR THE FOLLOWING:

STYLE OF SPECIFICATIONS

The City is gradually standardizing the style and language of the standard specifications for the public works construction. The new style and language follows the Federal guidelines for “Plain Language” to the extent possible.

The use of this new style does not change the meaning of a specification not yet using this style. Where used in the Contract Documents, statement or command type phrases (i.e., active voice and imperative mood) refer to and are directed at the Bidder or Contractor as applicable. The specifications are written to the Bidder before award and the Contractor after. Before award, interpret sentences written in the imperative mood as starting with "The Bidder must" and interpret "you" as "the Bidder" and "your" as "the Bidder's." After award, interpret sentences written in the imperative mood as starting with "The Contractor must" and interpret "you" as "the Contractor" and "your" as "the Contractor's." Similarly, interpret "we" and “us” as "the City" and "our" as "the City's.”

PART 1 – GENERAL PROVISIONS

SECTION 1 – TERMS, DEFINITIONS, ABBREVIATIONS, UNITS OF MEASURE, AND SYMBOLS

1-2 TERMS AND DEFINITIONS.

Agency – ADD the following:

Regulatory activities handled by the City of San Diego Developmental Services, Fire and Planning Departments, or any other City Department are not subject to the responsibilities of the City under this contract.

Contract Documents – To the City Supplement, DELETE in its entirety and SUBSTITUTE with the following:

The Agreement, Addendum, Invitation to Bids, Instructions to Bidders, special notice page, funding agency provisions, Bid and documentation accompanying the Bid and any post-bid documentation submitted prior to the Notice of Award when attached as an exhibit to the Contract, Bonds, permits from jurisdictional regulatory agencies, Supplementary Special Provisions (SSP), City’s EOCP Requirements, City Supplement, Plans, Standard Plans, Construction Documents, Reference Specifications listed in the Invitation to Bids or the RFP for Design-Build contracts, Request for Qualifications (RFQ), Statement of Qualifications (SOQ), Request for Proposals (RFP), modifications issued after the execution of the Contract e.g., Change Orders, Construction Manager At Risk’s Guaranteed Maximum Price including written qualifications, assumptions and conditions thereto and Pre-construction Services Agreement.

ADD: Limited Notice To Proceed – A written notice given from the City to the Contractor that authorizes the Contractor to start a limited amount of work that is not Construction Work, such as finalizing subcontract agreements, ordering materials, mobilization, furnishing a field office, and any other preliminary work done prior to performing Construction Work.

Notice of Completion (NOC) – ADD the following:

See California Civil Code section 3093.

Samples - Physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be evaluated.

Normal Working Hours - To the City Supplement, ADD the following:

The Normal Working Hours shall be 7:00 AM to 3:30 PM.

Certificate of Compliance – To the City Supplement, DELETE in its entirety and SUBSTITUTE with the following:

Certificate of Compliance – A written document signed and submitted by a supplier or manufacturer that certifies that the material or assembled material supplied to the Work site complies with the requirements of the Contract Documents.

SECTION 2 – SCOPE OF WORK

2-1.2.2 Joint Venture Contractors. To the City Supplement, last paragraph, DELETE in its entirety and SUBSTITUTE with the following:

The Joint Venture shall designate an on-site representative and an alternate in writing. The on-site representative and the alternate shall have the full authority to bind all Joint Venture partners.

The Joint Venture shall provide a copy of the Joint Venture agreement and the Joint Venture license to the City within 10 Working Days after receipt by the Bidder of Contract forms.

2-3.1.2 Subcontractor List. ADD the following:

For Extra Work, the Contractor shall submit Form CC10, “CONTRACT CHANGE ORDER (CCO)” with each CCO proposal. Form CC10 is available for download from the EOCP site at: <http://www.sandiego.gov/eoc/pdf/cc10.pdf>

2-3.2 Self Performance. DELETE in its entirety and SUBSTITUTE with the following:

The Contractor shall perform, with its own organization, Contract work amounting to at least **50 percent** of the base bid alone or base bid and any additive or deductive alternate(s) that together when added or deducted form the basis of determining the Apparent Low Bidder as specified. The self performance percentage requirement will be waived for contracts when a “B” License is required or allowed.

2-3.3 Status of Subcontractors. ADD the following:

With every request for payment, the Contractor shall submit to the Engineer a breakdown showing monthly and cumulative amounts of the Work performed under Change Order by the Contractor and the Subcontractors. The reporting format shall be approved by the Engineer.

2-3.4 Subcontract Requirements. To the City Supplement, ADD the following paragraph:

The Contractor shall ensure that all of its Subcontractors are licensed at the time of the execution of their subcontract agreements. In the event a Subcontractor is not properly licensed, the Contractor shall cease payment to Subcontractor for all work performed when the Subcontractor was improperly licensed. Any payment made by the Contractor to a Subcontractor for work performed when the Subcontractor was unlicensed shall be returned to the City.

Where the Contract Documents require that a particular product be installed or applied by an applicator approved by the manufacturer, it is the Contractor’s responsibility to ensure the Subcontractor or Supplier employed for such work is approved by the manufacturer.

2-5.2 Precedence of Contract Documents. To the Cit Supplement, DELETE in its entirety and SUBSTITUTE with the following:

2-5.2 Precedence of Contract Documents.. If there is a conflict between any of the Contract Documents, the document highest in the order of precedence shall control. The order of precedence, from highest to lowest, shall be as follows:

- 1) Permits (i.e., issued by jurisdictional regulatory agencies)
- 2) Change Orders and Supplemental Agreements; whichever occurs last
- 3) Contract and Agreement
- 4) Addenda
- 5) Bid (e.g., price Proposal for Design-Build contracts)
- 6) Request for Proposal (RFP)
- 7) Invitation to Bids
- 8) Instruction to Bidders
- 9) Request for Qualifications (RFQ)
- 10) Special Provisions (i.e., City's EOC Requirements, City Supplement, and Supplementary Special Provisions (SSP))
- 11) Plans
- 12) Construction Documents (for Design-Build contracts)
- 13) Standard Drawings
- 14) Reference Specifications (e.g., GREENBOOK)
- 15) Technical Proposal (for Design-Build contracts)
- 16) Statement of Qualifications (SOQ)

When additional requirements by the funding sources are physically or by reference incorporated in the Contract Documents, the funding source's requirements shall govern **unless specified otherwise**.

Figured dimensions shall take precedence over scaled dimensions. Detailed drawings shall take precedence over general drawings.

2-5.3.1 General. DELETE in its entirety and SUBSTITUTE with the following:

When required by the Contract Documents or when requested by the Engineer, the Contractor shall provide the submittals as specified in 2-5.3.2, 2-5.3.3, and 2-5.3.4 to the Engineer. Materials shall neither be furnished nor fabricated, nor shall any work for which submittals are required be performed before the required submittals have been reviewed and accepted by the Engineer. The payment for the submittals shall be included in the various Bid items. Neither review nor acceptance of submittals by the Engineer shall relieve the Contractor from responsibility for errors, omissions, or deviations from the Contract Documents, unless such deviations were specifically called to the attention of the Engineer in the letter of transmittal. The Contractor shall be responsible for the correctness of the submittals.

The Contractor shall allow a minimum of 20 working days for review of submittals unless otherwise specified in the Special Provisions. Each submittal shall be accompanied by a letter of transmittal.

2-5.4.1 General. ADD the following:

Source Identification e.g., RFI numbers and Change Order numbers as required to identify the source of the change to the Contract Documents shall be noted.

2-5.4.2 Asset Specific Red-lines. To the City Supplement, item (d). ADD the following:

- Dimensional changes to the drawings.
- Revisions to details shown on drawings.
- Depths of foundations below first floor.
- Locations and depths of underground utilities.
- Revisions to routing of piping and conduits.
- Revisions to electrical circuitry.
- Actual equipment locations.
- Duct size and routing.
- Locations of concealed internal utilities.
- Changes made by Change Order.
- Details not on original Plans.

ADD the following:

- h) Slurry Seal and Asphalt Overlay Red-Lines: The Contractor shall clearly record on the City provided forms in MS Excel format the actual dates and quantity of each Bid item applied to each street segment and comments regarding each segment. The Contractor shall record reasons if no work is performed.

2-6 WORK TO BE DONE. ADD the following:

In accordance with the provisions of California Law, the Contractor shall possess or require the Subcontractor(s) to possess valid appropriate license(s) for the Work being performed.

2-7 SUBSURFACE DATA. ADD the following:

In preparation of the Contract Documents, the designer has relied upon the following reports of explorations and tests of subsurface conditions at the Work Site:

1. Report of Geotechnical Evaluation dated May 25, 2010 by Ninyo & Moore and Associates

The report(s) listed above is(are) available for review by contacting the City Project Manager.

2-9.2 Survey Services. DELETE in its entirety and SUBSTITUTE with the following:

The Contractor shall be responsible for all surveying services or as may be specified in these special provisions.

The payment for survey services shall be included in the various Bid items unless a Bid item for Survey Service has been provided.

2-10 AUTHORITY OF BOARD AND ENGINEER. ADD the following:

Regulating agencies of the City, such as Developmental Services, Fire and Planning Departments, enforce Legal Requirements and standards. These enforcement activities are not subject to the responsibilities of the Engineer under this Agreement.

2-11 INSPECTION. ADD the following:

The City may utilize field inspectors to assist the Engineer during construction in observing performance of the Contractor. The inspector is for the purpose of assisting the Engineer and shall not be confused with an inspector with a City regulatory agency or with a Special Inspector.

Code compliance testing (including all Geotechnical requirements) and inspections required by codes or ordinances, or by a plan approval authority, shall be the responsibility of and shall be paid by the Contractor, unless otherwise provided in the Contract Documents.

The Contractor's quality control testing and inspections shall be the sole responsibility of the Contractor and paid by the Contractor included in the Bid price.

ADD: 2-17 CONTRACTOR REGISTRATION. The Contractor, Subcontractors, and Suppliers shall register with the City's EOCP via Prism® i.e., the City's web-based contract compliance portal at: <https://pro.prismcompliance.com/contractor/plugins/pages/contractormenu.aspx>.

The Contractor shall ensure that proposed Subcontractors and Suppliers have completed the registration prior to Notice of Intent to Award. If the Contractor fails to have its Subcontractors and Suppliers registered after the NTP has been issued, the City will withhold a minimum of 10% in addition to the Retention from all invoices submitted until the Contractor and all listed Subcontractors and Suppliers are properly registered in PRISM.

SECTION 3 – CHANGES IN WORK

3-3.2.2 Basis for Establishing Costs. To the City Supplement, item (a) Labor, 1st and 2nd paragraphs, DELETE in their entirety and SUBSTITUTE with the following:

The City reserves the right to request financial records of salaries for an employee, wages, bonuses and deductions to substantiate the actual cost of labor certified by a California licensed Certified Public Accountant. The Contractor shall use the City provided form i.e., "PUBLIC WORKS PAYROLL REPORTING FORM" which is available at <http://www.sandiego.gov/eoc/pdf/payrollreport.pdf> to list the labor rates of its personnel and Subcontractors who work on this Project. An initial submittal shall be made prior to NTP.

The payment for payroll records shall be included in the various Bid item unless a separate Bid item has been provided.

SECTION 4 - CONTROL OF MATERIALS

4-1.3.1 General. First paragraph, ADD the following:

Other standard items or materials typically accepted by Certificate of Compliance shall not require inspection at the source unless specified in the Special Provisions. For a list of these items or materials, the Contractor may refer to the Contract Documents.

4-1.3.4 Inspection Paid For By the Contractor. To the City Supplement, ADD the following:

The Contractor shall employ and pay for the services of qualified inspection entity to perform specialty inspection services as specified here:

- Reinforced Concrete and Masonry.

4-1.3.5 Special Inspections. To the City Supplement, ADD the following:

Special Inspection and testing by the Special Inspectors shall meet the minimum requirements of the prevailing Codes and by the City's Development Services Department (DSD) and reference in <http://www.sandiego.gov/development-services/industry/special.shtml>

4-1.5 Certificates of Compliance. To the City Supplement, DELETE in its entirety and SUBSTITUTE with the following:

4-1.5 Certificates of Compliance. DELETE in its entirety and SUBSTITUTE with the following:

Certificates of Compliance shall be furnished to the Engineer prior to the use of any material or assembled material for which these Specifications so require or if so required by the Engineer.

The Engineer may waive the materials testing requirements of the Specifications and accept a Certificate of Compliance. Manufacturing test data may be required by the Engineer to be included with the submittal.

Materials used on the basis of a Certificate of Compliance may be sampled and tested at any time. The submission of a Certificate of Compliance shall not relieve the Contractor of responsibility for incorporating material in the Work which conforms to the requirements of the Contract Documents, and any material not conforming to the requirements will be subject to rejection whether in place or not.

When professional certification of performance criteria of materials, systems or equipment is required by the Contract Documents, the City shall be entitled to rely upon the accuracy and completeness of such calculations and certifications.

4-1.6 Trade Names or Equals. To the City Supplement, DELETE in its entirety and SUBSTITUTE with the following:

Whenever materials or equipment are indicated in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the naming of the item is intended to establish the type, function, and quality required. Unless stated otherwise, materials or equipment of other Suppliers may be accepted if sufficient information is submitted to the Engineer for review to determine whether the material or equipment proposed is equivalent or equal to that named.

- a) The Contractor shall submit its list of proposed substitutions for "an equal" ("or equal") item(s) **no later than 35 Working Days after the determination of the Apparent Low Bidder** and on a City form when provided by the City.
- b) The request for substitution shall include the following information:
 - i. Whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents to adopt the design to the proposed substitute.
 - ii. Whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty.

- iii. All variations of the proposed substitute from the items originally specified will be identified.
 - iv. Available maintenance, repair, and replacement service requirements. The manufacturer shall have a local service agency within 50 miles of the site which maintains properly trained personnel and adequate spare parts and is able to respond and complete repairs within 24 hours.
 - v. Certification that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, and be similar and of equal substance to that indicated, and be suited to the same use as that specified.
- c) There is no guaranteed time frame for the City's review of the substitution requests.
 - d) The burden of proof as to the type, function, and quality of any such substitute product, material or equipment shall be upon the Contractor. The Engineer may require at the Contractor's expense additional data about the proposed substitute.
 - e) If the Engineer takes no exceptions to the proposed substitution, it shall not relieve the Contractor from responsibility for the efficiency, sufficiency, quality, and performance of the substitute material or equipment, in the same manner and degree as the material and equipment specified by name.
 - f) The lack of action(s) on the Engineer's side within the Contractor's requested time shall not constitute acceptance of the substitution.
 - g) Acceptance by the Engineer of a substitute item shall not relieve the Contractor of the responsibility for full compliance with the Contract Documents.
 - h) For the substitution review process or to have materials listed on the AML, refer to the AML standard review process.
 - i) The Bid submittal shall be based on the material and equipment specified by name in the Contract. If the proposal is rejected by the Engineer, the Contractor shall not be entitled to either an extension in Contract Time, increase in the Contract Price, or both.
 - j) As applicable, no Shop Drawing or Working Drawing submittals shall be made for a substitute item nor shall any substitute item be ordered, installed, or utilized without the Engineer's prior written.
 - k) The Contractor shall reimburse the City for the charges of the Engineer for evaluating each proposed substitute.
 - l) For Design-Build contracts, one copy of all designer reviewed submittals shall be provided to the Engineer.

SECTION 6 - PROSECUTION, PROGRESS AND ACCEPTANCE OF WORK

6-1.2 Commencement of Work. To the City Supplement, DELETE the following:

1st sentence of the 2nd paragraph and the 5th paragraph in its entirety.

6-8.3 Warranty. ADD the following:

Nothing in this warranty is intended to limit any manufacturer's warranty which provides the City with greater warranty rights than set forth in this section or the Contract Documents. The Contractor shall provide the Engineer with all manufacturers' warranties upon Substantial Completion.

These specifications are not intended to constitute a period of limitations or waiver of any other rights or remedies City may have regarding the Contractor's other obligations under the Contract Documents or federal or state law.

The Contractor shall respond and initiate corrective action within 24 hours of notice of nonconforming Work that poses an imminent threat to person or property.

6-9 LIQUIDATED DAMAGES. To the City Supplement, DELETE in its entirety and SUBSTITUTE with the following:

MODIFY to increase the daily value from \$250 to \$1,000 for contracts with a value of over \$100,000.

SECTION 7 - RESPONSIBILITIES OF THE CONTRACTOR

7-3 LIABILITY INSURANCE. DELETE in its entirety and SUBSTITUTE with the following:

The insurance provisions herein must not be construed to limit your indemnity obligations contained in this contract.

ADD: 7-3.1 Policies and Procedures.

- a) You must procure the insurance described below, at your sole cost and expense, to provide coverage against claims for loss including injuries to persons or damage to property, which may arise out of or in connection with the performance of the Work by you, your agents, representatives, officers, employees or subcontractors.
- b) Insurance coverage for property damage resulting from your operations is on a replacement cost valuation. The market value will not be accepted.
- c) You must maintain this insurance for the duration of this contract and at all times thereafter when you are correcting, removing, or replacing Work in accordance with this contract. Your liabilities under this contract, e.g., your indemnity obligations, will is not deemed limited to the insurance coverage required by this contract.
- d) Payment for insurance is included in the various items of Work as bid by you, and except as specifically agreed to by the City in writing, you are not entitled to any additional payment. Do not begin any work under this contract until you have provided and the City has approved all required insurance.
- e) Policies of insurance must provide that the City is entitled to 30 days (10 days for cancellation due to non-payment of premium) prior written notice of cancellation or non-renewal of the policy. Maintenance of specified insurance coverage is a material element of this contract. Your failure to maintain or renew coverage or to provide evidence of renewal during the term of this contract may be treated by the City as a material breach of contract.

ADD: 7-3.2 Types of Insurance.

7-3.2.1 Commercial General Liability Insurance.

- a) Commercial General Liability Insurance must be written on the current version of the ISO Occurrence form CG 00 01 07 98 or an equivalent form providing coverage at least as broad.
- b) The policy must cover liability arising from premises and operations, XCU (explosions, underground, and collapse), independent contractors, products/completed operations, personal injury and advertising injury, bodily injury, property damage, and liability assumed under an insured's contract (including the tort liability of another assumed in a business contract).
- c) There must be no endorsement or modification limiting the scope of coverage for either "insured vs. insured" claims or contractual liability. You must maintain the same or equivalent insurance for at least 10 years following completion of the Work.
- d) All costs of defense must be outside the policy limits. Policy coverage must be in liability limits of not less than the following:

<u>General Annual Aggregate Limit</u>	<u>Limits of Liability</u>
Other than Products/Completed Operations	\$2,000,000
Products/Completed Operations Aggregate Limit	\$2,000,000
Personal Injury Limit	\$1,000,000
Each Occurrence	\$1,000,000

7-3.2.2 Commercial Automobile Liability Insurance.

- a) You must provide a policy or policies of Commercial Automobile Liability Insurance written on the current version of the ISO form CA 00 01 12 90 or later version or equivalent form providing coverage at least as broad in the amount of \$1,000,000 combined single limit per accident, covering bodily injury and property damage for owned, non-owned, and hired automobiles ("Any Auto").
- b) All costs of defense must be outside the limits of the policy.

7-3.2.3 Commercial Pollution Liability Insurance.

- a) You must procure and maintain at your expense or require Subcontractor, as described below to procure and maintain, the Contractors Pollution Liability Insurance including contractual liability coverage to cover liability arising out of cleanup, removal, storage, or handling of hazardous or toxic chemicals, materials, substances, or any other pollutants by you or any Subcontractor in an amount not less than \$2,000,000 limit for bodily injury and property damage.
- b) All costs of defense must be outside the limits of the policy. Any such insurance provided by Subcontractor instead of you must be approved separately in writing by the City.
- c) For approval of a substitution of Subcontractor's insurance, you must certify that all activities for which the Contractors Pollution Liability Insurance will provide coverage will be performed exclusively by the Subcontractor providing the insurance. The deductible must not exceed \$25,000 per claim.
- d) Contractual liability must include coverage of tort liability of another party to pay for bodily injury or property damage to a third person or organization. There must be no endorsement or modification of the coverage limiting the scope of coverage for either "insured vs. insured" claims or contractual liability.

- e) Occurrence based policies must be procured before the Work commences and must be maintained for the Contract Time. Claims Made policies must be procured before the Work commences, must be maintained for the Contract Time, and must include a 12 month extended Claims Discovery Period applicable to this contract or the existing policy or policies must continue to be maintained for 12 months after the completion of the Work without advancing the retroactive date.
- f) Except as provided for under California law, the policy or policies must provide that the City is entitled to 30 days prior written notice (10 days for cancellation due to non-payment of premium) of cancellation or non-renewal of the policy or policies.

7-3.2.4 Contractors Hazardous Transporters Pollution Liability Insurance.

- a) You must provide at your expense or require Subcontractor to provide, as described below Contractors Hazardous Transporters Pollution Liability Insurance including contractual liability coverage to cover liability arising out of transportation of hazardous or toxic, materials, substances, or any other pollutants by you or any subcontractor in an amount not less than \$2,000,000 limit per occurrence/aggregate for bodily injury and property damage.
- b) All costs of defense must be outside the limits of the policy. The deductible must not exceed \$25,000 per claim. Any such insurance provided by a subcontractor instead of you must be approved separately in writing by the City.
- c) For approval of the substitution of Subcontractor’s insurance you must certify that all activities for which Contractors Hazardous Transporters Pollution Liability Insurance will provide coverage will be performed exclusively by the Subcontractor providing the insurance.
- d) Contractual liability must include coverage of tort liability of another party to pay for bodily injury or property damage to a third person or organization. There must be no endorsement or modification of the coverage limiting the scope of coverage for either “insured vs. insured” claims or contractual liability. Occurrence based policies must be procured before the Work commences and must be maintained for the duration of this contract. Claims Made policies must be procured before the Work commences, must be maintained for the duration of this contract, and must include a 12 month extended Claims Discovery Period applicable to this contract or the existing policy or policies must continue to be maintained for 12 months after the completion of the Work under this contract without advancing the retroactive date.
- e) Except as provided for under California law, the policy or policies must provide that the City is entitled to 30 days prior written notice (10 days for cancellation due to non-payment of premium) of cancellation or non-renewal of the policy or policies.

7-3.2.5 Contractors Builders Risk Property Insurance..

- a) You must provide at your expense, and maintain until Final Acceptance of the Work, a Special Form Builders Risk Policy or Policies. This insurance must be in an amount equal to the replacement cost of the completed Work (without deduction for depreciation) including the cost of excavations, grading, and filling. The policy or policies limits must be 100% of this contract value of the Work plus 15% to cover administrative costs, design costs, and the costs of inspections and construction management.

- b) Insured property must include material or portions of the Work located away from the Site but intended for use at the Site, and must cover material or portions of the Work in transit. The policy or policies must include as insured property scaffolding, falsework, and temporary buildings located at the Site. The policy or policies must cover the cost of removing debris, including demolition.
- c) The policy or policies must provide that all proceeds thereunder must be payable to the City as Trustee for the insured, and must name the City, you, Subcontractors, and Suppliers of all tiers as named insured. We as Trustee will collect, adjust, and receive all monies which may become due and payable under the policy or policies, may compromise any and all claims thereunder, and will apply the proceeds of such insurance to the repair, reconstruction, or replacement of the Work.
- d) Any deductible applicable to the insurance must be identified in the policy or policies documents and responsibility for paying the part of any loss not covered because of the application of such deductibles must be apportioned among the parties except for the City as follows: if there is more than one claimant for a single occurrence, then each claimant must pay a pro-rata share of the per occurrence deductible based upon the percentage of their paid claim to the total paid for insured. The City must be entitled to 100% of its loss. You must pay the City any portion of that loss not covered because of a deductible, at the same time the proceeds of the insurance are paid to the City as trustee.
- e) Any insured, other than the City, making claim to which a deductible applies must be responsible for 100% of the loss not insured because of the deductible. Except as provided for under California law, the policy or policies must provide that the City is entitled to 30 days prior written notice (10 days for cancellation due to non-payment of premium) of cancellation or non-renewal of the policy or policies.

ADD: 7-3.3 Rating Requirements. Except for the State Compensation Insurance Fund, all insurance required by this contract as described herein must be carried only by responsible insurance companies with a rating of, or equivalent to, at least “A-, VI” by A.M. Best Company, that are authorized by the California Insurance Commissioner to do business in the State, and that have been approved by the City.

7-3.3.1 Non-Admitted Carriers. The City will accept insurance provided by non-admitted, “surplus lines” carriers only if the carrier is authorized to do business in the State and is included on the List of Eligible Surplus Lines Insurers (LESLI list).

All policies of insurance carried by non-admitted carriers must be subject to all of the requirements for policies of insurance provided by admitted carriers described herein.

ADD: 7-3.4 Evidence of Insurance. Furnish to the City documents e.g., certificates of insurance and endorsements evidencing the insurance required herein, and furnish renewal documentation prior to expiration of this insurance. Each required document must be signed by the insurer or a person authorized by the insurer to bind coverage on its behalf. We reserve the right to require complete, certified copies of all insurance policies required herein.

ADD: 7-3.5 Policy Endorsements.

7-3.5.1 Commercial General Liability Insurance

7-3.5.1.1 Additional Insured.

- a) You must provide at your expense policy endorsement written on the current version of the ISO Occurrence form CG 20 10 11 85 or an equivalent form providing coverage at least as broad.

- b) To the fullest extent allowed by law e.g., California Insurance Code §11580.04, the policy must be endorsed to include the City and its respective elected officials, officers, employees, agents, and representatives as additional insured.
 - 1. The additional insured coverage for projects for which the Engineer's Estimate is \$1,000,000 or more must include liability arising out of: (a) Ongoing operations performed by you or on your behalf, (b) Your products, (c) Your work, e.g., your completed operations performed by you or on your behalf, or (d) premises owned, leased, controlled, or used by you.
 - 2. The additional insured coverage for projects for which the Engineer's Estimate is less than \$1,000,000 must include liability arising out of: (a) Ongoing operations performed by you or on your behalf, (b) Your products, or (c) premises owned, leased, controlled, or used by you.

7-3.5.1.2 Primary and Non-Contributory Coverage. The policy must be endorsed to provide that the coverage with respect to operations, including the completed operations, if appropriate, of the Named Insured is primary to any insurance or self-insurance of the City and its elected officials, officers, employees, agents and representatives. Further, it must provide that any insurance maintained by the City and its elected officials, officers, employees, agents and representatives must be in excess of the Contractor's insurance and must not contribute to it.

7-3.5.1.3 Project General Aggregate Limit. The policy or policies must be endorsed to provide a Designated Construction Project General Aggregate Limit that will apply only to the Work. Only claims payments which arise from the Work must reduce the Designated Construction Project General Aggregate Limit. The Designated Construction Project General Aggregate Limit must be in addition to the aggregate limit provided for the products-completed operations hazard.

7-3.5.2 Commercial Automobile Liability Insurance.

7-3.5.2.1 Additional Insured. Unless the policy or policies of Commercial Auto Liability Insurance are written on an ISO form CA 00 01 12 90 or a later version of this form or equivalent form providing coverage at least as broad, the policy must be endorsed to include the City and its respective elected officials, officers, employees, agents, and representatives as additional insured, with respect to liability arising out of automobiles owned, leased, hired or borrowed by you or on your behalf. This endorsement is limited to the obligations permitted by California Insurance Code §11580.04.

7-3.5.3 Contractors Pollution Liability Insurance Endorsements.

7-3.5.3.1 Additional Insured.

- a) The policy or policies must be endorsed to include as an Insured the City and its respective elected officials, officers, employees, agents, and representatives, with respect to liability arising out of: (a) Ongoing operations performed by you or on your behalf, (b) your products, (c) your work, e.g., your completed operations performed by you or on your behalf, or (d) premises owned, leased, controlled, or used by you; except that in connection with, collateral to, or affecting any construction contract to which the provisions of subdivision (b) of § 2782 of the California Civil Code apply, this endorsement must not provide any duty of indemnity coverage for the active negligence of the City and its respective elected officials, officers, employees, agents, and representatives in any case where an agreement to indemnify the City and its respective elected officials, officers, employees, agents, and representatives would be invalid under subdivision (b) of §2782 of the California Civil Code.

- b) In any case where a claim or loss encompasses the negligence of the Insured and the active negligence of the City and its respective elected officials, officers, employees, agents, and representatives that is not covered because of California Insurance Code §11580.04, the insurer's obligation to the City and its respective elected officials, officers, employees, agents, and representatives must be limited to obligations permitted by California Insurance Code §11580.04.

7-3.5.3.2 Primary and Non-Contributory Coverage. The policy or policies must be endorsed to provide that the insurance afforded by the Contractors Pollution Liability Insurance policy or policies is primary to any insurance or self-insurance of the City and its elected officials, officers, employees, agents and representatives with respect to operations including the completed operations of the Named Insured. Any insurance maintained by the City and its elected officials, officers, employees, agents and representatives must be in excess of your insurance and must not contribute to it.

7-3.5.3.3 Severability of Interest. For Contractors Pollution Liability Insurance, the policy or policies must provide that your insurance must apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability and must provide cross-liability coverage.

7-3.5.4 Contractors Hazardous Transporters Pollution Liability Insurance Endorsements.

7-3.5.4.1 Additional Insured.

- a) The policy or policies must be endorsed to include as an Insured the City and its respective elected officials, officers, employees, agents, and representatives, with respect to liability arising out of: (a) Ongoing operations performed by you or on your behalf, (b) your products, (c) your work, e.g., your completed operations performed by you or on your behalf, or (d) premises owned, leased, controlled, or used by you; except that in connection with, collateral to, or affecting any construction contract to which the provisions of subdivision (b) of §2782 of the California Civil Code apply, this endorsement must not provide any duty of indemnity coverage for the active negligence of the City and its respective elected officials, officers, employees, agents, and representatives in any case where an agreement to indemnify the City and its respective elected officials, officers, employees, agents, and representatives would be invalid under subdivision (b) of §2782 of the California Civil Code.
- b) In any case where a claim or loss encompasses the negligence of the Insured and the active negligence of the City and its respective elected officials, officers, employees, agents, and representatives that is not covered because of California Insurance Code §11580.04, the insurer's obligation to the City and its respective elected officials, officers, employees, agents, and representatives must be limited to obligations permitted by California Insurance Code §11580.04.

7-3.5.4.2 Primary and Non-Contributory Coverage. The policy or policies must be endorsed to provide that the insurance afforded by the Contractors Pollution Liability Insurance policy or policies is primary to any insurance or self-insurance of the City and its elected officials, officers, employees, agents and representatives with respect to operations including the completed operations of the Named Insured. Any insurance maintained by the City and its elected officials, officers, employees, agents and representatives must be in excess of your insurance and must not contribute to it.

7-3.5.4.3 Severability of Interest. For Contractors Hazardous Transporters Pollution Liability Insurance, the policy or policies must provide that your insurance must apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability and must provide cross-liability coverage.

7-3.5.5 Builders Risk Endorsements.

7-3.5.5.1 Waiver of Subrogation. The policy or policies must be endorsed to provide that the insurer will waive all rights of subrogation against the City, and its respective elected officials, officers, employees, agents, and representatives for losses paid under the terms of the policy or policies and which arise from work performed by the Named Insured for the City.

7-3.5.5.2 Builders Risk – Partial Utilization. If we desire to occupy or use a portion or portions of the Work prior to Acceptance in accordance with this contract, we will notify you and you must immediately notify your Builder's Risk insurer and obtain an endorsement that the policy or policies must not be cancelled or lapse on account of any such partial use or occupancy. You must obtain the endorsement prior to our occupation and use.

ADD: 7-3.6 Deductibles and Self-Insured Retentions. You are responsible for the payment of all deductibles and self-insured retentions. Disclose deductibles and self-insured retentions to the City at the time the evidence of insurance is provided.

ADD: 7-3.7 Reservation of Rights. We reserve the right, from time to time, to review your insurance coverage, limits, deductibles and self-insured retentions to determine if they are acceptable to the City. We will reimburse you, without overhead, profit, or any other markup, for the cost of additional premium for any coverage requested by the Engineer but not required by this contract.

ADD: 7-3.8 Notice of Changes to Insurance. You must notify the City 30 days prior to any material change to the policies of insurance provided under this contract.

ADD: 7-3.9 Excess Insurance. Policies providing excess coverage must follow the form of the primary policy or policies e.g., all endorsements.

7-4 WORKERS' COMPENSATION INSURANCE. DELETE in its entirety and SUBSTITUTE with the following:

7-4.1 Workers' Compensation Insurance and Employers Liability Insurance.

- a) In accordance with the provisions of §3700 of the California Labor Code, you must provide at its expense Workers' Compensation Insurance and Employers Liability Insurance to protect you against all claims under applicable state workers compensation laws. The City, its elected officials, and employees will not be responsible for any claims in law or equity occasioned by your failure to comply with the requirements of this section.
- b) Limits for this insurance must be not less than the following:

<u>Workers' Compensation</u>	<u>Statutory Employers Liability</u>
Bodily Injury by Accident	\$1,000,000 each accident
Bodily Injury by Disease	\$1,000,000 each employee
Bodily Injury by Disease	\$1,000,000 policy limit

- c) By signing and returning this contract you certify that you are aware of the provisions of §3700 of the Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that code and you will comply with such provisions before commencing the Work as required by § 1861 of the California Labor Code.

7-4.1.1 Waiver of Subrogation. The policy or policies must be endorsed to provide that the insurer will waive all rights of subrogation against the City, and its respective elected officials, officers, employees, agents, and representatives for losses paid under the terms of the policy or policies and which arise from work performed by the Named Insured for the City.

7-5 PERMITS, FEES, AND NOTICES. To the City Supplement, DELETE item e) in its entirety.

7-8.6 Water Pollution Control. ADD the following:

- a) The Project is subject to the Storm Water Pollution control requirements listed on the Plans or as specified in these specifications.
- b) For contracts subject to Construction General Permit (CGP), the Contractor's QSD shall verify the City's assessment prior to submittal through SMARTS.
- c) The Contractor's attention is directed to Section 801, "WATER POLLUTION CONTROL" of these specifications for more information.

Based on a preliminary assessment by the City, this contract is subject to WPCP.

7-9 PROTECTION AND RESTORATION OF EXISTING IMPROVEMENTS. ADD the following:

In any emergency affecting the safety of persons or property, the Contractor shall act, at its discretion, to prevent threatened damage, injury or loss. Any change in Contract Price or Contract Time resulting from emergency work shall be determined as provided in SECTION 3, "CHANGES IN WORK."

SECTION 8 - FACILITIES FOR AGENCY PERSONNEL

8-2 FIELD OFFICE FACILITIES. To the City Supplement, DELETE in its entirety.

END OF SUPPLEMENTARY SPECIAL PROVISIONS (SSP)

TECHNICAL SPECIFICATIONS

Vista Terrace Pool Accessibility Improvements

**VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS
TECHNICAL SPECIFICATIONS**

Division	Section Title
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GENERAL REQUIREMENTS – Refer to City of San Diego Greenbook/Whitebook

DIVISION 02 - SITE CONDITIONS

024119 SELECTIVE STRUCTURE DEMOLITION

DIVISION 03 - CONCRETE

033000 CONCRETE WORK

033053 MISCELLANEOUS CAST-IN-PLACE CONCRETE WORK

DIVISION 05 - METALS

051200 STRUCTURAL STEEL

055213 PIPE AND TUBE RAILINGS

DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES

061000 ROUGH CARPENTRY

064023 INTERIOR ARCHITECTURAL WOODWORK

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

071616 CRYSTALLINE WATERPROOFING

079200 JOINT SEALANTS

DIVISION 08 - OPENINGS

081213 HOLLOW METAL FRAMES

081416 FLUSH WOOD DOORS

081473 SLIDING DOOR

085413 FIBERGLASS WINDOWS

087100 FINISH HARDWARE

089000 EXTRUDED ALUMINUM STATIONARY LOUVERS

DIVISION 09 - FINISHES

092900 GYPSUM BOARD

093000 TILING

099113 EXTERIOR PAINTING

099123 INTERIOR PAINTING

099300 STAINING AND TRANSPARENT FINISHING

DIVISION 10 - SPECIALTIES

101400 SIGNAGE

102113 TOILET COMPARTMENTS

102800 TOILET AND SHOWER ACCESSORIES

105113 LOCKERS

DIVISION 22 - PLUMBING

220500 BASIC PLUMBING REQUIREMENTS, MATERIALS AND METHODS

220700 PLUMBING INSULATION

221000 PLUMBING PIPING

224000 PLUMBING FIXTURES

225000 PLUMBING SPECIALTIES

**VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS
TECHNICAL SPECIFICATIONS**

Division	Section Title
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DIVISION 23 - MECHANICAL

- 233113 METAL DUCTS
- 233423 HVAC POWER VENTILATORS
- 233713 DIFFUSERS, REGISTERS AND GRILLES

DIVISION 26 - ELECTRICAL

- 260000 GENERAL ELECTRICAL REQUIREMENTS

DIVISION 33 – SITE WORK

- 334616 GEOCOMPOSITE SUBDRAINAGE

024119 - SELECTIVE STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Demolition and removal of selected portions of building or structure.
 - 2. Demolition and removal of selected site elements.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.
- B. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and 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 structural load limitations of existing structure.
 - 3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
 - 5. Review areas where existing construction is to remain and requires protection.

1.6 INFORMATIONAL SUBMITTALS

- A. 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.
- B. 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.
- C. Inventory: Submit a list of items to be removed and salvaged and deliver to Owner prior to start of demolition.
 - D. Pre-demolition Photographs or Video: Submit before Work begins.
- 1.7 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.
 - D. Notify Resident Engineer of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
 - E. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
 1. Hazardous materials will be removed by Owner before start of the Work.
 2. If suspected hazardous materials are encountered, do not disturb; immediately notify Resident Engineer and Owner. Hazardous materials will be removed by Owner under a separate contract.
 - F. Storage or sale of removed items or materials on-site is not permitted.
 - G. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition 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 ANSI/ASSE A10.6 and NFPA 241.

PART 2 - EXECUTION

2.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review record documents of existing construction provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in record documents.
- C. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Resident Engineer.
- E. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs.

1. Inventory and record the condition of items to be removed and salvaged. Provide photographs of conditions that might be misconstrued as damage caused by salvage operations.

2.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

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

2.3 PREPARATION

- A. 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.
- B. Temporary Facilities: 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. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
 3. Cover and protect furniture, furnishings, and equipment that have not been removed.
 4. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Greenbook.

2.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 2. 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, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.

5. Maintain adequate ventilation when using cutting torches.
 6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
 8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 9. Dispose of demolished items and materials promptly.
- B. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Resident Engineer, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

2.5 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
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.
- B. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

2.6 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

SECTION 033000 - CONCRETE WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUBMITTALS

- A. Comply with pertinent provisions of submittal requirements from the Greenbook.
- B. Product Data: Submit the following:
 - 1. Materials list of items proposed to be provided under this Section.
 - 2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements.
 - 3. Shop drawings in sufficient detail to show fabrication, installation, anchorage, and interface of the work of this Section with the work of other Sections.
 - a. Reinforcing: Submit shop and placement drawings of all reinforcing for review.
 - 1) Placement drawings shall show the locations and spacing of reinforcing in the various parts of the structure with details as required, in accordance with ACI "Detailing Manual". Cutting and bending lists submitted without placement drawings will be returned without review as incomplete. Placement drawings shall be complete so that placement of the reinforcing may proceed without reference to the design drawings.
 - 2) Review shall not act to relieve the Contractor from responsibility for accuracy of the fabrication details and placing diagrams. Dimensions and locations shall be verified prior to the preparation of shop drawings.
 - 3) No work shall be done except from reviewed drawings which must be kept at all work locations.
 - 4. Manufacturer's recommended installation procedures which will become the basis for accepting or rejecting actual installation procedures used on the Work.
 - C. Mill Affidavits: Mill affidavits stating the grades and physical and chemical properties of the reinforcing steel, and conformance with ASTM Specifications, shall be submitted before delivery of the steel to the job site.
 - D. Submit mix designs.

1.3 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

- B. Codes and Standards: In addition to complying with pertinent codes and regulations of governmental agencies having jurisdiction, unless otherwise specifically directed or permitted by the Resident Engineer comply with:
 - 1. "California Building Code": Current adopted edition, Chapter 19, Concrete.
 - 2. American Concrete Institute (ACI):
 - a. ACI 301 "Specifications for Structural Concrete for Buildings".
 - b. ACI 318 "Building Code Requirements for Reinforced Concrete".
 - c. ACI "Detailing Manual".
 - 3. Concrete Reinforcing Steel Institute (CRSI): "Recommended Practice for Placing Reinforcing Bars", current edition.
 - C. Concrete Testing Service: Engage a testing laboratory acceptable to Resident Engineer to perform material evaluation tests and to design concrete mixes.
 - D. Materials and installed work may require testing and retesting, as directed by Resident Engineer, at anytime during progress of work. Allow free access to material stockpiles and facilities.
 - E. Review architectural, structural, mechanical, and electrical drawings for anchor bolt schedules and locations, anchors, inserts, conduits, sleeves, and other items which are required to be cast in concrete, and make necessary provisions as required so that reinforcing steel will not interfere with the placement of such embedded items.
- 1.4 DELIVERY AND STORAGE
- A. Comply with pertinent provisions of the Greenbook.
 - B. Deliver reinforcement bundled and tagged to identify placement and certify testing.
 - 1. Reinforcing steel shall be transported to the building site, stored and covered in a manner which will insure that no damage shall occur to it from moisture, dirt, grease, or any other cause that might impair bond to concrete.
 - 2. Identification of steel shall be maintained after bundles are broken.
 - C. Cement and aggregates shall be stored at the work in such manner as to prevent deterioration or intrusion of any foreign matter. Cement shall be kept dry and any material which has deteriorated or which has been damaged shall not be used.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Aggregates:
 - 1. Normal sand-gravel aggregates conforming to ASTM C 33 "Standard Specifications for Concrete Aggregates".

2. Lightweight aggregates conforming to ASTM C 330 "Lightweight Aggregates for Structural Concrete".
- B. Cement: "Standard Specifications for Portland Cement" ASTM C 150, Type I or Type II.
 - C. Water: Clean and free from deleterious amounts of acids, alkali, oil, or organic materials.
 - D. Reinforcing Bars: New, deformed steel conforming to ASTM A 615, grade as indicated on drawings.
 - E. Premoulded Expansion Joint Filler: 1/2" thick, depth as required by slab thickness of premoulded, resilient, non-bituminous material.
 - F. Sealant: Specified in Section 079200, Sealants.
 - G. Concrete Sealer: "Hydro-Gard II", by The CreteGard Corporation, or equal.
 - H. Form Materials:
 1. Forms for Exposed Finish Concrete: Construct formwork with plywood, metal, metal-framed plywood faced or other acceptable panel-type materials, to provide continuous, straight, smooth, exposed surfaces.
 - a. Furnish in largest practicable sizes to minimize number of joints.
 - b. Provide form material with sufficient thickness to withstand pressure of newly-placed concrete without bow or deflection.
 2. Forms for Unexposed Finish Concrete: Form concrete surfaces which will be unexposed in finished structure with plywood, lumber, metal or other acceptable material. Provide lumber dressed on at least 2 edges and one side for tight fit.
 3. Form Coatings: Provide commercial formulation form-coating compounds that will not bond with, stain nor adversely affect concrete surfaces, and will not impair subsequent treatments of concrete surfaces.
 - I. Curing Compound: 1000 Series, by W.R. Meadows, or equal, clear liquid membrane forming compound conforming to ASTM C 309, Type I, Class B, free of paraffin or petroleum.
 - J. Sand Fill for Concrete Slabs on Grade: Imported clean sand.
 - K. Vapor Barrier: Polyethylene vapor barrier conforming to ASTM D 2103, with a nominal thickness of 15 mils.
 - L. Non-Shrink Grout: Burke No. 57-100, or equal, non-shrink, non-metallic grout.
 - M. Weakened Plane Joint Former: "Plastic Zip Strip Joint Former", by The Burke Company, or equal.
 - N. Crystalline Waterproofing Additive: Concrete waterproofing system shall be of the crystalline type that chemically controls and permanently fixes a non-soluble crystalline structure throughout the capillary voids of the concrete. The system shall cause the concrete to become sealed against the penetration of liquids from any direction, and shall protect the concrete from deterioration due to harsh environmental conditions.

2.2 MIXES

- A. Provide mix design in accordance with ACI 318. Mix designs shall be the responsibility of the Contractor.
 - 1. Contractor shall employ a Testing Laboratory approved by the Resident Engineer under the active direction of a Civil Engineer, who shall determine mix designs to fulfill the specified requirements for strength, aggregate size and workability of concrete, and such designs shall be used in proportioning all structural concrete.
 - a. Mix designs shall be submitted to the Resident Engineer for review at least 10 days prior to scheduled concrete pour.
 - b. Review by the Resident Engineer shall not be considered unqualified approval, and shall not relieve the Contractor of his responsibility to furnish concrete of proper consistency and specified strengths.
 - 2. Provide concrete of the strengths indicated in the structural general notes.
 - 3. Lightweight Concrete: 110 to 115 lbs. per cubic foot.
 - 4. Min w/c ratio = 0.5 min for all slabs, 0.45 for foundations.

2.3 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Resident Engineer.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 INSTALLATION

- A. Coordinate as required with other work to assure proper and adequate provision in other work for interface with the work of this Section.
- B. Install the work of this Section in strict accordance with the original design, the approved shop Drawings, pertinent requirements of governmental agencies having jurisdiction, and the manufacturer's recommended installation procedures.
- C. Crystalline Waterproofing Admix shall be added to the concrete mix at time of batching. Thorough blending of the Xypex Admix throughout the concrete mix is essential for correct performance of the product and, therefore, care should be taken to ensure that a homogeneous mixture is obtained.

3.3 FORMS

- A. All forms shall conform to the shape, lines, and dimensions of the members as called for on the plans, and shall be substantial and sufficiently tight to prevent leakage of mortar. Provide openings in formwork as required.
- B. Construction: Conform to the requirements of ACI-347 "Recommended Practice for Concrete Formwork", except as modified herein. Provide chamfers as noted or detailed, otherwise provide square corners. Provide offsets, recesses, etc., as required.

- C. Form Coatings: Coat contact surfaces of forms with a form-coating compound before reinforcement is placed. Apply in accordance with manufacturer's recommendations.
- D. Inserts and Anchors: Comply with ACI-318 "Building Code Requirements for Reinforced Concrete", for embedded conduits and piping, except as modified by the drawings.
 - 1. Carefully check all other trades before completing forms and placing concrete to determine that all embedded items are in place.
 - 2. Set all miscellaneous anchors, bolts, ties, dowels, plates, etc.
 - 3. Cooperate completely with other trades in the proper settings, aligning and securing of all items built into and dependent on the concrete work.
- E. Forms shall be reviewed by the Resident Engineer and Structural Engineer prior to concrete pour.
- F. Removal of Forms: The supporting forms shall not be disturbed until the concrete has hardened sufficiently to permit their removal with safety.
 - 1. In no case shall the forms be removed from walls and footings sooner than five days.
 - 2. Forms shall be removed in accordance with requirements of the ACI-347 "Recommended Practice for Concrete Formwork" without damage to concrete and in a manner to ensure complete safety of the structure.
 - 3. Freshly stripped surfaces shall not be painted up or touched in any manner before having been inspected.

3.4 PLACING REINFORCEMENT

- A. All reinforcement shall be bent and placed in accordance with the "Code of Standard Practice" of the Concrete Reinforcing Steel Institute. All steel shall be thoroughly cleaned of mill scale, rust and coatings that will destroy or reduce the bond. Steel shall be accurately positioned and secured in place with annealed wire of not smaller than No. 16 gage.
- B. Slab steel shall be wired together at points where bars cross and shall be lapped at all splices as shown on the drawings. Splices shall be staggered so that adjacent splices will be at least four feet apart.
- C. All horizontal slab steel or reinforcing mesh shall be supported on precast concrete blocks or chairs of the proper size and spaced so to keep the steel at the proper height in the slab.

3.5 CONCRETE PLACEMENT

- A. Ready-Mix Concrete: Mixed and delivered in accordance with the requirements of ASTM C 94.
 - 1. Concrete will be rejected if not placed in final position within 1-1/2 hours after water is first added to the batch, or if not in such condition that it can be properly placed.
 - 2. Each mixer truck shall be accompanied by a Public Weighmaster's Certificate.
- B. Concrete shall not be placed until all reinforcement is securely and properly fastened in its correct position and items required to be embedded in the concrete have been placed and anchored, forms cleaned and oiled as specified; and until the form work has been reviewed for general conformance to the construction documents by the Contractor and the Resident Engineer.
- C. All concrete shall be placed upon clean, damp surfaces free from standing water, and never upon soft mud, dry porous earth, or upon fills that have not been subject to approved puddling or tamping so that ultimate settlement has occurred.

1. Concrete shall not be placed in water nor shall water be allowed to rise over freshly placed concrete until the concrete has obtained its final set.
- D. Concrete shall be deposited in approximately horizontal layers, not to exceed twelve inches in thickness, unless otherwise authorized, and the pour shall be carried on in a continuous operation, as far as practicable, until the placing in the course, section, panel or monolith is completed.
- E. Concrete in foundation walls shall be consolidated with the aid of approved mechanical vibrating equipment. The intensity, duration, and vibration shall be sufficient to accomplish thorough compaction. The concrete shall be compacted and worked in an approved manner into all corners and angles of the forms and around reinforcement and embedded fixtures.
- F. Concrete Floor Slabs on Grade:
 1. After all utilities or other installations required under the slab have been installed over compacted grade, place clean sand (thickness as indicated on drawings), then 10 mil polyethylene film vapor barrier, followed by sand (thickness as indicated on drawings). Bring sand to uniform surface to receive concrete slab.
 2. Dampen top layer of sand prior to placing concrete.

3.6 FINISH OF FORMED SURFACES

- A. Rough Form Finish: For formed concrete surfaces not exposed-to-view in the finish work or by other construction, unless otherwise indicated.
 1. This is the concrete surface having texture imparted by form facing material used, with tie holes and defective areas repaired and patched and fins and other projections exceeding 1/4" in height rubbed down or chipped off.
- B. Smooth Form Finish: For formed concrete surfaces exposed-to-view, or that are to be covered with a coating material applied directly to concrete, such as waterproofing, dampproofing, painting or other similar system.
 1. This is as-cast concrete surface obtained with selected form facing material, arranged orderly and symmetrically with a minimum of seams.
- C. Related Unformed Surfaces: At horizontal offsets surfaces occurring adjacent to formed surfaces, strike-off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

3.7 MONOLITHIC SLAB FINISHES

- A. After screeding and leveling concrete to proper elevation, tamp with heavy grille tamper until at least 3/8" of mortar has been brought to the surface; as soon as the surface becomes workable, work with float, pushing down all coarse aggregate, filling all holes and leveling surface to a true and even surface, level, or sloped as detailed.
 1. Refer to drawings for location of finishes.
- B. Smooth Trowel Finish: Float and trowel to a perfectly smooth finish. Steel trowel finish shall be composed of at least three separate steel trowel operations.

- C. Broom Finish: Float and wood float surfaces to required slopes and planes. Apply wire broom finish transverse to traffic direction. Provide non-slip surface on all ramps and landings.
- D. Sealer: Apply concrete sealer where indicated in accordance with manufacturer's written recommendations. Bead blast concrete surfaces prior to application.

3.8 JOINTS

- A. Locate as indicated on the drawings.
- B. Construction Joints: Wet hardened concrete and keep wet for twenty-four hours before placing concrete.
- C. Exterior Expansion Joints: Locate in slab where indicated, filled to full depth with expansion joint material. Locate one-half inch below surface and seal exposed joints with joint sealer.
- D. Weakened Plane Joints: As shown on drawings.

3.9 CURING

- A. Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
 - 1. Foundations and Vertical Surfaces: Maintain concrete in continuously wet condition for minimum of seven days.
 - 2. Slabs-On-Grade: Apply specified curing compound to concrete faces.
 - a. Apply uniformly in continuous operation by power sprayer or roller in accordance with manufacturer's recommendations.
 - b. Maintain continuity of coating and repair damage during curing period.
 - c. Protect surfaces from abrasion during curing period.

3.10 PATCHING AND FINISHING

- A. All exposed concrete which is above grade and is not formed as shown on the drawings, or for any reason is out of alignment, or is not true, or is not plumb or level, or is not in plane, or shows a defective surface, or is not otherwise in true and continuous form, shall be considered as not conforming with the intent of the specifications.
 - 1. The maximum permissible deviation from true straight surfaces shall be 1/8" in ten feet.
 - 2. All surfaces not meeting the above requirements shall be removed and replaced. Remove defective concrete from the job, or if permission is given, patch defective concrete at no cost to the Owner.
- B. After the forms have been removed, all concrete surfaces shall be inspected and any pour joints, voids, stone pockets or other defective areas permitted by Resident Engineer to be patched, and all tie holes, shall be patched before the concrete is thoroughly dry. Areas not permitted to be patched shall be removed and replaced.
 - 1. Defective areas shall be chipped away to a depth of not less than one inch with the edges perpendicular to the surface.
 - 2. The area to be patched and a space of at least six inches wide entirely surrounding it shall be wetted to prevent absorption of water from the patching mortar.

3. A grout of equal parts of portland cement and sand with sufficient water to produce a brushing consistency shall then be well brushed into the surface, followed immediately by the patching mortar.
4. The patch shall be finished in such manner as to match the adjoining surface.
5. Test patch at non-visible area and obtain Resident Engineer's written approval prior to patching defective areas.

3.11 FIELD QUALITY CONTROL

- A. Cost of testing shall be paid by Contractor.
- B. Cylinders shall be taken by the Testing Laboratory, and shall be made in accordance with ASTM C 31. Concrete shall be tested in accordance with "Standard Method of Making Compression Tests of Concrete" ASTM C 39.
 1. At least three identical cylinders shall be tested for each fifty cubic yards or fraction thereof of each type and strength of structural concrete, and shall be tested at the ages of seven and twenty-eight days.
- C. If minimum ultimate strength of test cylinders falls below compressive strengths called for on the plans, permission may be granted to Contractor to demonstrate that concrete meets specifications by taking cores, and testing as specified in ASTM C 42.
 1. Costs of such testing will be paid for by Contractor.
 2. If compressive tests of core specimens fail to show compressive strength assumed in design, concrete will be deemed defective and shall be replaced or adequately strengthened at no cost to the Owner.

END OF SECTION 033000

SECTION 033053 – MISCELLANEOUS CAST-IN-PLACE CONCRETE WORK

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUBMITTALS

- A. Comply with pertinent provisions of Section 2 of the Greenbook.
- B. Product Data: Submit the following:
 - 1. Materials list of items proposed to be provided under this Section.
 - 2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements.
 - 3. Shop drawings in sufficient detail to show fabrication, installation, anchorage, and interface of the work of this Section with the work of other Sections.
 - a. Reinforcing: Submit shop and placement drawings of all reinforcing for review.
 - 1) Placement drawings shall show the locations and spacing of reinforcing in the various parts of the structure with details as required, in accordance with ACI "Detailing Manual". Cutting and bending lists submitted without placement drawings will be returned without review as incomplete. Placement drawings shall be complete so that placement of the reinforcing may proceed without reference to the design drawings.
 - 2) Review shall not act to relieve the Contractor from responsibility for accuracy of the fabrication details and placing diagrams. Dimensions and locations shall be verified prior to the preparation of shop drawings.
 - 3) No work shall be done except from reviewed drawings which must be kept at all work locations.
 - 4. Manufacturer's recommended installation procedures which will become the basis for accepting or rejecting actual installation procedures used on the Work.
- C. Mill Affidavits: Mill affidavits stating the grades and physical and chemical properties of the reinforcing steel, and conformance with ASTM Specifications, shall be submitted before delivery of the steel to the job site.
- D. Submit mix designs.

1.03 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Codes and Standards: In addition to complying with pertinent codes and regulations of governmental agencies having jurisdiction, unless otherwise specifically directed or permitted by the Resident Engineer comply with:

1. "California Building Code": Current adopted edition, Chapter 19, Concrete.
 2. American Concrete Institute (ACI):
 - a. ACI 301 "Specifications for Structural Concrete for Buildings".
 - b. ACI 318 "Building Code Requirements for Reinforced Concrete".
 - c. ACI "Detailing Manual".
 3. Concrete Reinforcing Steel Institute (CRSI): "Recommended Practice for Placing Reinforcing Bars", current edition.
- C. Concrete Testing Service: Engage a testing laboratory acceptable to Resident Engineer to perform material evaluation tests and to design concrete mixes.
- D. Materials and installed work may require testing and retesting, as directed by Resident Engineer, at anytime during progress of work. Allow free access to material stockpiles and facilities.
- E. Review architectural, structural, mechanical, and electrical drawings for anchor bolt schedules and locations, anchors, inserts, conduits, sleeves, and other items which are required to be cast in concrete, and make necessary provisions as required so that reinforcing steel will not interfere with the placement of such embedded items.
- 1.04 DELIVERY AND STORAGE
- A. Comply with pertinent provisions of the Greenbook.
- B. Deliver reinforcement bundled and tagged to identify placement and certify testing.
1. Reinforcing steel shall be transported to the building site, stored and covered in a manner which will insure that no damage shall occur to it from moisture, dirt, grease, or any other cause that might impair bond to concrete.
 2. Identification of steel shall be maintained after bundles are broken.
- C. Cement and aggregates shall be stored at the work in such manner as to prevent deterioration or intrusion of any foreign matter. Cement shall be kept dry and any material which has deteriorated or which has been damaged shall not be used.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Aggregates:
1. Normal sand-gravel aggregates conforming to ASTM C 33 "Standard Specifications for Concrete Aggregates".
 2. Lightweight aggregates conforming to ASTM C 330 "Lightweight Aggregates for Structural Concrete".

- B. Cement: "Standard Specifications for Portland Cement" ASTM C 150, Type I or Type II.
- C. Water: Clean and free from deleterious amounts of acids, alkali, oil, or organic materials.
- D. Reinforcing Bars: New, deformed steel conforming to ASTM A 615, grade as indicated on drawings.
- E. Premoulded Expansion Joint Filler: 1/2" thick, depth as required by slab thickness of premoulded, resilient, non-bituminous material.
- F. Sealant: Specified in Section 079200, Sealants.
- G. Concrete Sealer: "Hydro-Gard II", by The CreteGard Corporation, or equal.
- H. Form Materials:
 - 1. Forms for Exposed Finish Concrete: Construct formwork with plywood, metal, metal-framed plywood faced or other acceptable panel-type materials, to provide continuous, straight, smooth, exposed surfaces.
 - a. Furnish in largest practicable sizes to minimize number of joints.
 - b. Provide form material with sufficient thickness to withstand pressure of newly-placed concrete without bow or deflection.
 - 2. Forms for Unexposed Finish Concrete: Form concrete surfaces which will be unexposed in finished structure with plywood, lumber, metal or other acceptable material. Provide lumber dressed on at least 2 edges and one side for tight fit.
 - 3. Form Coatings: Provide commercial formulation form-coating compounds that will not bond with, stain nor adversely affect concrete surfaces, and will not impair subsequent treatments of concrete surfaces.
- I. Curing Compound: 1000 Series, by W.R. Meadows, or equal, clear liquid membrane forming compound conforming to ASTM C 309, Type I, Class B, free of paraffin or petroleum.
- J. Sand Fill for Concrete Slabs on Grade: Imported clean sand.
- K. Vapor Barrier: Polyethylene vapor barrier conforming to ASTM D 2103, with a nominal thickness of 15 mils.
- L. Non-Shrink Grout: Burke No. 57-100, or equal, non-shrink, non-metallic grout.
- M. Weakened Plane Joint Former: "Plastic Zip Strip Joint Former", by The Burke Company, or equal.
- N. Crystalline Waterproofing Additive at Exterior concrete: Concrete waterproofing system shall be of the crystalline type that chemically controls and permanently fixes a non-soluble crystalline structure throughout the capillary voids of the concrete. The system shall cause the concrete to become sealed against the penetration of liquids from any direction, and shall protect the concrete from deterioration due to harsh environmental conditions.

2.02 MIXES

- A. Provide mix design in accordance with ACI 318. Mix designs shall be the responsibility of the Contractor.
 - 1. Contractor shall employ a Testing Laboratory approved by the Resident Engineer under the active direction of a Civil Engineer, who shall determine mix designs to fulfill the specified requirements for strength, aggregate size and workability of concrete, and such designs shall be used in proportioning all structural concrete.
 - a. Mix designs shall be submitted to the Resident Engineer for review at least 10 days prior to scheduled concrete pour.
 - b. Review by the Resident Engineer shall not be considered unqualified approval, and shall not relieve the Contractor of his responsibility to furnish concrete of proper consistency and specified strengths.
 - 2. Provide concrete of the strengths indicated in the structural general notes.
 - 3. Lightweight Concrete: 110 to 115 lbs. per cubic foot.
 - 4. Min w/c ratio = 0.5 min for all slabs, 0.45 for foundations.

2.03 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Resident Engineer.

PART 3 - EXECUTION

3.01 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.02 INSTALLATION

- A. Coordinate as required with other work to assure proper and adequate provision in other work for interface with the work of this Section.
- B. Install the work of this Section in strict accordance with the original design, the approved shop Drawings, pertinent requirements of governmental agencies having jurisdiction, and the manufacturer's recommended installation procedures.

3.03 FORMS

- A. All forms shall conform to the shape, lines, and dimensions of the members as called for on the plans, and shall be substantial and sufficiently tight to prevent leakage of mortar. Provide openings in formwork as required.

- B. Construction: Conform to the requirements of ACI-347 "Recommended Practice for Concrete Formwork", except as modified herein. Provide chamfers as noted or detailed, otherwise provide square corners. Provide offsets, recesses, etc., as required.
- C. Form Coatings: Coat contact surfaces of forms with a form-coating compound before reinforcement is placed. Apply in accordance with manufacturer's recommendations.
- D. Inserts and Anchors: Comply with ACI-318 "Building Code Requirements for Reinforced Concrete", for embedded conduits and piping, except as modified by the drawings.
 - 1. Carefully check all other trades before completing forms and placing concrete to determine that all embedded items are in place.
 - 2. Set all miscellaneous anchors, bolts, ties, dowels, plates, etc.
 - 3. Cooperate completely with other trades in the proper settings, aligning and securing of all items built into and dependent on the concrete work.
- E. Forms shall be reviewed by the Resident Engineer and Structural Engineer prior to concrete pour.
- F. Removal of Forms: The supporting forms shall not be disturbed until the concrete has hardened sufficiently to permit their removal with safety.
 - 1. In no case shall the forms be removed from walls and footings sooner than five days.
 - 2. Forms shall be removed in accordance with requirements of the ACI-347 "Recommended Practice for Concrete Formwork" without damage to concrete and in a manner to ensure complete safety of the structure.
 - 3. Freshly stripped surfaces shall not be painted up or touched in any manner before having been inspected.

3.04 PLACING REINFORCEMENT

- A. All reinforcement shall be bent and placed in accordance with the "Code of Standard Practice" of the Concrete Reinforcing Steel Institute. All steel shall be thoroughly cleaned of mill scale, rust and coatings that will destroy or reduce the bond. Steel shall be accurately positioned and secured in place with annealed wire of not smaller than No. 16 gage.
- B. Slab steel shall be wired together at points where bars cross and shall be lapped at all splices as shown on the drawings. Splices shall be staggered so that adjacent splices will be at least four feet apart.
- C. All horizontal slab steel or reinforcing mesh shall be supported on precast concrete blocks or chairs of the proper size and spaced so to keep the steel at the proper height in the slab.

3.05 CONCRETE PLACEMENT

- A. Ready-Mix Concrete: Mixed and delivered in accordance with the requirements of ASTM C 94.

1. Concrete will be rejected if not placed in final position within 1-1/2 hours after water is first added to the batch, or if not in such condition that it can be properly placed.
 2. Each mixer truck shall be accompanied by a Public Weigh master's Certificate.
- B. Concrete shall not be placed until all reinforcement is securely and properly fastened in its correct position and items required to be embedded in the concrete have been placed and anchored, forms cleaned and oiled as specified; and until the form work has been reviewed for general conformance to the construction documents by the Contractor and the Resident Engineer.
- C. All concrete shall be placed upon clean, damp surfaces free from standing water, and never upon soft mud, dry porous earth, or upon fills that have not been subject to approved puddling or tamping so that ultimate settlement has occurred.
1. Concrete shall not be placed in water nor shall water be allowed to rise over freshly placed concrete until the concrete has obtained its final set.
- D. Concrete shall be deposited in approximately horizontal layers, not to exceed twelve inches in thickness, unless otherwise authorized, and the pour shall be carried on in a continuous operation, as far as practicable, until the placing in the course, section, panel or monolith is completed.
- E. Concrete in foundation walls shall be consolidated with the aid of approved mechanical vibrating equipment. The intensity, duration, and vibration shall be sufficient to accomplish thorough compaction. The concrete shall be compacted and worked in an approved manner into all corners and angles of the forms and around reinforcement and embedded fixtures.
- F. Concrete Floor Slabs on Grade:
1. After all utilities or other installations required under the slab have been installed over compacted grade, place clean sand (thickness as indicated on drawings), then 10 mil polyethylene film vapor barrier, followed by sand (thickness as indicated on drawings). Bring sand to uniform surface to receive concrete slab.
 2. Dampen top layer of sand prior to placing concrete.

3.06 FINISH OF FORMED SURFACES

- A. Rough Form Finish: For formed concrete surfaces not exposed-to-view in the finish work or by other construction, unless otherwise indicated.
1. This is the concrete surface having texture imparted by form facing material used, with tie holes and defective areas repaired and patched and fins and other projections exceeding 1/4" in height rubbed down or chipped off.
- B. Smooth Form Finish: For formed concrete surfaces exposed-to-view, or that are to be covered with a coating material applied directly to concrete, such as waterproofing, dampproofing, painting or other similar system.
1. This is as-cast concrete surface obtained with selected form facing material, arranged orderly and symmetrically with a minimum of seams.

- C. Related Unformed Surfaces: At horizontal offsets surfaces occurring adjacent to formed surfaces, strike-off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

3.07 MONOLITHIC SLAB FINISHES

- A. After screeding and leveling concrete to proper elevation, tamp with heavy grille tamper until at least 3/8" of mortar has been brought to the surface; as soon as the surface becomes workable, work with float, pushing down all coarse aggregate, filling all holes and leveling surface to a true and even surface, level, or sloped as detailed.
 - 1. Refer to drawings for location of finishes.
- B. Smooth Trowel Finish: Float and trowel to a perfectly smooth finish. Steel trowel finish shall be composed of at least three separate steel trowel operations.
- C. Broom Finish: Float and wood float surfaces to required slopes and planes. Apply wire broom finish transverse to traffic direction. Provide non-slip surface on all ramps and landings.
- D. Sealer: Apply concrete sealer where indicated in accordance with manufacturer's written recommendations. Bead blast concrete surfaces prior to application.

3.08 JOINTS

- A. Locate as indicated on the drawings.
- B. Construction Joints: Wet hardened concrete and keep wet for twenty-four hours before placing concrete.
- C. Exterior Expansion Joints: Locate in slab where indicated, filled to full depth with expansion joint material. Locate one-half inch below surface and seal exposed joints with joint sealer.
- D. Weakened Plane Joints: As shown on drawings.

3.09 CURING

- A. Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
 - 1. Foundations and Vertical Surfaces: Maintain concrete in continuously wet condition for minimum of seven days.
 - 2. Slabs-On-Grade: Apply specified curing compound to concrete faces.
 - a. Apply uniformly in continuous operation by power sprayer or roller in accordance with manufacturer's recommendations.
 - b. Maintain continuity of coating and repair damage during curing period.
 - c. Protect surfaces from abrasion during curing period.

3.10 PATCHING AND FINISHING

- A. All exposed concrete which is above grade and is not formed as shown on the drawings, or for any reason is out of alignment, or is not true, or is not plumb or level, or is not in plane, or shows a defective surface, or is not otherwise in true and continuous form, shall be considered as not conforming with the intent of the specifications.
 - 1. The maximum permissible deviation from true straight surfaces shall be 1/8" in ten feet.
 - 2. All surfaces not meeting the above requirements shall be removed and replaced. Remove defective concrete from the job, or if permission is given, patch defective concrete at no cost to the Owner.
- B. After the forms have been removed, all concrete surfaces shall be inspected and any pour joints, voids, stone pockets or other defective areas permitted by Resident Engineer to be patched, and all tie holes, shall be patched before the concrete is thoroughly dry. Areas not permitted to be patched shall be removed and replaced.
 - 1. Defective areas shall be chipped away to a depth of not less than one inch with the edges perpendicular to the surface.
 - 2. The area to be patched and a space of at least six inches wide entirely surrounding it shall be wetted to prevent absorption of water from the patching mortar.
 - 3. A grout of equal parts of portland cement and sand with sufficient water to produce a brushing consistency shall then be well brushed into the surface, followed immediately by the patching mortar.
 - 4. The patch shall be finished in such manner as to match the adjoining surface.
 - 5. Test patch at non-visible area and obtain Resident Engineer's written approval prior to patching defective areas.

3.11 FIELD QUALITY CONTROL

- A. Cost of testing shall be paid by Contractor as required per structural notes on drawings.
- B. Cylinders shall be taken by the Testing Laboratory, and shall be made in accordance with ASTM C 31. Concrete shall be tested in accordance with "Standard Method of Making Compression Tests of Concrete" ASTM C 39.
 - 1. At least three identical cylinders shall be tested for each fifty cubic yards or fraction thereof of each type and strength of structural concrete, and shall be tested at the ages of seven and twenty-eight days.
- C. If minimum ultimate strength of test cylinders falls below compressive strengths called for on the plans, permission may be granted to Contractor to demonstrate that concrete meets specifications by taking cores, and testing as specified in ASTM C 42.
 - 1. Costs of such testing will be paid for by Contractor.
 - 2. If compressive tests of core specimens fail to show compressive strength assumed in design, concrete will be deemed defective and shall be replaced or adequately strengthened at no cost to the Owner.

END OF SECTION 033053

SECTION 051200 - STRUCTURAL STEEL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUBMITTALS

- A. Comply with pertinent provisions of The Greenbook.
- B. Submit shop Drawings including complete details and schedules for fabrication and shop assembly of members. Include details of cuts, connections, camber, holes, and other pertinent data. Indicate welds by AWS symbols, and show size length, and type of weld. Provide setting drawings, templates, and directions for installation of anchor bolts and other anchorages. Identify details by reference to sheet and detail number on the Drawings.
 - 1. Submit the entire structural steel submittal package at one time. Exceptions can be requested by the Contractor prior to the first submittal to expedite the construction schedule by subdividing the submittal package into the following order and categories:
 - a. All base plates, anchors, templates, and plans showing their locations and all related details.
 - b. All columns, beams, and plans showing their location and all related details.
- C. Survey of steel structural elements.

1.3 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Certification of Materials: Identify all structural steel by heat or melt number and accompany with mill analysis and test reports. Furnish evidence to the Resident Engineer that the materials conform with the requirements of these specifications.
- C. Fabrication and Erection;
 - 1. Perform all work in accordance with the applicable provisions of the Uniform Building Code and AISC "Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings," and AWS "Structural Welding Code," latest approved edition.
 - 2. All structural steel, both in the shop and in field shall be transported and handled and erected in such manner as will preclude any injury thereto and in no case shall the material be subjected to any undue stresses in any part of connection or member.

- D. Cooperation: Coordinate the work in the structural steel section with that of all other sections. Provide all punchings and drilling indicated on the drawings, or required for the attachment of their work to the structural steel framing for pipe and duct supports, anchors, aluminum sash, doors and similar work. Provided necessary drilling and punching; accurately locate and arrange to receive and engage the same.
- E. Field Measurements: Before starting work, secure all field measurements pertaining to or affecting the work of this section and verify the locations and exact position of all anchor bolts occurring therein.
- F. Provide a survey of the steel structural elements to confirm that they are installed true and plumb.

1.4 TESTING

- A. Testing Laboratory: A qualified testing laboratory, meeting requirements of ASTM E 329, shall be as approved by the Owner. Testing and inspection shall be as required by the Drawings and these Specifications. Cost of Testing and Inspecting of Structural Steel shall be paid for by the Contractor:
 - 1. It is assumed that steel will be fabricated within the State of California. All transportation costs and per diem living costs for inspection at fabricator's plants outside of California will be back-charged to the Contractor.
 - 2. All fabrication must be performed in a UBC approved fabrication shop. It is assumed that all fabrication will take place in one shop location only. All additional inspection costs resulting from fabrication at more than one shop location will be back-charged to the Contractor.
 - 3. All mill tests and costs of retests of plain materials shall be at the expense of the Contractor.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. All materials shall conform with the following requirements and shall be free from scale, defects and imperfections, of recent manufacture and unused. Where two or more identical articles or pieces of equipment are required, they shall be of the same manufacture.
- B. Structural steel shall conform with ASTM A 996 for shapes and ASTM A 36 for plates and bars unless noted otherwise.
- C. Welding electrodes shall conform with AWS D1.1, E70, series. Electrodes for welding reinforcing steel to be low hydrogen electrodes.
- D. Anchor bolts shall conform with ASTM A 307. High strength bolts shall conform to ASTM A 325 N bolts for structural steel joints.
- E. Pipe columns shall be ASTM A 53, Grade B.
- F. Tube steel shall be ASTM A 500, Grade B, 46 ksi.

G. Primer Paint:

1. Shop Paint: SSPC-Paint 2.
2. Omit shop paint on surfaces to be enclosed in concrete, surfaces to be welded, contact surfaces in high strength bolted friction type connections, tops of beam in composite construction, surfaces to receive welded stud, and surfaces to receive spray-on fire protection.

H. Galvanizing shall conform with ASTM A 123, for hot-dipped galvanizing.

I. Touch-up Primer for Galvanized Surfaces: Fed. Spec. TT-P-641.

2.2 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Resident Engineer.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.
- B. Commencement of installation of any products of this Section shall be considered as acceptance of the substrate and conditions as being satisfactory for proper installation of products of this Section.

3.2 INSTALLATION

- A. Coordinate as required with other work to assure proper and adequate provision in other work for interface with the work of this Section.
- B. Install the work of this Section in strict accordance with the original design, the approved Shop Drawings, pertinent requirements of governmental agencies having jurisdiction, and the manufacturer's recommended installation procedures.

3.3 WELDING

- A. Structural welding shall be done by the electric submerged or shielded metal arc process and shall have inspection by the laboratory of record. Operators shall be thoroughly trained and experienced in arc welding of structures, capable of making uniformly reliable butt and fillet welds in flat, vertical and overhead positions and by producing neat and consistent work in actual operation. Each operator shall have passed all welding tests of the American Welding Society.
- B. Surfaces to be welded shall be free of any paint, grease, loose scale and foreign matter. Clean welds each time the electrode is changed and chip clean all burned or flame-cut edges before welds are deposited thereon. The same electrode may be used with various thicknesses of plate, but change current used and number of passes made proportionately.

- C. After being deposited, brush welds with wire brushes. Welds shall exhibit uniform section, smoothness of welded metal, feathered edges without undercuts or overlays, and freedom from porosity and clinkers. Visual inspection at edges and ends of fillet and butt joint welds shall indicate a good fusion with penetration into base metal.
- D. During assembly and welding, hold component part of a built-up member with sufficient clamps or other adequate means to keep the parts straight and in close contact. In welding, precautions shall be taken to minimize "lockup" stresses and distortion due to heat. No welding shall be done under windy conditions until adequate wind protection screening has been provided. Any welds or parts of welds which are found to be defective shall be cut out with a chisel and replaced.
- E. The maximum space between members to be butt welded shall not exceed 1/4". Bevel all pieces or members up to 1/8" thickness to form a single or double "vee" before being welded. Bevel welds over 3/8" in thickness to form a double "vee" wherever possible.
- F. Lay fillet welds in the position indicated on the drawings and to the sizes shown. In measuring fillet welds, consider only the effective portion. The maximum space between pieces for members to be fillet welded shall not exceed 1/16".

3.4 ERECTION

- A. Contractor shall field check all anchor bolts for dimensions prior to erection of structural steel. Notify Owner of any discrepancies.
- B. Erect all structural steel with qualified riggers and carefully plan and lay out so that a minimum of cutting shall be required. Erect work plumb, square and true to line and level, and in precise position, as indicated. Provide temporary bracing and guys, wherever necessary, to provide for the loads and stresses to which the structure may be subjected, including those due to erection equipment and their operation, and leave in place as long as it may be required for safeguarding all parts of the work.
- C. As erection progresses, securely bolt up work as required to maintain the steel in proper position while field bolting and welding is being done and as required to take care of all deadloads, wind and erection stresses. No field bolting or welding shall be done until the work has been properly aligned, plumbed and leveled.
- D. Set each column base plate in exact position as to alignment, plumb and height. The center of each base shall be true to the column center within a tolerance of 1/16", and its height shall be adjusted in exact position. Maintain all bases at the exact position and level while they are being grouted.
- E. Carry out erection of structural steel work in proper sequence with the work of other trades, and frame, bed and anchor to concrete and related work in strict accordance with the detail drawings and approved setting drawings.
- F. Field Modification: Written acceptance from the Resident Engineer and/or Engineer must be obtained before using cutting torch for field modification or refabrication of structural steel. The structural steel fabricator shall be responsible for errors in fabrication and for correct fit in the field.

- G. Allowable Tolerances: Comply with requirements of AISC Code of Standard Practice. Bases of all columns shall be located on the established column lines within plus or minus 1/8". All leveling and plumbing shall be based on a mean temperature of 70 degrees F. Compensate for difference in temperature at time of erection.

3.5 CONNECTIONS

- A. Unfinished Bolts: Make field connections with unfinished bolts only where indicated.

3.6 ANCHOR BOLTS

- A. Inspect the installation of anchor bolts, make all necessary field measurements and, if necessary, furnish templates to insure that all structural steel will fit the job conditions. Locate all columns as indicated on the drawings. Setting of anchor bolts in hardened or existing concrete, which may be necessary because of error or oversight, shall be made in suitable drilled holes and solidly grouted in place, under the direction of the Resident Engineer.

3.7 FINISH

- A. Clean all steel of any grease, rust, mill scale or other foreign matter, and give one shop coat of metal primer as specified. Material to be embedded in concrete shall not be primed.
- B. After installation, touch-up field welds, scratched or damaged surfaces with paint or galvanizing primer, as applicable.

END OF SECTION 051200

SECTION 055213 - PIPE AND TUBE RAILINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Steel pipe and tube handrails and railings.

1.3 SUBMITTALS

- A. Shop Drawings: Show fabrication and installation of handrails and railings. Include plans, elevations, sections, component details, and attachments to other Work.

1.4 STORAGE

- A. Store handrails and railings in a dry, well-ventilated, weathertight place.

1.5 PROJECT CONDITIONS

- A. Field Measurements: Verify handrail and railing dimensions by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1.6 COORDINATION

- A. Coordinate installation of anchorages for handrails and railings. 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.

PART 2 - PRODUCTS

2.1 METALS

- A. General: Provide metal free from pitting, seam marks, roller marks, stains, discolorations, and other imperfections where exposed to view on finished units.
- B. Steel and Iron: Provide steel and iron in the form indicated, complying with the following requirements:
 - a. Steel Pipe: ASTM A 53; finish, type, and weight class as follows:
 - i. Galvanized finish.
 - ii. Type F, or Type S, Grade A, standard weight (Schedule 40), unless another grade and weight are required by structural loads.
 - b. Steel Tubing: Cold-formed steel tubing, ASTM A 500, Grade A, unless another grade is required by structural loads.

- c. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
 - d. Handrail shall have 1-1/4" min to 1-1/2" max outside diameter dimension.
- C. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails, unless otherwise indicated.

2.2 WELDING MATERIALS, FASTENERS, AND ANCHORS

- A. Welding Electrodes and Filler Metal: Provide type and alloy of filler metal and electrodes as recommended by producer of metal to be welded and as required for color match, strength, and compatibility in fabricated items.
- B. Fasteners for Anchoring Handrails and Railings to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring handrails and railings to other types of construction indicated and capable of withstanding design loads.
 - 1. For steel handrails, railings, and fittings, use plated fasteners complying with ASTM B 633, Class Fe/Zn 25 for electrodeposited zinc coating.
- C. Cast-in-Place and Postinstalled Anchors: Anchors of type indicated below, fabricated from corrosion-resistant materials with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry and equal to four times the load imposed when installed in concrete, as determined by testing per ASTM E 488 conducted by a qualified independent testing agency.
 - 1. Cast-in-place anchors.
 - 2. Expansion anchors.

2.4 ANCHORING CEMENT

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

2.5 FABRICATION

- A. General: Fabricate handrails and railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.
- B. Assemble handrails and railings in the shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.
- C. Form changes in direction of railing members as follows:
 - 1. As detailed.
 - 2. By radius bends of radius indicated.
 - 3. By flush radius bends.

4. By mitering at elbow bends.
 5. By any method indicated above, applicable to change in direction involved.
- D. Form simple and compound curves by bending members in jigs to produce uniform curvature for each repetitive configuration required; maintain cylindrical cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of handrail and railing components.
- E. Welded Connections: Fabricate handrails and railings for connecting members by welding. Cope components at perpendicular and skew connections to provide close fit, or use fittings designed for this purpose. Weld connections continuously to comply with the following:
1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 2. Obtain fusion without undercut or overlap.
 3. Remove flux immediately.
 4. At exposed connections, finish exposed surfaces smooth and blended so no roughness shows after finishing and welded surface matches contours of adjoining surfaces.
- F. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect handrail and railing members to other work, unless otherwise indicated.
- G. Provide inserts and other anchorage devices for connecting handrails and railings to concrete or masonry work. Fabricate anchorage devices capable of withstanding loads imposed by handrails and railings. Coordinate anchorage devices with supporting structure.
- H. For railing posts set in concrete, provide preset sleeves of steel not less than 6 inches long with inside dimensions not less than 1/2 inch greater than outside dimensions of post, and steel plate forming bottom closure.
- I. Shear and punch metals cleanly and accurately. Remove burrs from exposed cut edges.
- J. Ease exposed edges to a radius of approximately 1/32 inch, unless otherwise indicated. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing the Work.
- K. Cut, reinforce, drill, and tap components, as indicated, to receive finish hardware, screws, and similar items.
- L. Provide weep holes or another means to drain entrapped water in hollow sections of handrail and railing members that are exposed to exterior or to moisture from condensation or other sources.
- M. Fabricate joints that will be exposed to weather in a watertight manner.
- N. Close exposed ends of handrail and railing members with prefabricated end fittings.

- O. Fillers: Provide fillers made from steel plate, or other suitably crush-resistant material, where needed to transfer wall bracket loads through wall finishes to structural supports. Size fillers to suit wall finish thicknesses and to produce adequate bearing area to prevent bracket rotation and overstressing of substrate.
- P. Skate Stoppers shall be installed on railings and horizontal pipe and tube at 36" o.c. at exterior locations, exception - DO NOT install on hand railings.

2.6 FINISHES, GENERAL

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

2.7 STEEL FINISHES

- A. Galvanized Handrails and Railings: Hot-dip galvanize steel and iron handrails and railings to comply with ASTM A 123. Hot-dip galvanize hardware to comply with ASTM A 153/A 153M.
- B. Fill vent and drain holes that will be exposed in finished Work, unless indicated to remain as weep holes, by plugging with zinc solder and filing off smooth.
- C. For galvanized handrails and railings, provide galvanized fittings, brackets, fasteners, sleeves, and other ferrous components.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Fit exposed connections together to form tight, hairline joints.
- B. Perform cutting, drilling, and fitting required to install handrails and railings. Set handrails and railings accurately in location, alignment, and elevation; measured from established lines and levels and free from rack.
 - 1. Set posts plumb within a tolerance of 1/16 inch in 3 feet.
 - 2. Align rails so variations from level for horizontal members and from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet.
- C. Adjust handrails and railings before anchoring to ensure matching alignment at abutting joints. Space posts at interval indicated, but not less than that required by structural loads.
- D. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing handrails and railings and for properly transferring loads to in-place construction.

3.2 RAILING CONNECTIONS

- A. Welded Connections: Use fully welded joints for permanently connecting railing components. Comply with requirements for welded connections in "Fabrication" Article whether welding is performed in the shop or in the field.

- B. Expansion Joints: Install expansion joints at locations indicated but not farther apart than required to accommodate thermal movement. Provide slip-joint internal sleeve extending 2 inches beyond joint on either side, fasten internal sleeve securely to one side, and locate joint within 6 inches of post.

3.3 ANCHORING POSTS

- A. Use galvanized steel pipe sleeves preset and anchored into concrete for installing posts. After posts have been inserted into sleeves, fill annular space between post and sleeve with the following anchoring material, mixed and placed to comply with anchoring material manufacturer's written instructions:
 - 1. Anchoring cement.
- C. Leave anchorage joint exposed; wipe off surplus anchoring material; and leave 1/8-inch build-up, sloped away from post.
- D. Anchor posts to metal surfaces with oval flanges, angle type, or floor type as required by conditions, connected to posts and to metal supporting members as follows:
 - 1. For steel pipe railings, weld flanges to post and bolt to metal supporting surfaces.
- E. Install removable railing sections, where indicated, in slip-fit metal sockets cast in concrete.

3.4 ANCHORING RAILING ENDS

- A. Anchor railing ends into concrete and masonry with round flanges connected to railing ends and anchored into wall construction with post installed anchors and bolts. Railing ends shall return to wall or post.
- B. Anchor railing ends to metal surfaces with flanges bolted to metal surfaces.
 - 1. Weld flanges to railing ends.

3.5 CLEANING AND PAINTING

- A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.
- B. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

END OF SECTION 055213

SECTION 061000 - ROUGH CARPENTRY

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Regulatory Requirements: Comply with applicable provisions of the following codes and standards, unless modified by the specifications or drawings.
 - 1. California Building Code, adopted edition, Chapter 25, "Wood".

PART 2 - PRODUCTS

2.01 GRADE STAMPS

- A. Framing lumber: Identify all framing lumber by the grade stamp of the West Coast Lumber Inspection Bureau.
- B. Plywood: Identify all plywood as to species, grade, and glue type by the stamp of the American Plywood Association.
- C. Other: Identify all other materials of this Section by the appropriate stamp of the agency listed in the reference standards, or by such other means as are approved by the Resident Engineer.

2.02 GENERAL REQUIREMENTS

- A. Moisture content at time of placing:
 - 1. Untreated lumber shall not exceed 19%.
 - 2. Plywood shall not exceed 15%.
- B. Sizing and Surfacing: Mill size. All exposed surfaces of wood members shall be surfaced smooth except as indicated otherwise.

2.03 LUMBER

- A. See drawings for grades for specific uses and locations.

2.04 PLYWOOD

- A. Structural Plywood: U.S. Product Standard PS-1 per Structural Wood Notes.

- B. All plywood shall be grade-marked by the American Plywood Association (APA). Remove all sheets not grade marked.
- C. Plywood used for structural purposes shall have exterior glue.

2.05 BUILDING PAPER

- A. "Tyvek", or equal.

2.06 ROUGH HARDWARE

- A. Furnish all items of rough hardware, connections, bolts, etc., required to complete the work. Bolts, nuts, and washers where exposed to elements shall be hot-dipped galvanized, conforming to ASTM A153.
 - 1. Nails: Common wire. Use galvanized nails for all exposed framing. Use ring shank nails for floor sheathing.
 - 2. Bolts: Standard mild steel, square or hexagonal head machine bolts with matching nuts and cut washers, or carriage bolts with square nuts and cut washers as indicated.
 - 3. Lag Bolts and Screws: Conform to Fed. Spec. FF-B-561B, of sizes shown or noted on drawings.
 - 4. Toggle Bolts: Galvanized conforming to Fed. Spec. FF-B-588B(2), of sizes shown or noted on drawings.
 - 5. Concrete and Masonry Anchors: Where anchors are not included in the concrete or masonry construction, anchors shall be galvanized machine screws or bolts with standard expansion-shield type concrete anchors, "Wej-It" Concrete Anchors as manufactured by Wej-It Expansion Products, Inc., Ramset Fasteners' "Dynabolt", McCulloch Industries, "Kwik-Bolt", or approved equal, of the size and types noted on drawings or as required. Do not use expansion bolts or anchors where other type anchors are shown or noted on the drawings.
 - 6. Powder-Driven Fasteners: "Drive-It" system of the Powder Power Tool Corporation, "Ramset" system of Ramset Fasteners, Inc., the equivalent system of Remington-Dupont, or equal. Use washers with all fasteners. Powder-driven fasteners shall not be used except where first approved by the Resident Engineer in writing.
 - 7. Framing Anchors: Simpson Co. Strong-tie connectors or equal, galvanized framing connectors and joist hangers as detailed, not less than 18 gage before galvanizing, having minimum design and load capacity given on the drawings, with manufacturer supplied nails.
 - a. Submit current ICBO report of alternate connectors and list of comparable connector values.

2.07 MISCELLANEOUS ITEMS

- A. Rough carpentry work and miscellaneous items and their related components which are to be furnished and/or installed under this section are not necessarily individually described. The most important features and those requiring detail description are mentioned. Rough carpentry work and miscellaneous items not mentioned or described shall be furnished and/or installed in accordance with the intent of the drawings and specifications and as required to complete the work.

PART 3 - EXECUTION

3.01 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.02 INSTALLATION

- A. Coordinate as required with other work to assure proper and adequate provision in other work for interface with the work of this Section.
- B. Install the work of this Section in strict accordance with the original design, the approved Shop Drawings, pertinent requirements of governmental agencies having jurisdiction, and the manufacturer's recommended installation procedures, anchoring all components firmly into position for long life under hard use.
- C. All rough carpentry shall produce joints true, tight, and well nailed, with all members assembled in accordance with the Drawings and with all pertinent codes and regulations.
- D. Selection of lumber pieces:
 - 1. Carefully select all members. Select individual pieces so that knots and obvious defects will not interfere with placing bolts or proper nailing or making connections.
 - 2. Cut out and discard all defects which will render a piece unable to serve its intended function. Lumber may be rejected by the Resident Engineer, whether or not it has been installed, for excessive warp, twist, bow, crook, mildew, fungus, or mold, as well as for improper cutting and fitting.

3.03 INSTALLATION OF PLYWOOD SHEATHING

- A. Placement:
 - 1. Place all plywood with face grain perpendicular to supports and continuously over at least two supports, except where otherwise specifically indicated on the Drawings.
 - 2. Center joints accurately over supports. Unless otherwise specifically shown on the Drawings, stagger the end joints of plywood panels to achieve a minimum of continuity of joints.
 - 3. Where required by drawings, provide adequate notification of Special Inspector for plywood installation.
- B. Protection of Plywood: Protect all plywood from moisture by use of all required waterproof coverings until the plywood has in turn been covered with the next succeeding component or finish.

3.05 FASTENING

- A. Nailing:
 - 1. Use only common wire nails or spikes of the dimension shown on the Nailing Schedule, except where otherwise called for on the Drawings.

2. For conditions not covered in the Nailing Schedule, provide penetration into the piece receiving the point of not less than 1/2 the length of the nail or spike provided, however, that 16d nails may be used to connect two pieces of two inch nominal thickness.
 3. Do all nailing without splitting wood. Pre-bore as required. Replace all split members.
- B. Bolting: Drill holes 1/16 inch larger in diameter than the bolts being used. Drill straight and true from one side only. Bolt threads shall not bear on wood. Use washers under head and nut where both bear on wood; use washers under all nuts.
1. Bolt in studs of partitions which abut a concrete wall at top, bottom and middle using 1/2" bolts.
- C. Screws: For lag screws and wood screws, pre-bore holes same diameter as root of thread; enlarge holes to shank diameter for length of shank. Screw, do not drive, all lag screws and wood screws.
- D. Where powder-driven anchors are approved for use, plates anchored to concrete floor shall be attached with pins not over 32 inches on center. All vertical furring shall be attached to concrete with pins not over 4 feet on center. Each pin shall penetrate to a minimum of 1-1/2 inch. Use washers with all pins. There shall be a minimum of 2 anchors for each member.

3.07 INSTALLATION OF BUILDING PAPER

- A. Install the specified building paper over all exterior framing members lapping all joints to prevent penetration of water into the stud spaces, and securely fastening the paper in place in accordance with the manufacturer's published recommendations as approved by the Resident Engineer.

3.08 CLEANING UP

- A. Keep the premises in neat, safe, and orderly condition at all times during execution of this portion of the Work, free from accumulation of sawdust, cut ends, and debris.

END OF SECTION 061000

SECTION 064023 - INTERIOR ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.7 RELATED DOCUMENTS

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

1.8 SUMMARY

A. This Section includes the following:

1. Plastic-laminate cabinets.
2. Plastic-laminate countertops.
3. Shop finishing interior woodwork.

B. Related Sections include the following:

1. Division 6 Section "Rough Carpentry" for wood furring, blocking, shims, and hanging strips required for installing woodwork and concealed within other construction before woodwork installation.

1.9 DEFINITIONS

A. Interior architectural woodwork includes wood furring, blocking, shims, and hanging strips for installing woodwork items, unless concealed within other construction before woodwork installation.

1.10 SUBMITTALS

A. Product Data: For cabinet hardware and accessories.

B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.

1. Show locations and sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcement specified in other Sections.
2. Show locations and sizes of cutouts and holes for plumbing fixtures and other items installed in architectural woodwork.
3. Apply WI-certified compliance label to first page of Shop Drawings.

C. Samples for Initial Selection:

1. Plastic laminates.
2. Edge material.

D. Samples for Verification: For the following:

1. Plastic-laminate-clad panel products, 8 by 10 inches, for each type, color, pattern, and surface finish.
2. Corner pieces as follows: Cabinet-front frame joints between stiles and rails, as well as exposed end pieces, 18 inches high by 18 inches wide by 6 inches deep.
3. Exposed cabinet hardware and accessories, one unit for each type.

E. Product Certificates: Signed by manufacturers of woodwork certifying that products furnished comply with requirements.

1.11 QUALITY ASSURANCE

A. Quality Standard: Unless otherwise indicated, comply with WI's "Manual of Millwork" for grades of interior architectural woodwork, construction, finishes, and other requirements.

1. Provide WI-certified compliance certificate indicating that woodwork complies with requirements of grades specified.
2. Provide WI-certified compliance certificate for installation.
3. Final product and installation shall be certified by a WI inspector.
4. The Contract Documents contain selections chosen from options in the quality standard and additional requirements beyond those of the quality standard. Comply with such selections and requirements in addition to the quality standard.

B. Regulatory Requirements: Provide casework that complies with CBC Chapter 11B, Sections 1115B4.7 Accessible Sinks, 1117B Other Building Components, 1118B Space Allowance and Reach Ranges, 1122B for Counters and 1125B Storage, including 1125B.4 Hardware.

1.12 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver woodwork until painting and similar operations that could damage woodwork have been completed in installation areas. If woodwork must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Project Conditions" Article.

1.13 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, and wet work is complete

B. Field Measurements: Where woodwork is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1. Locate concealed framing, blocking, and reinforcements that support woodwork by field measurements before being enclosed.

1.14 COORDINATION

A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that interior architectural woodwork can be supported and installed as indicated.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Provide materials that comply with requirements of the WI quality standard for each type of woodwork and quality grade specified, unless otherwise indicated.

B. Wood Products: Comply with the following:

1. Softwood Plywood: DOC PS 1.

2.2 CABINET HARDWARE AND ACCESSORIES

- A. Hinges: Stainless-steel, 5-knuckle hinges complying with BHMA 156.9, Grade 1, with antifriction bearings and rounded tips. Provide 2 for doors less than 48 inches high and 3 for doors more than 48 inches high. Hinges shall be notched.
- B. Wire Pulls: Back mounted, D-shaped wire pulls, 4 inches long, 5/16 inches in diameter. Wire pulls shall comply with CBC Section 1125B.4.
- C. Catches: Magnetic catches, equivalent to the following:
 - 1. National Lock: No. 61-570.
 - 2. Stanley Hardware; NO. 41.
- D. Adjustable Shelf Standards and Supports:
 - 1. Shall be 32 mm systems and 5 mm shelf supports.
- E. Grommets for Cable Passage through Countertops: 2-inch OD, black, molded-plastic grommets and matching plastic caps with slot for wire passage.
- F. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for BHMA finish number indicated.
 - 1. Satin Chromium Plated: BHMA 626 for brass or bronze base; BHMA 652 for steel base.
- G. For concealed hardware, provide manufacturer's standard finish that complies with product class requirements in BHMA A156.9.

2.3 INSTALLATION MATERIALS

- A. Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln-dried to less than 19 percent moisture content. Horizontal hanging strips shall be attached and continuous between wall framing members. Coordinate locations with millwork manufacturer.
- B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.

2.4 FABRICATION, GENERAL

- A. Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to ambient relative humidity during fabrication and in installation areas.
- B. Complete fabrication, including assembly, finishing, and hardware application, to maximum extent possible, before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.
 - 1. Trial fit assemblies at fabrication shop that cannot be shipped completely assembled. Install dowels, screws, bolted connectors, and other fastening devices that can be removed after trial fitting. Verify that various parts fit as intended and check measurements of assemblies against field measurements indicated on Shop Drawings before disassembling for shipment.

C. Shop cut openings, to maximum extent possible, to receive hardware, appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.

1. Seal edges of openings in countertops with water resistant material.

2.5 PLASTIC-LAMINATE CABINETS

A. Quality Standard: Comply with WI Section 15, except all plywood cores shall be 7 ply with void free core and a non-telegraphing face.

B. Grade: Custom.

C. WIC Construction Style: Style A, Frameless.

D. WIC Construction Type: Type I, multiple self-supporting units rigidly joined together, or Type II, single-length sections to fit access openings.

E. WIC Door and Drawer Front Style: Flush overlay.

F. Laminate Cladding for Exposed Surfaces: High-pressure decorative laminate complying with the following requirements:

1. Horizontal Surfaces Other Than Tops: HPL.
2. Postformed Surfaces: HPL.
3. Vertical Surfaces: VGS.

Edge banding: Rigid PVC extrusions, bevel edges, through color with satin finish, 3 mm thick.

G. Materials for Semi exposed Surfaces: Provide surface materials indicated below:

1. Surfaces Other Than Drawer Bodies: High-pressure decorative laminate, Grade VGS, or cabinet liner.

H. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:

4. Match Architect's sample if available or provide full color range of standard product.

2.6 PLASTIC-LAMINATE COUNTERTOPS

A. Quality Standard: Comply with WIC Section 16 except use exterior grade plywood cores.

B. Grade: Custom.

C. High-Pressure Decorative Laminate Grade: HPL.

- D. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:
 - 1. Match Architect's sample if available or provide full color range of standard product.
- E. Edge Treatment: Rolled raised front edge.
- F. Core Material: Exterior-grade plywood.
- G. Backsplash: Coved.

2.7 FINISHING

- A. Quality Standard: Comply with WI Section 5, unless otherwise indicated.
 - 1. Grade: Provide finishes of same grades as items to be finished.
- B. General: Finish architectural woodwork at fabrication shop. Defer only final touchup, cleaning, and polishing until after installation.
- C. Preparations for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing architectural woodwork, as applicable to each unit of work.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Condition woodwork to average prevailing humidity conditions in installation areas before installation.
- B. Before installing architectural woodwork, examine shop-fabricated work for completion and complete work as required, including removal of packing.

3.2 INSTALLATION

- A. Quality Standard: Install woodwork to comply with WI Section 26 for the same grade specified in Part 2 of this Section for type of woodwork involved.
- B. Install woodwork level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 1/8 inch in 96 inches.
- C. Scribe and cut woodwork to fit adjoining work, and refinish cut surfaces and repair damaged finish at cuts.
 - 1. Anchor woodwork to anchors or blocking as specified by WI.
- D. Cabinets: Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated. No visible anchoring in semi-exposed casework. Anchor screws shall be covered by anchor covers.

1. Install cabinets with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line.
- E. Regulatory Requirements: Brace and anchor wall cabinets and base cabinets over 5 feet high in accordance with CBC requirements
- F. Countertops: Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop.

3.3 ADJUSTING AND CLEANING

- A. Repair damaged and defective woodwork, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean, lubricate, and adjust hardware.
- C. Clean woodwork on exposed and semi exposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION 064023

SECTION 071616 - CRYSTALLINE WATERPROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- D. Drawings and general provisions of the Contract, including General and Special Supplementary Conditions and Greenbook Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes: Furnishing of all labor, materials, services and equipment necessary for the supply and installation of crystalline waterproofing additive to concrete structures as indicated on the drawings and as specified herein. The crystalline waterproofing material shall be added to concrete during the mixing cycle, and shall be used in above or below-grade walls and slabs, including structures where enhanced chemical resistance is required.
- B. Related Sections:
 - 1. Section 033053 – Cast-in-Place Concrete Work
 - 2. Section 079200 - Joint Sealers

1.3 REFERENCES

- A. Applicable Standards: The following standards are referenced herein.
 - 1. American Society for Testing and Materials (ASTM)
 - 2. Army Corps of Engineers (CRD)
 - 3. American Concrete Institute (ACI)
 - 4. NSF International (NSF)

1.4 SYSTEM DESCRIPTION

- A. Crystalline Waterproofing Additive: Concrete waterproofing system shall be of the crystalline type that chemically controls and permanently fixes a non-soluble crystalline structure throughout the capillary voids of the concrete. The system shall cause the concrete to become sealed against the penetration of liquids from any direction, and shall protect the concrete from deterioration due to harsh environmental conditions.

1.5 SYSTEM PERFORMANCE REQUIREMENTS

- A. Testing Requirements: Crystalline waterproofing system shall be tested in accordance with the following standards and conditions, and the testing results shall meet or exceed the performance requirements as specified herein.
- B. Independent Laboratory: Testing shall be performed by an independent laboratory meeting the requirements of ASTM E 329-90 and certified by the United States Bureau of Standards. Testing laboratory shall obtain all concrete samples and waterproofing product samples.

1.6 SUBMITTALS

- A. General: Submit listed submittals in accordance with conditions of the Contract and with Greenbook Submittal Procedures Section.
- B. Product Data: Submit product data, including manufacturer's specifications, installation instructions, and general recommendations for waterproofing applications. Also include manufacturer's certification or other data substantiating that products comply with requirements of Contract Documents.

1.7 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer to be ISO 9001 registered, and to have no less than 10 years experience in manufacturing the crystalline waterproofing additive for the required work. Manufacturer must be capable of providing field service representation during construction phase.
- B. Technical Consultation: The waterproofing manufacturer's representative shall provide technical consultation on waterproofing application.

1.8 WARRANTY

- A. Manufacturer's Warranty: Manufacturer shall provide standard product warranty executed by authorized company official. Term of warranty shall be [specify term] years from Date of Substantial Completion.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Acceptable Manufacturer: Provide product by the following or an approved manufacture;

Xypex Chemical Corporation

13731 Mayfield Place, Richmond, B.C., Canada V6V 2G9

Tel: 800 961.4477 or 604 273.5265 Fax: 604 270.0451

E-mail: info@xypex.com, Website: www.xypex.com

- B. Source Quality: Obtain proprietary crystalline waterproofing products from a single manufacturer.

2.2 DOSAGE

- A. General: Xypex Admix must be added to concrete mix at time of batching.
- B. Dosage Rate: Under normal conditions, the crystalline waterproofing powder shall be added to the concrete mix at the following rates:

Xypex Admix C-500 2% – 3% by weight of portland cement content

Xypex Admix C-1000 2% – 3% by weight of portland cement content

Xypex Admix C-2000 2% by weight of portland cement content

PART 3 – EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data regarding installation, including technical bulletins, product catalogue, installation instructions and product packaging labels.

3.2 PROJECT CONDITIONS

- A. Reinforcement: All reinforcement shall be rib deformed bar in accordance with applicable standards. Exposed concrete decks (joint free) shall contain sufficient reinforcement to minimize thermal movement and control cracking.
- B. Setting Time and Strength: Some retardation of set may occur when using Admix products. The amount of retardation will depend upon the concrete mix design, the particular Admix product used, dosage rate of the Admix, temperature of the concrete and climatic conditions. Concrete containing a Admix product may develop higher ultimate strengths than plain concrete. Conduct trial mixes under project conditions to determine setting time and strength

of the concrete. Consult with manufacturer or manufacturer's representative regarding concrete mix design, project conditions and proper dosage rate.

- C. Weather Conditions: For mixing, transporting and placing concrete under conditions of high temperature or low temperature, follow concrete practices as referred to in ACI 305R-77 (Hot Weather Concreting) and ACI 306R-78 (Cold Weather Concreting). For flatwork being placed in either hot, dry or windy conditions use of monomolecular film (evaporation retardant) is recommended to control loss of bleed water.

3.3 APPLICATION

- A. General: Admix shall be added to the concrete mix at time of batching. Thorough blending of the Xypex Admix throughout the concrete mix is essential for correct performance of the product and, therefore, care should be taken to ensure that a homogeneous mixture is obtained.
- B. Concrete Batching & Mixing: Procedures for mixing will vary according to type of batch plant operation and equipment.
 - 1. Ready Mix Plant - Dry Batching Operation: Add Xypex Admix powder to drum of ready-mix truck, then add 60% - 70% of required water along with 300 - 500 lb. (136 - 227 kg) of aggregate. Mix the materials for 2 - 3 minutes to ensure that the Admix is distributed evenly throughout the mix water. Add balance of materials to the ready-mix truck and mix in accordance with standard batch practices.
 - 2. Ready Mix Plant - Central Mix Operation: Mix Xypex Admix with water to form a very thin slurry (e.g. 15 - 20 lb. or 6.75 - 9 kg of powder mixed with 3 gal. or 13.6 l of water). Pour the required amount of material in drum of ready-mix truck. The aggregate, cement and water should be batched and mixed in the plant in accordance with standard practices (taking into account the quantity of water that has already been placed in the ready-mix truck). Pour the concrete into the truck and mix for at least 5 minutes to ensure even distribution of the Xypex Admix throughout the concrete.
 - 3. Precast Batch Plant - Pan Type Mixer: Add Xypex Admix to the rock and sand, then mix thoroughly for 2 - 3 minutes before adding the cement and water. The total concrete mass should be blended using standard practices.

3.4 CURING

- A. General: Concrete containing Admix shall be moist cured in accordance with ACI Reference 308, "Standard Practice for Curing Concrete".
- B. Curing Compounds: Curing compounds may be used in the event that project requirements or conditions prevent moist curing. Curing compounds shall comply with ASTM C-309.

3.5 PROTECTION

- A. Protection: Protect installed product and finished surfaces from damage during construction.

3.6 FIELD QUALITY CONTROL

- A. Examination for Defects: Do not conceal treated concrete before it has been observed by Resident Engineer / Engineer, waterproofing manufacturer's representative and other designated entities. Concrete shall be examined for structural defects such as faulty construction joints, cold joints and cracks. Such defects to be repaired in accordance with manufacturer's repair procedures.

3.7 INTERACTION WITH OTHER MATERIALS

- A. Backfilling: Normal backfilling procedures may be used after concrete has been cured for at least seven days. If backfill takes place within seven days after concrete placement, then backfill material shall be moist so as not to draw moisture from the concrete. In no event shall backfilling take place before concrete has gained sufficient strength to withstand the applied load.

END OF SECTION 071616

SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes sealants for the following applications, including those specified by reference to this Section:
 - 1. Interior joints in the following vertical surfaces and horizontal nontraffic surfaces:
 - a. Control and expansion joints on exposed interior surfaces of exterior walls.
 - b. Tile control and expansion joints.
 - c. Joints between plumbing fixtures and adjoining walls, floors, and counters.
 - d. Other joints as indicated.
 - 2. Interior joints in the following horizontal traffic surfaces:
 - a. Control and expansion joints in tile flooring.
 - b. Other joints as indicated.

1.3 PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.

1.4 SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- C. Product Certificates: Signed by manufacturers of joint sealants certifying that products furnished comply with requirements and are suitable for the use indicated.
- D. Product Test Reports: From a qualified testing agency indicating sealants comply with requirements, based on comprehensive testing of current product formulations.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration date, pot life, curing time, and mixing instructions for multicomponent materials.
- B. Store and handle materials in compliance with manufacturer's written instructions to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations: 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.
- C. Joint-Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than those allowed by joint sealant manufacturer for applications indicated.
- D. Joint-Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates.

PART 2 - PRODUCTS

2.1 PRODUCTS AND MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide one of the products indicated for each type in the sealant schedules at the end of Part 3.

2.2 MATERIALS, 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 sealant manufacturer based on testing and field experience.
- B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range for this characteristic.

2.3 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric Sealant Standard: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant in the Elastomeric Joint-Sealant Schedule at the end of Part 3, including those referencing ASTM C 920 classifications for type, grade, class, and uses.
- B. Additional Movement Capability: Where additional movement capability is specified in the Elastomeric Joint-Sealant Schedule, provide products with the capability, when tested for adhesion and cohesion under maximum cyclic movement per ASTM C 719, to withstand the specified percentage change in the joint width existing at the time of installation and remain in compliance with other requirements of ASTM C 920 for uses indicated.
- C. Stain-Test-Response Characteristics: Where elastomeric sealants are specified in the Elastomeric Joint-Sealant Schedule to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.
- D. Suitability for Contact with Food: Where elastomeric sealants are indicated for joints that will come in repeated contact with food, provide products that comply with 21 CFR 177.2600.

2.4 LATEX JOINT SEALANTS

- A. Latex Sealant Standard: Comply with ASTM C 834 for each product of this description indicated in the Latex Joint-Sealant Schedule at the end of Part 3.

2.5 JOINT-SEALANT BACKING

- A. General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

- B. Cylindrical Sealant Backings: ASTM C 1330, of type indicated below and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance:
 - 1. Type C: Closed-cell material with a surface skin.
- C. 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 where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

1.2 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 with joint substrates.

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 joint-sealant performance.
- 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.
 - a. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, 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 from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
 - 2. Remove laitance and form-release agents from concrete.
 - 3. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.
- B. Joint Priming: Prime joint substrates where recommended in writing by joint sealant manufacturer, based on 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 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 indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations of ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install sealant backings of type indicated 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 back of joints.
- E. Install sealants by proven techniques to 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 provided for each joint configuration.
 - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
 - 1. Remove excess sealants from surfaces adjacent to joint.
 - 2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
 - 3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

3.4 CLEANING

- A. Clean off excess sealants 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 and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from the original work.

3.6 ELASTOMERIC JOINT-SEALANT SCHEDULE

- A. Low-Modulus Nonacid-Curing Silicone Sealant: Where joint sealants of this type are indicated, provide products complying with the following:
 - 1. Products: Provide one of the following
 - a. 790; Dow Corning.
 - b. Silpruf; GE Silicones.
 - c. Spectrem 1; Tremco.
 - 2. Type and Grade: S (single component) and NS (nonsag).
 - 3. Class: 25.
 - 4. Additional Movement Capability: 50 percent movement in extension and 50 percent movement in compression for a total of 100 percent movement.
 - 5. Use Related to Exposure: NT (nontraffic).
 - 6. Uses Related to Joint Substrates: M, G, A, and, as applicable to joint substrates indicated, O.
 - a. Use O Joint Substrates: Coated glass, color anodic aluminum, aluminum coated with a high-performance coating, galvanized steel, masonry, ceramic tile, and wood.
 - 7. Stain-Test-Response Characteristics: Nonstaining to porous substrates per ASTM C 1248.
 - 8. Applications:
 - a. Interior control and expansion joints.
- B. Mildew-Resistant Silicone Sealant: Where joint sealants of this type are indicated, provide products formulated with fungicide that are intended for sealing interior ceramic tile joints and other nonporous substrates that are subject to in-service exposures of high humidity and temperature extremes, and that comply with the following:
 - 1. Products: Provide one of the following
 - a. 786 Mildew Resistant; Dow Corning.
 - b. 898 Silicone Sanitary Sealant; Pecora Corporation.
 - c. Tremsil 600 White; Tremco.
 - 2. Type and Grade: S (single component) and NS (nonsag).
 - 3. Class: 25.
 - 4. Use Related to Exposure: NT (nontraffic).

5. Uses Related to Joint Substrates: G, A, and, as applicable to joint substrates indicated, O.
 6. Application: Ceramic wall tile.
- 3.7 LATEX JOINT-SEALANT SCHEDULE
- A. Latex Sealant: Where joint sealants of this type are indicated, provide products complying with the following:
1. Products: Provide one of the following
 - a. Chem-Calk 600; Bostik Inc.
 - b. Sonolac; Sonneborn Building Products Div., ChemRex, Inc.
 - c. Tremflex 834; Tremco.
 2. Applications:
 - a. Interior non-moving vertical joints.

END OF SECTION 079200

SECTION 081213 - HOLLOW METAL FRAMES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes hollow-metal frames.
- B. Related Requirements:
 - 1. Section 081416 "Flush Wood Doors" for wood doors installed in hollow-metal frames.

1.3 DEFINITIONS

- A. Minimum Thickness: Minimum thickness of base metal without coatings according to NAAMM-HMMA 803 or SDI A250.8.

1.4 COORDINATION

- A. Coordinate anchorage installation for hollow-metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, and finishes.
- B. Shop Drawings: Include the following:
 - 1. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
 - 2. Locations of reinforcement and preparations for hardware.
 - 3. Details of each different wall opening condition.
 - 4. Details of anchorages, joints, field splices, and connections.
 - 5. Details of moldings, removable stops, and glazing.
- C. Samples for Initial Selection: For units with factory-applied color finishes.
- D. Samples for Verification: Prepare Samples to demonstrate compliance with requirements for quality of materials and construction. Show profile, corner joint, floor and wall anchors, and silencers. Include separate section showing fixed hollow-metal panels and glazing if applicable.
- E. Schedule: Provide a schedule of hollow-metal work prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final Door Hardware Schedule.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver hollow-metal work palletized, packaged, or crated to provide protection during transit and Project-site storage. Do not use nonvented plastic.
 - 1. Provide additional protection to prevent damage to factory-finished units.
- B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.
- C. Store hollow-metal work vertically under cover at Project site with head up. Place on minimum 4-inch- high wood blocking. Provide minimum 1/4-inch space between each unit to permit air circulation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, [provide products by the following] [provide products by one of the following] [available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following]:
 - 1. Amweld International, LLC.
 - 2. Apex Industries, Inc.
 - 3. Ceco Door Products; an Assa Abloy Group company.
 - 4. Commercial Door & Hardware Inc.
 - 5. Curries Company; an Assa Abloy Group company.
 - 6. Custom Metal Products.
 - 7. Steelcraft; an Ingersoll-Rand company.
- B. Source Limitations: Obtain hollow-metal work from single source from single manufacturer.

2.2 INTERIOR FRAMES

- A. Construct interior frames to comply with the standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.
- B. Hollow-Metal Frames: NAAMM-HMMA 860. At interior locations
 - 1. Physical Performance: Level A according to SDI A250.4.
 - 2. Materials: Galvanealed steel sheet, minimum thickness of 16 gauge.
 - 3. Exposed Finish: Prime.

2.3 EXTERIOR HOLLOW-METAL FRAMES

- A. Construct exterior frames to comply with the standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.
- B. Hollow-Metal Frames: NAAMM-HMMA 860.
 - 1. Physical Performance: Level A according to SDI A250.4.

2. Materials: Galvanealed steel sheet, minimum thickness of 14 gauge for door openings
3. Exposed Finish: Prime.

2.4 FRAME ANCHORS

A. Jamb Anchors:

1. Stud-Wall Type: Designed to engage stud, welded to back of frames; not less than 0.042 inch thick.
2. Compression Type for Drywall Slip-on Frames: Adjustable compression anchors.

C. Floor Anchors: Formed from same material as frames, minimum thickness of 0.042 inch, and as follows:

1. Monolithic Concrete Slabs: Clip-type anchors, with two holes to receive fasteners.
2. Separate Topping Concrete Slabs: Adjustable-type anchors with extension clips, allowing not less than 2-inch height adjustment. Terminate bottom of frames at finish floor surface.

2.5 MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.

B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.

C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B.

D. Frame Anchors: ASTM A 879/A 879M, Commercial Steel (CS), 04Z coating designation; mill phosphatized.

1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M, hot-dip galvanized according to ASTM A 153/A 153M, Class B.

E. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.

F. Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow-metal frames of type indicated.

G. Grout: ASTM C 476, except with a maximum slump of 4 inches (102 mm), as measured according to ASTM C 143/C 143M.

H. Bituminous Coating: Cold-applied asphalt mastic, compounded for 15-mil (0.4-mm) dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.6 FABRICATION

A. Fabricate hollow-metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for metal thickness. Where practical, fit and assemble units in manufacturer's plant. To ensure proper assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.

- I. Hollow-Metal Frames: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.
 2. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
 3. Grout Guards: Weld guards to frame at back of hardware mortises in frames to be grouted.
 4. Floor Anchors: Weld anchors to bottoms of jambs with at least four spot welds per anchor; however, for slip-on drywall frames, provide anchor clips or countersunk holes at bottoms of jambs.
 5. Jamb Anchors: Provide number and spacing of anchors as follows:
 - a. Stud-Wall Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:
 - 1) Three anchors per jamb up to 60 inches high.
 - 2) Four anchors per jamb from 60 to 90 inches high.
 - 3) Five anchors per jamb from 90 to 96 inches high.
 - 4) Five anchors per jamb plus one additional anchor per jamb for each 24 inches or fraction thereof above 96 inches high.
 - b. Compression Type: Not less than two anchors in each frame.
 - c. Postinstalled Expansion Type: Locate anchors not more than 6 inches from top and bottom of frame. Space anchors not more than 26 inches o.c.
 6. Head Anchors: Two anchors per head for frames more than 42 inches wide and mounted in metal-stud partitions.
 7. Door Silencers: Except on weather-stripped frames, drill stops to receive door silencers as follows. Keep holes clear during construction.
 - a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
 - b. Double-Door Frames: Drill stop in head jamb to receive two door silencers.
 8. Terminated Stops: Terminate stops [6 inches] 6 above finish floor with a 90-degree angle cut, and close open end of stop with steel sheet closure. Cover opening in extension of frame with welded-steel filler plate, with welds ground smooth and flush with frame.
- J. Hardware Preparation: Factory prepare hollow-metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to SDI A250.6, the Door Hardware Schedule, and templates.
2. Reinforce frames to receive nontemplated, mortised, and surface-mounted hardware.
 3. Comply with applicable requirements in SDI A250.6 and BHMA A156.115 for preparation of hollow-metal work for hardware.
- K. Stops and Moldings: Provide stops and moldings around glazed lites and louvers where indicated. Form corners of stops and moldings with mitered hairline joints.

1. Single Glazed Lites: Provide fixed stops and moldings welded on secure side of hollow-metal work.
2. Multiple Glazed Lites: Provide fixed and removable stops and moldings so that each glazed lite is capable of being removed independently.
3. Provide fixed frame moldings on outside of exterior and on secure side of interior frames.
4. Provide loose stops and moldings on inside of hollow-metal work.
5. Coordinate rabbet width between fixed and removable stops with glazing and installation types indicated.

2.7 STEEL FINISHES

- A. Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.
 1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.
- B. Factory Finish: Clean, pretreat, and apply manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat, complying with SDI A250.3.
 1. Color and Gloss: As selected by Architect from manufacturer's full range

2.8 ACCESSORIES

- A. Grout Guards: Formed from same material as frames, not less than 0.016 inch thick.

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 embedded and built-in anchors to verify actual locations before frame installation.
- C. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.5 PREPARATION

- A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.
- E. Drill and tap frames to receive nontemplated, mortised, and surface-mounted hardware.

3.3 INSTALLATION

- A. General: Install hollow-metal work plumb, rigid, properly aligned, and securely fastened in place. Comply with Drawings and manufacturer's written instructions.
- B. Hollow-Metal Frames: Install hollow-metal frames of size and profile indicated. Comply with SDI A250.11 or NAAMM-HMMA 840 as required by standards specified.
 - 1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.
 - a. At fire-rated openings, install frames according to NFPA 80.
 - b. Where frames are fabricated in sections because of shipping or handling limitations, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces.
 - c. Install frames with removable stops located on secure side of opening.
 - d. Install door silencers in frames before grouting.
 - e. Remove temporary braces necessary for installation only after frames have been properly set and secured.
 - f. Check plumb, square, and twist of frames as walls are constructed. Shim as necessary to comply with installation tolerances.
 - g. Field apply bituminous coating to backs of frames that will be filled with grout containing antifreezing agents.
 - 2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with postinstalled expansion anchors.
 - a. Floor anchors may be set with power-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.
 - 3. Metal-Stud Partitions: Solidly pack mineral-fiber insulation inside frames.
 - 4. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout.
 - 5. Concrete Walls: Solidly fill space between frames and concrete with mineral-fiber insulation.
 - 6. In-Place Concrete or Masonry Construction: Secure frames in place with postinstalled expansion anchors. Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces.
 - 7. In-Place Metal or Wood-Stud Partitions: Secure slip-on drywall frames in place according to manufacturer's written instructions.
 - 8. Installation Tolerances: Adjust hollow-metal door frames for squareness, alignment, twist, and plumb to the following tolerances:

- a. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
- b. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
- c. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
- d. Plumbness: Plus or minus 1/16 inch, measured at jambs at floor.

3.4 ADJUSTING AND CLEANING

- A. Final Adjustments: Remove and replace defective work, including hollow-metal work that is warped, bowed, or otherwise unacceptable.
- B. Remove grout and other bonding material from hollow-metal work immediately after installation.
- C. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.
- D. Metallic-Coated Surface Touchup: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.
- E. Factory-Finish Touchup: Clean abraded areas and repair with same material used for factory finish according to manufacturer's written instructions.
- F. Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.

END OF SECTION 081213

SECTION 081416 - FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Solid-core doors with wood-veneer faces.

B. Related Sections:

1. Division 08 Section Hollow Metal Frames for door frames.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of door indicated. Include details of core and edge construction and trim for openings.

B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; location and extent of hardware blocking; and other pertinent data.

1. Indicate dimensions and locations of mortises and holes for hardware.

2. Indicate dimensions and locations of cutouts.

3. Indicate requirements for veneer matching.

4. Indicate doors to be factory finished and finish requirements.

5. Indicate fire-protection ratings for fire-rated doors.

C. Samples for Verification:

1. Factory finishes applied to actual door face materials, approximately 8 by 10 inches, for each material and finish.

1.4 INFORMATIONAL SUBMITTALS

A. Warranty: Sample of special warranty.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Comply with requirements of referenced standard and manufacturer's written instructions.

1.6 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace doors that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:
 - a. Warping (bow, cup, or twist) more than 1/4 inch in a 42-by-84-inch section.
 - b. Telegraphing of core construction in face veneers exceeding 0.01 inch in a 3-inch span.
2. Warranty shall also include installation and finishing that may be required due to repair or replacement of defective doors.
3. Warranty Period for Hollow-Core Interior Doors: Two year(s) from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

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

1. Algoma Hardwoods, Inc.
2. Eggers Industries.
3. Graham; an Assa Abloy Group company.

2.2 DOOR CONSTRUCTION, GENERAL

A. WDMA I.S.1-A Performance Grade: Heavy Duty.

B. Mineral-Core Doors:

1. Core: Noncombustible mineral product complying with requirements of referenced quality standard and testing and inspecting agency for fire-protection rating indicated.
2. Edge Construction: At hinge stiles, provide laminated-edge construction with improved screw-holding capability and split resistance. Comply with specified requirements for exposed edges.

3.2 VENEERED-FACED DOORS FOR TRANSPARENT FINISH

A. Interior Solid-Core Doors:

1. Grade: Custom (Grade A faces).
2. Species: Furnish species so when finished will match existing doors.

3. Cut: Rotary cut.
4. Exposed Vertical and Top Edges: Same species as faces or a compatible species.
5. Core: Either glued or nonglued wood stave or structural composite lumber.
6. Construction: Five or seven plies. Stiles and rails are bonded to core, then entire unit abrasive planed before veneering
7. WDMA I.S.1-A Performance Grade: Heavy Duty.

2.3 FABRICATION

A. Factory fit doors to suit frame-opening sizes indicated. Comply with clearance requirements of referenced quality standard for fitting unless otherwise indicated.

1. Comply with requirements in NFPA 80 for fire-rated doors as required.

B. Factory machine doors for hardware that is not surface applied. Locate hardware to comply with DHI-WDHS-3. Comply with final hardware schedules, door frame Shop Drawings, DHI A115-W series standards, and hardware templates.

1. Coordinate with hardware mortises in metal frames to verify dimensions and alignment before factory machining.

2.4 FINISHING

A. General: Comply with referenced quality standard for finishing. Complete fabrication, including fitting doors for openings and machining for hardware that is not surface applied, before finishing.

1. Finish faces, all four edges, edges of cutouts, and mortises. Stains and fillers may be omitted on top and bottom edges, edges of cutouts, and mortises.

B. Use only paints and coatings that comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

C. Transparent Finish:

1. Grade: Custom.
2. Finish: AWI conversion varnish or catalyzed polyurethane system.
3. Staining: Match existing doors.
4. Effect: Open-grain finish.
5. Sheen: Satin.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine doors and installed door frames before hanging doors.

1. Verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.
 2. Reject doors with defects.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Hardware: For installation, see Division 08 Section "Finish Hardware."
- B. Installation Instructions: Install doors to comply with manufacturer's written instructions and the referenced quality standard, and as indicated.
- C. Job-Fitted Doors: Align and fit doors in frames with uniform clearances and bevels as indicated below; do not trim stiles and rails in excess of limits set by manufacturer or permitted for fire-rated doors. Machine doors for hardware. Seal edges of doors, edges of cutouts, and mortises after fitting and machining.
1. Clearances: Provide 1/8 inch at heads, jambs, and between pairs of doors. Provide 1/8 inch from bottom of door to top of decorative floor finish or covering unless otherwise indicated. Where threshold is shown or scheduled, provide 1/4 inch from bottom of door to top of threshold unless otherwise indicated.
 2. Bevel non-fire-rated doors 1/8 inch in 2 inches at lock and hinge edges.
- D. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.
- E. Factory-Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

3.3 ADJUSTING

- A. Operation: Rehang or replace doors that do not swing or operate freely.
- B. Finished Doors: Replace doors that are damaged or that do not comply with requirements. Doors may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing.

END OF SECTION 081416

081473 – SLIDING DOOR

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes: Furnish and install factory fabricated and finished sliding hardware system(s) in accordance with plans and specifications.
- B. Related Work: (Insert applicable sections)
 - a) Section 051200 – Structural Steel Framing
 - b) Section 081416 – Flush Wood Doors
 - c) Section 087100 – Finish Hardware: Cylinders, Locks, Pulls & Handles

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's product data, specific hardware details and installation instructions for all materials provided in this section.
- C. Shop Drawings: Submit drawings that document layout, profiles, product components, anchorage details, track mounting and support, and adjoining interface construction.
- D. Samples: Submit hardware samples of components and finishes.
- E. Submittals shall include enclosed anodized aluminum track with integrated stop, two high density nylon wheel trolleys, bottom guide or optional floor channel.
- F. Provide Manufacturer's Warranty. Minimum Acceptable two (2) years.

1.4 QUALITY ASSURANCE:

- A. Sliding hardware system shall be certified and tested to the design performance criteria by an established independent testing laboratory and comply with all codes.

1.5 PRODUCT HANDLING:

- A. All materials shall arrive in the manufacturer's original sealed and labeled containers.
- B. Hardware and track components shall be protected from damage and stored in a dry, well ventilated area. Immediately report any damaged material to carrier that made the delivery and note such damage on the carrier's freight bill of lading.
- C. Precautions shall be taken during construction to ensure that hardware is not damaged. Do not install damaged goods. Damaged components shall be replaced.

1.6 SUBSTITUTIONS

- A. Request for substitutions shall be submitted in writing to and approved by the Resident Engineer 30 days prior to bid date.
- B. Requested substitutions shall meet the performance and quality standards of this section.

1.7 JOB CONDITIONS

- A. Verify that other trades have completed the necessary related work before installing the sliding hardware track.
- B. Floor and mounting surfaces shall be level, plumb, secure, true and straight. Substrates shall be of proper dimensions and material. Structural member that anchors the hardware system shall be of sufficient strength to support the attached loads.

1.8 WARRANTY

- A. Manufacturer's Standard Warranty: Warranted materials shall be free of defects in material and workmanship for a period of two (2) years from the date of substantial completion.

PART 2 - PRODUCTS

2.1 MANUFACTURER:

- A. Hawa Hardware provided by Hafele America Co. or approved equal

2.2 OPERATING CONDITIONS:

- A. Opening and closing force of the door shall be less than 5 lbs. after 500,000 cycles.
- B. Sliding Hardware Systems shall operate smoothly, quietly and effortlessly.

2.3 RELATED WORK REQUIREMENTS:

- A. Wood: Shall be in accordance with:
 - 1. NWWDA for Architectural Wood Flush Panels reference standard I.S. 1-A-97

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify structural supports are level and of adequate strength for applicable loads.
- B. Verify opening(s) dimensions prior to fabrication & assembly.

3.2 PREPARATION

- A. Site conditions shall be level, plumb, secure, straight and true. And shall be dry, clean and free of debris.

- B. Installer shall ensure hardware & track surfaces are clean and free of foreign matter.

3.3 INSTALLATION

- A. Installation shall be completed by an installer with a minimum of five (5) years experience with approval by the Resident Engineer in strict accordance with manufacturer's instructions.
- B. Sliding hardware system(s) shall be level, plumb, secure, true and straight and comply with manufacturer's installation instruction.
- C. Provide installation fasteners as required by the manufacturer.

3.4 ADJUSTMENT

- A. Upon installation, make appropriate adjustments and test hardware for ease of operation and safety.

END OF SECTION 0871473

SECTION 085413 - FIBERGLASS WINDOWS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- B. Drawings and general provisions of the Contract, including General and Special Supplementary Conditions and Greenbook Specification Sections, apply to this Section

1.2 SUMMARY

- B. Section includes fiberglass-framed windows.

1.3 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 fiberglass windows.
- B. Shop Drawings: 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" x 4" min in size.
- D. Samples for Initial Selection: For units with factory-applied color finishes.
 - 1. Include similar Samples of hardware and accessories involving color selection.
- E. Samples for Verification: For fiberglass windows and components required, prepared on Samples of size indicated below:
 - 1. Exposed Finishes: 2" x 4" min in size.
 - 2. Exposed Hardware: Full-size units.
- F. Product Schedule: For fiberglass windows. Use same designations indicated on Drawings.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For manufacturer and Installer.
- B. Product Test Reports: For each type of fiberglass window, for tests performed by a qualified testing agency.
- C. Field quality-control reports.
- D. Sample Warranties: For manufacturer's warranties.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A manufacturer capable of fabricating fiberglass 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 fiberglass window manufacturer for installation of units required for this Project.

1.6 WARRANTY

- A. Manufacturer's Warranty: Manufacturer agrees to repair or replace fiberglass 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, 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: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following.
 - 1. Milgard Windows, Inc
 - 2. Pella Corporation.
 - 3. Serious Materials Inc.
- B. Source Limitations: Obtain fiberglass 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: WDMA 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: 35
- C. Solar Heat-Gain Coefficient (SHGC): NFRC 200 maximum whole-window SHGC of .35 or as required by energy compliance forms or code.

2.3 FIBERGLASS WINDOWS

- A. Operating Types: Provide the following operating types in locations indicated on Drawings:
 - 1. Horizontal sliding.
 - 2. Fixed.

- B. Frames and Sashes: Pultruded fiberglass complying with AAMA/WDMA/CSA 101/I.S.2/A440 and with exposed exterior fiberglass surfaces finished with manufacturer's standard enamel coating complying with AAMA 623.
 - 1. Exterior Color: Color selected by Architect from manufacturer's full range
 - 2. Interior Finish: Matching exterior color and finish.
- C. Glass: Clear annealed glass, ASTM C 1036, Type 1, Class 1, q3.
 - 1. Kind: Fully tempered.
- D. Insulating-Glass Units: ASTM E 2190, certified through IGCC as complying with requirements of IGCC.
 - 1. Glass: ASTM C 1036, Type 1, Class 1, q3.
 - a. Tint: Clear.
 - b. Kind: Fully tempered
 - 2. Lites: two
 - 3. Filling: Fill space between glass lites with air
 - 4. Low-E Coating: Sputtered on second surface
 - 5. Retain "Integral Louver Blinds" Subparagraph below if required. Verify availability with manufacturers.
- E. Glazing System: Manufacturer's standard factory-glazing system that produces weathertight seal.
- F. Hardware, General: Provide manufacturer's standard hardware fabricated from aluminum, stainless steel, carbon steel complying with AAMA 907, or other corrosion-resistant material compatible with adjacent materials; designed to smoothly operate, tightly close, and securely lock fiberglass windows, and sized to accommodate sash weight and dimensions.
 - 1. Exposed Hardware Color and Finish: As selected by Architect from manufacturer's full range.
- G. Horizontal-Sliding Window Hardware:
 - 1. Sill Cap/Track: Extruded-aluminum track with natural anodized finish, of dimensions and profile indicated; designed to comply with performance requirements indicated and to drain to the exterior.
 - 2. Locks and Latches: Allow unobstructed movement of the sash across adjacent sash in direction indicated and operated from the inside only.
 - 3. Roller Assemblies: Low-friction design.
- H. Weather Stripping: Provide full-perimeter weather stripping for each operable sash unless otherwise indicated.
- I. Fasteners: Noncorrosive and compatible with window members, trim, hardware, anchors, and other components.
 - 1. Exposed Fasteners: Do not use exposed fasteners to the greatest extent possible. For application of hardware, use fasteners that match finish hardware being fastened.

2.4 ACCESSORIES

- A. Jamb Extensions: to match window frame and to fill complete width of jambs, head and sill.

2.5 INSECT SCREENS

- A. General: Fabricate insect screens to integrate with window frame. Provide screen for each operable exterior sash. Screen wickets are not permitted.

- 1. Type and Location: Half, outside for sliding sashes.

- B. Aluminum Frames: Manufacturer's standard aluminum alloy complying with SMA 1004 or SMA 1201. Fabricate frames with mitered or coped joints or corner extrusions, concealed fasteners, and removable PVC spline/anchor concealing edge of frame.

- 1. Tubular Framing Sections and Cross Braces: Roll formed from aluminum sheet.

- 2. Finish for Interior Screens: Baked-on organic coating in color selected by Architect from manufacturer's full range

- 3. Finish for Exterior Screens: Matching color and finish of cladding.

- C. Aluminum Wire Fabric: 18-by-16 diameter, coated aluminum wire.

- 1. Wire-Fabric Finish: Natural bright.

2.6 FABRICATION

- A. Fabricate fiberglass windows in sizes indicated. Include a complete system for installing and anchoring windows.

- B. Glaze fiberglass windows in the factory.

- C. Weather strip each operable sash to provide weathertight installation.

- D. Window Assemblies: Provide units in configuration indicated. Provide window frames, sashes, hardware, and other trim and components necessary for a complete, secure, and weathertight installation, including the following:

- 1. Angled mullion posts with interior and exterior trim.

- 2. Angled interior and exterior extension and trim.

- 3. Exterior head and sill casings and trim.

- 4. Support brackets.

- 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. Allow for scribing, trimming, and fitting at Project site.

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, hardware, accessories, 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, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction to produce weathertight construction.

3.3 ADJUSTING, CLEANING, AND PROTECTION

- A. Adjust operating sashes and hardware for a tight fit at contact points and weather stripping for smooth operation and weathertight closure.
- B. Clean exposed surfaces immediately after installing windows. Remove excess sealants, glazing materials, dirt, and other substances.
 - 1. Keep protective films and coverings in place until final cleaning.
- C. Remove and replace sashes if glass has been broken, chipped, cracked, abraded, or damaged during construction period.
- D. 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 085413

SECTION 087100 -- FINISH HARDWARE

PART 1 -GENERAL

1.0 RELATED DOCUMENTS

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

1.1 SUMMARY

A. Section Includes:

1. Door Hardware, including electric hardware.
2. Storefront and entrance door hardware.
3. Padlocks.
4. Cylinders for doors fabricated with locking hardware.
5. Key cabinets, key management software.

B. Related Sections:

1. Section 064023 – Interior Architectural Woodwork – for hardware installation.
2. Section 079200 - Joint Sealers – for exterior thresholds.
3. Section 081213 – Hollow Metal Frames.
4. Section 081416 – Flush Wood Doors.

C. Specific Omissions: Hardware for the following is specified or indicated elsewhere.

1. Windows.
2. Cabinets, including open wall shelving and locks.
3. Signs, except where scheduled.
4. Toilet accessories, including grab bars.
5. Installation.
6. Rough hardware.
7. Access doors and panels, except cylinders where detailed.
8. Corner Guards.
9. Railings, gates and supports.

1.2 REFERENCES:

- A. Use date of standard in effect as of Bid date.
- B. American National Standards Institute – ANSI 156.18 – Materials and Finishes.
- C. ANSI A117.1 – Specifications for making buildings and facilities usable by physically handicapped people.
- D. ADA – Americans with Disabilities Act of 1990

- E. BHMA – Builders Hardware Manufacturers Association
- F. DHI – Door and Hardware Institute
- G. NFPA – National Fire Protection Association
 - 1. NFPA 80 – Fire Doors and Windows
 - 2. NFPA 101 – Life Safety Code
 - 3. NFPA 105 – Smoke and Draft Control Door Assemblies
 - 4. NFPA 252 – Fire Tests of Door Assemblies
- H. UL – Underwriters Laboratories
 - 1. UL10C – Fire Tests of Door Assemblies (Positive Pressure)
 - 2. UL 305 – Panic Hardware
- I. WHI – Warnock Hersey Incorporated
- J. State of California Building Code
- K. SDI – Steel Door Institute
- L. WDI – Wood Door Institute
- M. AWI – Architectural Woodwork Institute
- N. NAAM – National Association of Architectural Metal Manufacturers

1.3 SUBMITTALS & SUBSTITUTIONS

- A. SUBMITTALS: Submit six copies of schedule. Organize vertically formatted schedule into “Hardware Sets” with index of doors and headings, indicating complete designations of every item required for each door or opening. Include following information:
 - 1. Type, style, function, size, quantity and finish of hardware items.
Use BHMA Finish codes per ANSI A156.18.
 - 2. Name, part number and manufacturer of each item.
 - 3. Fastenings and other pertinent information.
 - 4. Location of hardware set coordinated with floor plans and door schedule.
 - 5. Explanation of abbreviations, symbols, and codes contained in schedule.
 - 6. Mounting locations for hardware.
 - 7. Door and frame sizes, materials and degrees of swing.
 - 8. List of manufacturers used and their nearest representative with address and phone number.
 - 9. Catalog cuts.
 - 10. Manufacturer’s technical data and installation instructions for electronic hardware.
 - 11. Date of jobsite visit.
- B. Bid and submit manufacturer’s updated/improved item if scheduled item is discontinued.

- C. Make substitution requests in accordance with Whitebook. Include product data and indicate benefit to the Project. Furnish operating samples on request.
 - D. Furnish as-built/as-installed schedule with closeout documents, including keying schedule, wiring/riser diagrams, manufacturers' installation, adjustment and maintenance information, and supplier's final inspection report.
- 1.4 QUALITY ASSURANCE:
- A. Qualifications:
 - 1. Hardware supplier: direct factory contract supplier who employs a certified architectural hardware consultant (AHC), available at reasonable times during course Work for project hardware consultation to Owner, Resident Engineer and Contractor.
 - (1) Responsible for detailing, scheduling and ordering of finish hardware.
 - B. Hardware: New, free of defects, blemishes and excessive play. Obtain each kind of hardware, latch and locksets, exit devices, hinges and closers, from one manufacturer.
 - C. Exit Doors: Operable from inside with single motion without the use of a key or special knowledge or effort.
 - D. Mandatory - Pre-Installation Meeting(s): Initiate and conduct with supplier, installer and related trades, coordinate materials and techniques, and sequence complex hardware items and systems installation. Convene at least one week prior to ordering material or commencement of related work.
- 1.5 DELIVERY, STORAGE AND HANDLING:
- A. Delivery: coordinate delivery to appropriate locations (shop or field).
 - 1. Permanent keys and cores: secured delivery direct to Owner's representative.
 - B. Acceptance at Site: Items individually packaged in manufacturers' original containers, complete with proper fasteners and related pieces. Clearly mark packages to indicate contents, locations in hardware schedule and door numbers.
 - C. Storage: Provide locked storage area for hardware, protect from moisture, sunlight, paint, chemicals, etc...
- 1.6 PROJECT CONDITIONS:
- A. Where exact types of hardware specified are not adaptable to finished shape or size of members requiring hardware, provide suitable types having as nearly as practical as the same operation and quality as type specified, subject to Resident Engineer's approval.
- 1.7 SEQUENCING AND COORDINATION:
- A. Coordinate with concrete.
 - B. Reinforce walls.
 - C. Coordinate finish floor materials and floor-mounted hardware.
 - D. Furnish manufacturer templates to door and frame fabricators.
 - E. Use hardware consultant to check Shop Drawings for doors and entrances to confirm that adequate provisions will be made for proper hardware installation.

1. Confirm that door manufacturers furnish necessary UBC-7-2 compliant seal packages.

1.8 WARRANTY:

- A. Part of respective manufacturers' regular terms of sale. Provide manufacturers' warranties:
 1. Closers: Ten years mechanical, two years electrical.
 2. Exit Devices: Three years.
 3. Hinges: Life of Building.
 4. Other Hardware: Two years.

1.9 COMMISSIONING:

- A. Test door hardware operation with climate control system and stairwell pressurization system both at rest and while in full operation.
- B. Test electrical, electronic and electro-pneumatic hardware systems for satisfactory operation.
- C. Test hardware interfaced with fire/life-safety system for proper operation and release.

PART 2 - PRODUCTS

2.1 MANUFACTURERS:

- A. Listed acceptable alternate manufacturers: submit for review products with equivalent function and features of scheduled products.

<u>ITEM:</u>	<u>MANUFACTURER:</u>	<u>ACCEPTABLE SUB:</u>
Hinges	(IVE) Ives	Bommer, Stanley
Key System	(BES) Best	Owner's Standard
Locks	(SCH) Schlage	Owner's Standard
Exit Devices	(VON) Von Duprin	Owner's Standard
Closers	(LCN) LCN	Norton 7500
Silencers	(IVE) Ives	Hager
Push & Pull Plates	(IVE) Ives	Hager, Rockwood
Kickplates	(IVE) Ives	Hager, Rockwood
Stops & Holders	(IVE) Ives	Trimco, Rockwood
Thresholds	(NGP) National Guard	Pemko, Reese
Seals & Bottoms	(NGP) National Guard	Pemko, Reese

- B. Provide hardware items required to complete the work in accordance with these specifications and manufacturers' instructions.
 1. Include items inadvertently omitted from this specification. Note these items in submittal for review.
 2. Where scheduled item is now obsolete, bid and furnish manufacturers updated item at no additional cost to the project.

2.2 HANGING MEANS:

- A. Conventional Hinges: Hinge open widths minimum, but, of sufficient throw to permit maximum door swing. Stainless steel pins and concealed bearings with stainless steel fasteners.

1. Three hinges per leaf to 7 foot, 6 inch height. Add one for each additional 30 inches in height, or any fraction thereof.
2. Extra heavy weight hinges on doors over 3 foot, 5 inches in width.
3. Outswinging exterior doors: non-ferrous with non-removable (NRP) stainless steel pins.
4. Non-ferrous material exteriors and at doors subject to corrosive atmospheric conditions.
5. Provide shims and shimming instructions for proper door adjustment.

2.3 LOCKSETS, LATCHSETS, DEADBOLTS:

A. Mortise and Cylindrical Locksets: as scheduled.

1. Chassis: cold-rolled steel, handing field-changeable without disassembly.
2. Lever Trim: through-bolted, Schlage 06A and Rhodes as scheduled. Filled hollow tube design unacceptable.
3. Provide with concealed cylinder.
4. Provide with a minimum 5 year warranty
5. Thumbturns: accessible design not requiring pinching or twisting motions to operate.
6. Deadbolts: stainless steel 1-inch throw.
7. Strikes: 16 gage curved steel, bronze or brass with 1 inch deep box construction, lips of sufficient length to clear trim and protect clothing.
8. Scheduled Lock Series and Design: Schlage L series, Schlage ND series.
9. Certifications:
 - a. ANSI A156.13, 1994, Grade 1 Operational, Grade 1 Security.
 - b. ANSI A.156.2-2003 Grade 1, UL Listed.
 - c. Approved by the Federal Bureau of Prisons.

2.4 CLOSERS

A. General: One manufacturer for closer units throughout the Work.

B. Surface Closers:

1. Full rack-and-pinion type cylinder with removable non-ferrous cover and cast iron body. Double heat-treated pinion shaft, single piece forged piston, chrome-silicon steel spring.
2. ISO 2000 certified. Units stamped with date-of-manufacture code.
3. Thru-bolts at wood doors unless doors are provided with closer blocking. Non-sized, non-handed, and adjustable.
4. Plates, brackets and special templating when needed for interface with particular header, door and wall conditions and neighboring hardware.
5. Opening pressure: Exterior doors 5 lb., interior doors 5 lb., labeled fire doors 5 lb or up to 15 lbs with permission from the Authority Having Jurisdiction..

6. Separate adjusting valves for closing speed, latching speed and backcheck, fourth valve for delayed action where scheduled.
7. Closers, interior and exterior are to have a special rust inhibitor on the body and arms.
8. Provide non corrosive fasteners of brass bronze or stainless steel.
9. Non-flaming fluid will not fuel door or floor covering fires.
10. Accepted: LCN 4041 Series, Norton 7500 with forged arms.

2.5 OTHER HARDWARE

- A. Flush Bolts: Low operating force design with stainless steel fasteners.
- B. Kick Plates: Four beveled edges, .050 inches minimum thickness, height and width as scheduled. Sheet-metal screws of stainless steel to match other hardware.
- C. Door Stops: Provide stops to protect walls, casework or other hardware with stainless steel fasteners.
 1. Seals: Finished to match adjacent frame color.
 2. Fire-rated Doors, Brush Seals: UL10C/UBC-7-2 compliant. Coordinate with selected door manufacturers and selected frame manufacturer's requirements. Where rigid housed brush seals are scheduled in this section and the selected door manufacturer only requires an adhesive mounted resilient seal, furnish rigid housed seal at minimum, or both the rigid housed seal and the adhesive applied seal if necessary to fulfill door manufacturer's requirement. Adhesive applied seal alone is deemed insufficient for this project where rigid housed seals are scheduled.
 3. Fire-rated Doors, Intumescent Seals: Furnish fire-labeled opening assembly complete and in full compliance with UL10C/UBC-7-2. Furnished by selected door manufacturer, these seals vary in requirement by door type and door manufacture. Adhesive applied intumescent strips are not acceptable, use concealed-in-door-edge type.
- E. Thresholds: As scheduled and per details. Substitute products: certify that the products equal or exceed specified material's thickness. Proposed substitutions: submit for approval.
 1. Set in full bed of butyl-rubber or polyisobutylene mastic sealant complying with requirements in Division 7 "Thermal and Moisture Protection". Non-ferrous ¼ inch fasteners and lead expansion shield anchors, or Red-Head #SFS-1420 (or approved equivalent) Flat Head Sleeve Anchors (SS/FHSL).
 2. Provide manufacturer's non skid surface.
- F. Fasteners: Generally, exposed screws to be Phillips or Robertson drive. Provide stainless steel, plated brass or plated bronze fasteners.
- G. Silencers: Interior hollow metal frames, 3 for single doors, 4 for pairs of doors. Omit where adhesive mounted seal occurs. Leave no unfilled/uncovered pre-punched silencer holes.
- H. Exit Devices: Von Duprin 99 Series with cylinder dogging and the "XP" security latch. Provide the Vandal Restituant (VR) Pull.

2.6 FINISH:

- A. Stain Nickel, BHMA 626, brass/bronze base, brushed chrome plated and BHMA 630, Brushed Stainless Steel.
- B. Door closers: Powder coated to Stain Chrome.
- C. Aluminum items: match predominant adjacent material. Seals to coordinate with frame color.

2.7 KEYING REQUIREMENTS:

- A. Key Systems: Where indicated in the hardware sets provide the Best 7-pin interchangeable core in small format in the keyway of record . Where indicated in the hardware sets provide small format interchangeable core in keyway of record, in small format keyed to the existing system in the keyway of record. Key blanks available only from factory-direct sources, not available from after-market key blank manufacturers. For estimate use factory GMK charge. Initiate and conduct meeting(s) with Owner to determine system keyway(s) and structure, furnish Owner’s written approval of the system.
 - 1. Existing factory registered master key system. Meet with the owner to determine the continuation of the system and establish the keying nomenclature.
 - 2. Construction keying: brass keyed-alike temporary cores plus 5 operating keys and 2 construction control keys. Temporary cores and keys remain property of hardware supplier.
- B. Keys: Four Keys per cylinder, one Master and Control..stamped “Do not Duplicate”. Provide to City Lock Shop.
- C. Locksets and cylinders: keyed at factory of lock manufacturer where permanent records are maintained. Locks and cylinders same manufacturer.
- D. Permanent keys and cores: secured shipment direct from point of origination to Owner’s representative.
- E. Bitting List: Secured shipment direct from point of origination to Owner upon completion.

PART 3 - EXECUTION

3.1 ACCEPTABLE INSTALLERS:

- A. Factory trained, certified, and carries a factory-issued card certifying that person as a “Certified Installer”. Alternative: can demonstrate suitably equivalent competence and experience.

3.2 PREPARATION:

- A. Ensure that walls and frames are square and plumb before hardware installation.
- B. Locate hardware per SDI-100 and applicable building, fire, life-safety, accessibility, and security codes.
 - 1. Notify Resident Engineer of any code conflicts before ordering material.
 - 2. Where new hardware is to be installed near existing doors/hardware scheduled to remain, match locations of existing hardware.

3.3 INSTALLATION

- A. Install hardware per manufacturer’s instructions and recommendations. Do not install surface-mounted items until finishes have been completed on substrate. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate for proper installation and operation.

1. Gaskets: install jamb-applied gaskets before closers, overhead stops, rim strikes, etc. Install sweeps across bottoms of doors before astragals, cope sweeps around bottom pivots, trim astragals to tops of sweeps.
 2. When hardware is to be attached to existing metal surface and insufficient reinforcement exists, use RivNuts, NutSerts or similar anchoring device for screws.
- B. Locate floor stops not more than 4 inches from the wall.
 - C. Drill pilot holes for fasteners in wood doors and/or frames.
 - D. Lubricate and adjust existing hardware scheduled to remain. Carefully remove and give to Owner items not scheduled for reuse.

3.4 ADJUSTING

- A. Adjust and check for proper operation and function. Replace units, which cannot be adjusted to operate freely and smoothly.
 1. Hardware damaged by improper installation or adjustment methods to be repaired or replaced to Owner's satisfaction.
- B. Inspection: Use hardware supplier. Include suppliers with closeout documents.
- C. Follow-up inspection: Installer to provide letter of agreement to Owner that approximately 6 months after substantial completion, installer will visit Project with representatives of the manufacturers of the locking devices and door closers to accomplish following:
 1. Re-adjust hardware.
 2. Evaluate maintenance procedures and recommend changes or additions, and instruct Owner's personnel.
 3. Identify items that have deteriorated or failed.
 4. Submit written report identifying problems and likely future problems.
 5. Provide written verification that doors meet accessible code requirements for opening and closing force.

3.5 DEMONSTRATION:

- A. Demonstrate electrical, electronic and pneumatic hardware systems, including adjustment and maintenance procedures.

3.6 PROTECTION/CLEANING:

- A. Cover installed hardware, protect from paint, cleaning agents, weathering, carts/barrows, etc. Remove covering materials and clean hardware just prior to substantial completion.
- B. Clean adjacent wall, frame and door surfaces soiled from installation/reinstallation process.

3.7 SCHEDULE OF FINISH HARDWARE

- A. See door schedule in drawings for hardware set assignments.
- B. Manufacturers and their abbreviations used in this schedule:

IVE	H. B. Ives
LCN	LCN Closers
NGP	National Guard Products
SCH	Schlage Lock Company

SPECWORKS # 102866-B7O845656

Heading 001

1 SGL DOOR 100 EXTERIOR / MEN'S HALLWAY 104
 1 SGL DOOR 200 EXTERIOR / WOMEN'S HALLWAY 204
 3'0" x 6'8" x 1-3/4" x XWDD x XHMF x NON-RTD

Each Assembly to have:

1	EA	PANIC HARDWARE	CDXP99NL-OP	626	VON
1	EA	RIM CYLINDER	1E62	626	BES
1	EA	MORTISE CYLINDER	1E74	626	BES
1	EA	DOOR PULL	VR910NL	630	IVE
1	EA	SURFACE CLOSER	4040XP SHCUSH SRI BODY AND ARM	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE

Heading 002

1 SGL DOOR 105 MEN'S HALLWAY 104 / JANITOR 105
 1 SGL DOOR 106 MEN'S HALLWAY 104 / STORAGE 106
 3'0" x 6'8" x 1-3/4" x WD x HMF x NON-RTD

Each Assembly to have:

3	EA	HINGE	3CB1 4.5 X 4 NRP	652	IVE
1	EA	STD COMBINATED CORE	1C7	626	BES
1	EA	STOREROOM LOCK	L9080BDC 06A	626	SCH
1	EA	OVERHEAD STOP	814S	630	GLY
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
3	EA	SILENCER	SR64	630	IVE

Heading 003

1 SGL DOOR 401 EXTERIOR / FAMILY TOILET 401
 1 SGL DOOR 402 EXTERIOR / FAMILY TOILET 401
 3'0" x 6'8" x 1-3/4" x WD x HMF x NON-RTD

Each Assembly to have:

1	EA	CONTINUOUS HINGE	715	630	IVE
1	EA	STD COMBINATED CORE	1C7	626	BES
1	EA	MORTISE DEADBOLT	L496BDC L583-363	626	SCH
1	EA	PUSH PLATE	8200 8" X 16" CUT FOR CYLINDER	630	IVE
1	EA	PULL PLATE	8302-8 6" X 16" CUT FOR TURN PIECE	630	IVE
1	EA	SURFACE CLOSER	4041 PULL SIDE MOUNT	689	LCN
1	EA	OVERHEAD STOP	814S	630	GLY
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
2	EA	JAMB SEALS	9600A	AL	NGP
1	EA	DRIP CAP	16A	AL	NGP
1	EA	DOOR SWEEP/DRIP	618	628	NGP
1	EA	HEAD SEAL	706A	AL	NGP
1	EA	THRESHOLD	613 SIA MS&A OR PER DETAIL	AL	NGP

INDICATOR TO READ "OCCUPIED".

TURN PIECE TO BE MOUNTED ABOVE PULL HANDLE. COORDINATE MOUNTING HEIGHT CENTER LINE OF DEADBOLT WITH CUT OUTS IN THE PUSH AND PULL PLATES.

Heading 004

1 SGL DOOR 301 STAFF LOUNGE 300 / STAFF TOILET301
 3'0" x 6'8" x 1-3/4" x WD x HMF x NON-RTD

Each Assembly to have:

3	EA	HINGE	3CB1 4.5 X 4 NRP	652	IVE
1	EA	STD COMBINATED CORE	1C7	626	BES
1	EA	PRIVACY LOCK	L9496BDC 06A L583-363	626	SCH
1	EA	OVERHEAD STOP	814S	630	GLY
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

Heading 005

1 SGL DOOR 104 LOBBY / MEN'S HALLWAY 104
 1 SGL DOOR 204 LOBBY / WOMEN'S HALLWAY 204
 3'0" x 6'8" x 1-3/4" x WD x HMF x NON-RTD

Each Assembly to have:

1	EA	CONTINUOUS HINGE	715	630	IVE
1	EA	STD COMBINATED CORE	1C7	626	BES
1	EA	MORTISE DEADBOLT	L463BDC XB11-720	626	SCH
1	EA	PUSH PLATE	8200 8" X 16" CUT FOR CYLINDER	630	IVE
1	EA	PULL PLATE	8302-8 6" X 16" CUT FOR TURN PIECE	630	IVE
1	EA	SURFACE CLOSER	4041 H PULL SIDE MOUNT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	WALL STOP	WS407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

TURN PIECE TO BE MOUNTED ABOVE PULL HANDLE. COORDINATE MOUNTING HEIGHT CENTER LINE OF DEADBOLT WITH CUT OUTS IN THE PUSH AND PULL PLATES.

Heading 006

1 SGL DOOR 300 EXTERIOR / STAFF LOUNGE 300
 3'0" x 6'8" x 1-3/4" x WD x HMF x NON-RTD

Each Assembly to have:

1	EA	CONTINUOUS HINGE	715	630	IVE
2	EA	STD COMBINATED CORE	1C7	626	BES
1	EA	CLASSROOM LOCK	L9077BDC 06A LESS OUTSIDE TRIM	626	SCH
1	EA	DOOR PULL	VR900	630	IVE
1	EA	SURFACE CLOSER	4040XP SHCUSH SRI BODY AND ARM	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
2	EA	JAMB SEALS	9600A	AL	NGP
1	EA	DRIP CAP	16A	AL	NGP
1	EA	DOOR SWEEP/DRIP	618	628	NGP
1	EA	HEAD SEAL	706A	AL	NGP
1	EA	THRESHOLD	613 SIA MS&A OR PER DETAIL	AL	NGP

Heading 007

1 SGL DOOR 001
1 SGL DOOR 002
1 SGL DOOR 006

VARIABLES x VARIABLES x 1-3/4" x XWDD x XHMF x NON-RTD

Each Assembly to have:

SIGNAGE BY OTHERS-EXISTING HDWE TO
REMAIN

Heading 008

1 SGL DOOR 003 EXTERIOR / MECHANICAL/MAINTENANCE

VARIABLES x VARIABLES x 1-3/4" x XWDD x XHMF x NON-RTD

Each Assembly to have:

1	EA	STD COMBINATED CORE	1C7	626	BES
1	EA	STOREROOM LOCK	L9480BDC 06N	626	SCH
				BALANCE OF HARDWARE TO REMAIN	

Heading 009

1 SGL DOOR 005 HALLWAY / MECHANICAL/MAINTENANCE

VARIABLES x VARIABLES x 1-3/4" x XWDD x XHMF x NON-RTD

Each Assembly to have:

2	EA	STD COMBINATED CORE	1C7	626	BES
1	EA	CLASSROOM LOCK	L9071BDC 06N	626	SCH
				BALANCE OF HARDWARE TO REMAIN	

END OF SECTION 087100

SECTION 089000 - EXTRUDED ALUMINUM STATIONARY LOUVERS

PART 1 - GENERAL

1.0 RELATED DOCUMENTS

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

1.1 SECTION INCLUDES

- A. Extruded aluminum stationary louvers with drainable blades.

1.2 RELATED SECTIONS

- A. Section 061000 - Rough Carpentry.
- B. Section 079200 - Joint Sealants.

1.3 REFERENCES

- A. AAMA 605.2 - High Performance Organic Coatings on Architectural Extrusions and Panels.
- B. AMCA 500 - Test Methods for Louvers, Dampers and Shutters.
- C. AMCA 511 - Certified Ratings Program for Air Control Devices.

1.4 SUBMITTALS

- A. Comply with submittal requirements of the Greenbook.
- B. Product Data: Submit manufacturer's product data including performance data.
- C. Shop Drawings: Submit shop drawings indicating materials, construction, dimensions, accessories, and installation details.
- D. Samples: Submit sample of louver to show frame, blades, bird screen, gutters, downspouts, vertical supports, sill, accessories, finish, and color.

1.5 QUALITY ASSURANCE

- A. Louvers licensed to bear AMCA Certified Ratings Seal. Ratings based on tests and procedures performed in accordance with AMCA 511 and comply with AMCA Certified Ratings Program. AMCA Certified Ratings Seal applies to air performance and water penetration ratings.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly indicating manufacturer and material.
- B. Storage: Store materials in a dry area indoors, protected from damage and in accordance with manufacturer's instructions.
- C. Handling: Protect materials and finishes during handling and installation to prevent damage.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Ruskin Manufacturing or approved equal.

2.2 EXTRUDED ALUMINUM STATIONARY LOUVERS

A. Fabrication:

Model: ELF375DXH.

Performance Ratings: AMCA licensed.

Frame:

- a. Material: Extruded aluminum, Alloy 6063-T5.
- b. Wall Thickness: 0.125 inch, nominal.
- c. Depth: 4 inches.
- d. Downspouts and caulking surfaces.

Blades:

- a. Style: Drainable.
- b. Material: Extruded aluminum, Alloy 6063-T5.
- c. Wall Thickness: 0.125 inch, nominal.
- d. Angle: 37.5 degrees.
- e. Centers: 5-3/32 inches, nominal.

Bird Screen:

- a. Material: Aluminum, 5/8 inch x 0.051 inch, expanded, flattened.
- b. Frame: Removable, re-wireable.
- c. Gutters: Drain gutter in head frame and each blade.
- d. Downspouts: Downspouts in jambs to drain water from louver for minimum water cascade from blade to blade.
- e. Vertical Supports: Hidden vertical supports to allow continuous line appearance up to 120 inches.
- f. Sill: Steeply angled integral sill eliminating areas of standing or trapped moisture where mold or mildew may thrive and effect indoor air quality.
- g. Assembly: Factory assembled louver components. All welded construction.

B. Performance Data:

1. Based on testing 48 inch x 48 inch size unit in accordance with AMCA 500.
2. Free Area: 54 percent, nominal.
3. Free Area Size: verify size per drawings.
4. Maximum Recommended Air Flow Thru Free Area: 873 feet per minute.
5. Maximum Pressure Drop: 0.15 inches w.g.
6. Water Penetration: Maximum of 0.01 ounces per square foot (3.1 g/m²) of free area at an air flow of 873 feet per minute (266 m/min) free area velocity when tested for 15 minutes.

2.3 FACTORY FINISH

- A. Standard mill finish.
- B. Prime Coat:
 - 1. Apply alkyd prime coat following chemical cleaning and pretreatment. Provide full range of standard colors to match existing trim work.
 - 2. Primer preparation for field painting.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Inspect areas to receive louvers. Notify the Resident Engineer of conditions that would adversely affect the installation or subsequent utilization of the louvers. Do not proceed with installation until unsatisfactory conditions are corrected.

3.2 INSTALLATION

- A. Install louvers at locations indicated on the drawings and in accordance with manufacturer's instructions.
- B. Install louvers plumb, level, in plane of wall, and in alignment with adjacent work. Modify wood framed construction as necessary to accommodate the required louvers per structural drawings, specifications and details.
- C. Provide metal opening flashing and counter flashing for watertight installation, over flexible 40 mil bitumen window flashing material on head, jambs and sills.
- D. Install joint sealants as specified in Section 079200.

3.3 CLEANING

- A. Clean louver surfaces in accordance with manufacturer's instructions.
- B. Repair minor damaged surfaces as directed by Resident Engineer.

END OF SECTION 089000

SECTION 092900 - GYPSUM BOARD

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Interior gypsum board.
 - 2. Texture finishes.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.

1.4 QUALITY ASSURANCE

1.5 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.

2.2 FIELD CONDITIONS

- A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.
- B. Do not install panels that are wet, those that are moisture damaged, and those that are 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. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. American Gypsum.
 - 2. CertainTeed Corp.

3. Georgia-Pacific Gypsum LLC.
 4. National Gypsum Company.
 5. USG Corporation.
- B. Gypsum Board, Type X: ASTM C 1396/C 1396M.
1. Thickness: 5/8 inch.
 2. Long Edges: Tapered.
- C. Moisture- and Mold-Resistant Gypsum Board: ASTM C 1396/C 1396M. With moisture- and mold-resistant core and paper surfaces.
1. Core: 5/8 inch Type X.
 2. Long Edges: Tapered.
 3. Mold Resistance: ASTM D 3273, score of 10.

2.2 TRIM ACCESSORIES

- A. Interior Trim: ASTM C 1047.
1. Material: Galvanized or aluminum-coated steel sheet, rolled zinc, plastic, or paper-faced galvanized steel sheet.
 2. Shapes:
 - a. Cornerbead.
 - b. LC-Bead: J-shaped; exposed long flange receives joint compound.
 - c. L-Bead: L-shaped; exposed long flange receives joint compound.

2.3 JOINT TREATMENT MATERIALS

- A. General: Comply with ASTM C 475/C 475M.
- B. Joint Tape:
1. Interior Gypsum Board: Paper.
 2. Exterior Gypsum Soffit Board: Paper.
 3. Glass-Mat Gypsum Sheathing Board: 10-by-10 glass mesh.
 4. Tile Backing Panels: As recommended by panel manufacturer.
- 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 and damaged surface areas, use setting-type taping compound.
2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use setting-type taping compound.
 - a. Use setting-type compound for installing paper-faced metal trim accessories.
3. Fill Coat: For second coat, use setting-type, sandable topping compound.
4. Finish Coat: For third coat, use setting-type, sandable topping compound.

2.4 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.
- B. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.

2.5 TEXTURE FINISHES

- A. Primer: As recommended by textured finish manufacturer.
- B. Aggregate Finish: Water-based, job-mixed, aggregated, drying-type texture finish for spray application.
 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. CertainTeed Corp.; ProRoc Wall and Ceiling Spray Texture.
 - b. Georgia-Pacific Gypsum LLC; ToughRock Ceiling Textures/Vermiculite.
 - c. USG Corporation; SHEETROCK Wall and Ceiling Spray Texture (Aggregated).
 2. Texture: Shall match existing and adjacent walls.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and substrates including welded hollow-metal frames and framing, with Installer present, for compliance with requirements and other conditions affecting performance.
- 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 ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.
- C. 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.
- D. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. 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.
- E. Form control and expansion joints with space between edges of adjoining gypsum panels.
- F. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.
 - 1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. in area.
 - 2. Fit gypsum panels around ducts, pipes, and conduits.
 - 3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4- to 3/8-inch- wide joints to install sealant.
- G. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. 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.
- H. Wood Framing: Install gypsum panels over wood framing, with floating internal corner construction. Do not attach gypsum panels across the flat grain of wide-dimension lumber, including floor joists and headers. Float gypsum panels over these members or provide control joints to counteract wood shrinkage.

3.3 APPLYING INTERIOR GYPSUM BOARD

- A. Install interior gypsum board in the following locations:
 - 1. Wallboard Type: Vertical surfaces unless otherwise indicated.
 - 2. Type X: Vertical surfaces unless otherwise indicated.
- B. Single-Layer Application:
 - 1. On ceilings, apply gypsum panels before wall/partition board application to greatest extent possible and at right angles to framing unless otherwise indicated.
 - 2. 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.

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.
 2. LC-Bead: Use at exposed panel edges.

3.5 FINISHING GYPSUM BOARD

- A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, 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 other Division 09 Sections.

3.6 APPLYING TEXTURE FINISHES

- A. Surface Preparation and Primer: Prepare and apply primer to gypsum panels and other surfaces receiving texture finishes. Apply primer to surfaces that are clean, dry, and smooth.
- B. Texture Finish Application: Mix and apply finish using powered spray equipment, to produce a uniform texture[matching approved mockup and] free of starved spots or other evidence of thin application or of application patterns.
- C. Prevent texture finishes from coming into contact with surfaces not indicated to receive texture finish by covering them with masking agents, polyethylene film, or other means. If, despite these precautions, texture finishes contact these surfaces, immediately remove droppings and overspray to prevent damage according to texture-finish manufacturer's written recommendations.

3.7 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 093000 - TILING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:

1. Ceramic tile.
2. Waterproof membrane.
3. Crack isolation membrane.
4. Tile backing panels.

- B. Related Sections:

1. Division 07 Section "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 "American National Standard 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.
- E. Tile Council of North America (TCNA) Handbook for Ceramic Tile Installation

1.4 PERFORMANCE REQUIREMENTS

- A. Static Coefficient of Friction: For tile installed on walkway surfaces, provide products with the following values as determined by testing identical products per ASTM C 1028:
 1. Level Surfaces: Minimum 0.60.
 2. Shower Floor: Minimum 0.70

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Show locations of each type of tile and tile pattern. Show widths, details, and locations of expansion, contraction, control, and isolation joints in tile substrates and finished tile surfaces.
- C. Samples for Verification:
 - 1. Full-size units of each type and composition of tile and for each color and finish required.
 - 2. Full-size units of each type of trim and accessory for each color and finish required.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer.
- B. Product Certificates: For each type of product, signed by product manufacturer.
- C. Material Test Reports: For each tile-setting and -grouting product.

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 5 percent of amount installed for each type, composition, color, pattern, and size indicated.

1.8 QUALITY ASSURANCE

- A. Source Limitations for Tile: Obtain tile from one source or producer.
 - 1. Obtain tile of each type and color or finish from same production run and of consistent quality in appearance and physical properties for each contiguous area.
- B. Source Limitations for Setting and Grouting Materials: Obtain ingredients of a uniform quality for each mortar, adhesive, and grout component from one manufacturer and each aggregate from one source or producer.

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.
- E. Handle tile that has temporary protective coating on exposed surfaces to prevent coated surfaces from contacting backs or edges of other units. If coating does contact bonding surfaces of tile, remove coating from bonding surfaces before setting tile.

1.10 PROJECT 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 PRODUCTS, GENERAL

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

2.2 TILE PRODUCTS

- A. Factory-mounted unglazed floor tile.
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
 - a. American Olean; Division of Dal-Tile International Inc.
 - b. Crossville, Inc.
 - c. Daltile; Division of Dal-Tile International Inc.

- d. Deutsche Steinzeug America, Inc.
 - e. Interceramic.
2. Composition: Porcelain.
 3. Module Size: Per finish schedule and material legend on plans
 4. Thickness: 1/4 inch.
 5. Face: Plain with cushion edges.
 6. Surface: Slip-resistant, with abrasive admixture on floor, glazed on walls.
 7. Tile Color and Pattern: Per finish schedule and material legend on plans
 8. Grout Color: As selected by Architect from manufacturer's full range.
 9. 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:
 10. Base Cove: Cove, Per finish schedule and material legend on plans
 - a. External Corners for Thin-Set Mortar Installations: Surface bullnose.
 - b. Internal Corners: Coved.

B. Glazed wall tile.

1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
 - a. American Olean; Division of Dal-Tile International Inc.
 - b. Daltile; Division of Dal-Tile International Inc.
 - c. Deutsche Steinzeug America, Inc.
 - d. Interceramic.
 - e. United States Ceramic Tile Company.
2. Module Size: Per finish schedule and material legend on plans
3. Thickness: 5/16 inch.
4. Face: Plain with modified square edges or cushion edges.
5. Finish: Bright, opaque glaze.

6. Tile Color and Pattern: Per finish schedule and material legend on plans
7. Grout Color: As selected by Architect from manufacturer's full range] <Insert color.
8. Mounting: Factory, back mounted.
 - a. Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable and matching characteristics of adjoining flat tile. Provide shapes necessary and to match adjacent tile.

2.3 TILE BACKING PANELS

- A. Cementitious Backer Units: ANSI A118.9 or ASTM C 1325, in maximum lengths available to minimize end-to-end butt joints.
 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. C-Cure; C-Cure Board 990.
 - b. Custom Building Products; Wonderboard.
 - c. FinPan, Inc.; Util-A-Crete Concrete Backer Board.
 - d. USG Corporation; DUROCK Cement Board.
 2. Thickness: 5/8 inch.

2.4 CRACK ISOLATION & WATERPROOFING MEMBRANE

- A. General: Manufacturer's standard product that complies with ANSI A118.12 for standard performance and is recommended by the manufacturer for the application indicated. Include reinforcement and accessories recommended by manufacturer.
- B. Polyethylene Sheet: Polyethylene faced on both sides with fleece webbing; 0.008-inch nominal thickness.
 1. Products: Subject to compliance with requirements, provide the following:
 - a. Schluter Systems L.P.; KERDI.
 - i. Description: 0.008 inch (0.2 mm) thick, orange polyethylene membrane, with polypropylene fleece laminated on both sides, which meet or exceed the requirements of the "American national standard specifications for load bearing, bonded, waterproof membranes for thin-set ceramic tile and dimension stone installation A118.10," and is evaluated by ICC-ES (see Report No. ESR-2467).

2.5 SETTING MATERIALS

- A. Latex-Portland Cement Mortar (Thin Set): ANSI A118.4.
 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Bonsal American; an Oldcastle company.
 - b. Bostik, Inc.
 - c. C-Cure.
 - d. Custom Building Products.

- e. Laticrete International, Inc.
 - f. MAPEI Corporation.
 - g. Summitville Tiles, Inc.
 - h. TEC; a subsidiary of H. B. Fuller Company.
2. For wall applications, provide mortar that complies with requirements for nonsagging mortar in addition to the other requirements in ANSI A118.4.

2.6 GROUT MATERIALS

A. Standard Cement Grout: ANSI A118.6.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Bonsal American; an Oldcastle company.
 - b. Bostik, Inc.
 - c. C-Cure.
 - d. Custom Building Products.
 - e. Laticrete International, Inc.
 - f. MAPEI Corporation.
 - g. Summitville Tiles, Inc.
 - h. TEC; a subsidiary of H. B. Fuller Company.

B. Grout for PregROUTed Tile Sheets: Same product used in factory to pregROUT tile sheets.

2.7 ELASTOMERIC SEALANTS

- A. General: Provide sealants, primers, backer rods, and other sealant accessories that comply with the following requirements and with the applicable requirements in Division 07 Section "Joint Sealants."
- B. Colors: Provide colors of exposed sealants to match colors of grout in tile adjoining sealed joints unless otherwise indicated.
- C. One-Part, Mildew-Resistant Silicone Sealant: ASTM C 920; Type S; Grade NS; Class 25; Uses NT, G, A, and, as applicable to nonporous joint substrates indicated, O; formulated with fungicide, intended for sealing interior ceramic tile joints and other nonporous substrates that are subject to in-service exposures of high humidity and extreme temperatures.

1. Products: Subject to compliance with requirements, provide one of the following:
 - a. DAP Inc.; 100 percent Silicone Kitchen and Bath Sealant.
 - b. Dow Corning Corporation; Dow Corning 786.
 - c. GE Silicones; a division of GE Specialty Materials; Sanitary 1700.
 - d. Laticrete International, Inc.; Latasil Tile & Stone Sealant.
 - e. Pecora Corporation; Pecora 898 Sanitary Silicone Sealant.
 - f. Tremco Incorporated; Tremsil 600 White.

2.8 MISCELLANEOUS MATERIALS

- A. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.
- B. 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.
- C. Grout Sealer: Manufacturer's standard product for sealing grout joints and that does not change color or appearance of grout.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Bonsal American; an Oldcastle company; Grout Sealer.
 - b. Bostik, Inc.; CeramaSeal Grout & Tile Sealer.
 - c. C-Cure; Penetrating Sealer 978.
 - d. Custom Building Products; Surfaceguard Sealer.
 - e. MAPEI Corporation; KER 004, Keraseal Penetrating Sealer for Unglazed Grout and Tile.
- D. Flooring Transition Strip: Aluminum transition strip from new tile to existing carpet at doorways. Schluter–Reno-U or equal.

2.9 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 installed tile.
 - 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 concrete substrates for tile floors installed with thin-set mortar comply with surface finish requirements in ANSI A108.01 for installations indicated.
 - a. Verify that surfaces that received a steel trowel finish have been mechanically scarified.
 - b. Verify that protrusions, bumps, and ridges have been removed by sanding or grinding.
 3. 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.
 4. Verify that joints and cracks in tile substrates are coordinated with tile joint locations; if not coordinated, adjust joint locations in consultation with Resident Engineer.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Fill cracks, holes, and depressions in concrete substrates for tile floors installed with thin-set mortar with trowelable leveling and patching compound specifically recommended by tile-setting material manufacturer.
- B. Where indicated, prepare substrates to receive waterproofing by applying a reinforced mortar bed that complies with ANSI A108.1A and is sloped maximum 1/4 inch per foot toward drains.
- C. Blending: For tile exhibiting color variations, verify that tile has been factory blended and packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.

3.3 TILE INSTALLATION

- A. Comply with TCA's "Handbook for Ceramic Tile Installation" for TCA 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 TCA 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: Lay tile in grid pattern unless otherwise indicated. Lay out tile work and center tile fields in both directions in each space or on each wall area. Lay out tile work to minimize the use of pieces that are less than half of a tile. Provide uniform joint widths unless otherwise indicated.
 - 1. For tile mounted in sheets, make joints between tile sheets same width as joints within tile sheets so joints between sheets are not apparent in finished work.
 - 2. Where adjoining tiles on floor, base, walls, or trim are specified or indicated to be same size, align joints.
 - 3. Where tiles are specified or indicated to be whole integer multiples of adjoining tiles on floor, base, walls, or trim, align joints unless otherwise indicated.
- F. Joint Widths: Unless otherwise indicated, install tile with the following joint widths:
 - 1. Ceramic Mosaic Tile: 1/16 inch.
 - 2. Glazed Wall Tile: 1/16 inch.
- G. Lay out tile wainscots to dimensions indicated or to next full tile beyond dimensions indicated.
- H. Grout Sealer: Apply grout sealer to grout joints according to grout-sealer manufacturer's written instructions. As soon as grout sealer has penetrated grout joints, remove excess sealer and sealer from tile faces by wiping with soft cloth.

3.4 TILE BACKING PANEL INSTALLATION

- A. Install cementitious backer units and treat joints according to ANSI A108.11 and manufacturer's written instructions for type of application indicated.

3.5 WATERPROOFING INSTALLATION

- A. Install waterproofing to comply with ANSI A108.13 and manufacturer's written instructions to produce waterproof membrane of uniform thickness and bonded securely to substrate.
- B. Do not install tile or setting materials over waterproofing until waterproofing has cured and been tested to determine that it is watertight.

3.6 CRACK ISOLATION MEMBRANE INSTALLATION

- A. Install crack isolation membrane to comply with ANSI A108.17 and manufacturer's written instructions to produce membrane of uniform thickness and bonded securely to substrate.
- B. Do not install tile or setting materials over crack isolation membrane until membrane has cured.

3.7 CLEANING AND PROTECTING

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

1. Remove latex-portland cement 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. Remove temporary protective coating by method recommended by coating manufacturer and that is acceptable to tile and grout manufacturer. Trap and remove coating to prevent drain clogging.
- B. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear. If recommended by tile manufacturer, apply coat of neutral protective cleaner to completed tile walls and floors.
 - C. Prohibit foot and wheel traffic from tiled floors for at least seven days after grouting is completed.
 - D. Before final inspection, remove protective coverings and rinse neutral protective cleaner from tile surfaces.

3.8 TILE INSTALLATION SCHEDULE

- A. Interior Wall Installations, Wood Studs or Furring:
 1. Tile Installation W244E: Thin-set mortar on cementitious backer units or fiber cement underlayment; TCA W244E.
 - a. Tile Type: Glazed wall tile.
 - b. Thin-Set Mortar: Latex- portland cement mortar.
 - c. Grout: Standard sanded cement grout.
- B. Shower Receptor and Wall Installations, Wood Studs or Furring:
 1. Tile Installation F112: mortar bed on waterproof membrane over concrete floor.
 - a. Tile Type: non-glazed porcelain ceramic floor.
 - b. Thin-Set Mortar: Latex-portland cement mortar.
 - c. Grout: Standard sanded and sealed cement grout.
- C. Exterior Wall Installations, Wood Studs or Furring:
 1. Tile Installation W244C: Thin-set mortar on cementitious backer units or fiber cement underlayment; TCA W244C.
 - a. Tile Type: Glazed wall tile.
 - b. Thin-Set Mortar: Latex- portland cement mortar.
 - c. Grout: Standard sanded cement grout.

END OF SECTION 093000

SECTION 099113 - EXTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special Supplementary Conditions and Greenbook 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. Wood.
- B. Related Requirements:
 - 1. Division 06 Section "Rough Carpentry" for wood framing to be painted.
 - 2. Division 09 Section "Interior Painting" for surface preparation and the application of paint systems on interior substrates.

1.3 DEFINITIONS

- A. Gloss Level 1: Not more than 5 units at 60 degrees and 10 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.
- B. 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. Step coats on Samples to show each coat required for system.
 - 3. Label each coat of each Sample.
 - 4. Label each Sample for location and application area.
- C. Product List: For each product indicated, include the following:
 - 1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.
 - 2. Printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
 - 3. VOC content.

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 QUALITY ASSURANCE

- A. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Resident Engineer will select one surface to represent surfaces and conditions for application of each paint system specified in Part 3.
 - a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft.
 - b. Other Items: Resident Engineer will designate items or areas required.
 - 2. Final approval of color selections will be based on mockups.
 - a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.
 - 3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Resident Engineer 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.

1.7 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.

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

1. Behr Process Corporation.
2. Benjamin Moore & Co.
3. Dunn-Edwards Corporation.
4. Frazee Paint.
5. ICI Paints.
6. Kelly-Moore Paints.
7. Kwal Paint.
8. PPG Architectural Finishes, Inc.
9. Pratt & Lambert.
10. Sherwin-Williams Company (The).
11. Vista Paint.

2.2 PAINT, GENERAL

- A. MPI Standards: Provide products that comply with MPI standards indicated and that are listed in its "MPI Approved Products List."
- B. Material Compatibility:
 1. Provide materials for use within each paint system that are 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, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- C. VOC Content: Provide materials that comply with VOC limits of authorities having jurisdiction.
- D. Colors: Match adjacent existing building colors.

2.3 PRIMERS/SEALERS

- A. Wood-Knot Sealer: Sealer recommended in writing by topcoat manufacturer for exterior use in paint system indicated.

2.4 WOOD PRIMERS

- A. Primer, Alkyd for Exterior Wood: MPI #5.

2.5 WATER-BASED PAINTS

- A. Latex, Exterior Flat (Gloss Level 1): MPI #10.

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. Wood: 15 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 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. 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.
- E. Wood Substrates:
 - 1. Scrape and clean knots. Before applying primer, apply coat of knot sealer recommended in writing by topcoat manufacturer for exterior use in paint system indicated.
 - 2. Sand surfaces that will be exposed to view, and dust off.
 - 3. Prime edges, ends, faces, undersides, and backsides of wood.

4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.
- F. Plastic Trim Fabrication Substrates: Remove dust, dirt, and other foreign material that might impair bond of paints to substrates.

3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions and recommendations in "MPI 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. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.
- B. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- C. 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 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 Resident Engineer, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.5 EXTERIOR PAINTING SCHEDULE

- A. Wood Substrates: Including wood trim, architectural woodwork, exposed joists, exposed beams.
1. Latex over Alkyd Primer System:

- a. Prime Coat: Primer, alkyd for exterior wood, MPI #5.
 - b. Topcoat: Latex, exterior flat (Gloss Level 1), MPI #10.
- B. Wood Substrates, Traffic Surfaces: Including stairs.
- 1. Latex over Alkyd Primer System:
 - a. Prime Coat: Primer, alkyd for exterior wood, MPI #5.
 - b. Topcoat: Interior/exterior latex floor and porch (low gloss).
 - 1) With additive to increase skid resistance of painted surface.

END OF SECTION 099113

SECTION 099123 - INTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes surface preparation and the application of paint systems on the following interior substrates:
 - 1. Gypsum board.
- B. Related Sections include the following:
 - 1. Division 09 Section "Staining and Transparent Finishing" for surface preparation and the application of wood stains and transparent finishes on interior wood substrates.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Initial Selection: For each type of topcoat product indicated requiring color selection.
- C. Samples for Verification: For each type of paint system and in each color and gloss of topcoat indicated.
 - 1. Submit Samples on rigid backing, 8 inches (200 mm) square.
 - 2. Step coats on Samples 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: For each product indicated, include the following:
 - 1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.

1.4 QUALITY ASSURANCE

- A. Mockups: Apply benchmark samples of each paint system indicated and each color and finish selected to verify preliminary selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Resident Engineer will select one surface to represent surfaces and conditions for application of each paint system specified in Part 3.
 - a. Wall and Ceiling Surfaces: Provide samples of at least 100 sq. ft. (9 sq. m).
 - b. Other Items: Resident Engineer will designate items or areas required.

2. Apply benchmark samples after permanent lighting and other environmental services have been activated.
3. Final approval of color selections will be based on benchmark samples.
 - a. If preliminary color selections are not approved, apply additional benchmark samples of additional colors selected by Resident Engineer at no added cost to Owner.

1.5 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 (7 deg C).
 1. Maintain containers in clean condition, free of foreign materials and residue.
 2. Remove rags and waste from storage areas daily.

1.6 PROJECT CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).
- B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

1.7 EXTRA MATERIALS

- A. Furnish extra materials described below that are from same production run (batch mix) as materials applied and that are packaged for storage and identified with labels describing contents.
 1. Quantity: Furnish an additional 5 percent, but not less than 1 gal. (3.8 L) of each material and color applied.

PART 2 - PRODUCTS

2.1 PAINT, GENERAL

- A. Material Compatibility:
 1. Provide materials for use within each paint system that are 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, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- B. Colors: Match Architect's samples.

2.2 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products from the following:
 1. Dunn-Edwards Corporation.
 2. Frazee Paint.
 3. ICI Paints.
 4. Sherwin-Williams Company (The).
 5. Vista Paint.

2.3 PRIMERS/SEALERS

A. Interior Primer/Sealer for Gypsum Board:

1. Dunn Edwards W101 Vinylastic
2. Frazee 061 Aquaseal
3. ICI 1000 Primer Sealer
4. SW Prep Rite Primer B28W200
5. Vista 1100 Hi Build Sealer

2.4 INTERIOR PAINT TOPCOATS

A. Interior Acrylic/Vinyl Eggshell

1. Dunn Edwards W411V Suprema
2. Frazee 022 Lo Glo
3. ICI 1403 Dulux Ultra
4. SW A87 Super Paint Interior Satin
5. Vista 8200 Carefree Velvasheen

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 work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 1. Gypsum Board: 12 percent.
- C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- D. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
 1. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
- B. Remove plates, machined surfaces, and similar items already in place that 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.
 2. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- C. Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.
1. Remove incompatible primers and reprime substrate with compatible primers as required to produce paint systems indicated.
- D. Gypsum Board Substrates: Do not begin paint application until finishing compound is dry and sanded smooth.

3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions.
1. Use applicators and techniques suited for paint and substrate indicated.
 2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
 3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
- 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.
- E. Do not paint mechanical and electrical work. Do not paint exposed ducts, pipes, conduits or cable trays.
- F. Do not paint items with factory finishes except items that have been factory-primed.

3.4 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 Resident Engineer, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.5 INTERIOR PAINTING SCHEDULE

A. Gypsum Board Substrates:

- 1. Latex System:
 - a. Prime Coat: Interior latex primer/sealer.
 - b. Intermediate Coat: Interior latex matching topcoat.
 - c. Topcoat: Interior latex (low sheen at ceilings) (eggshell at other locations)

END OF SECTION 099123

SECTION 099300 - STAINING AND TRANSPARENT FINISHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes surface preparation and application of wood finishes on the following substrates:
 - 1. Interior Substrates:
 - a. Dressed lumber (finish carpentry).
 - b. Exposed wood products.
 - c. Wood Doors.
- B. Related Requirements:
 - 1. Division 09 Section "Exterior Painting" for standard paint systems on exterior substrates.
 - 2. Division 09 Section "Interior Painting" for stains and transparent finishes on concrete floors.

1.3 DEFINITIONS

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

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include preparation requirements and application instructions.
- B. Samples for Verification: For each type of finish system and in each color and gloss of finish indicated.
 - 1. Submit Samples on representative samples of actual wood substrates, 8 inches square.
 - 2. Label each Sample for location and application area.
- C. Product List: For each product indicated, include the following:
 - 1. Cross-reference to finish system and locations of application areas. Use same designations indicated on Drawings and in schedules.

1.5 QUALITY ASSURANCE

- A. Mockups: Apply mockups of each finish system indicated and each color selected to verify preliminary selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Resident Engineer will select one surface to represent surfaces and conditions for application of each type of finish system and substrate.
 - a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft.
 - b. Other Items: Resident Engineer will designate items or areas required.
 - 2. Final approval of stain color selections will be based on mockups.
 - a. If preliminary stain color selections are not approved, apply additional mockups of additional stain colors selected by Architect at no added cost to Owner.

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.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Behr Process Corporation.
 - 2. Benjamin Moore & Co.
 - 3. Davis Paint Company.
 - 4. Dunn-Edwards Corporation.
 - 5. Frazee Paint.
 - 6. ICI Paints.
 - 7. Kelly-Moore Paints.
 - 8. PPG Architectural Finishes, Inc.
 - 9. Pratt & Lambert.
 - 10. Sherwin-Williams Company (The).
 - 11. Vista Paint.

- B. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to products listed in other Part 2 articles for the category indicated.

2.2 MATERIALS, GENERAL

- A. MPI Standards: Provide products that comply with MPI standards indicated and that are listed in its "MPI Approved Products List."
- B. Material Compatibility:
 - 1. Provide materials for use within each finish system that are 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 finish system, provide products recommended in writing by manufacturers of topcoat for use in finish system and on substrate indicated.
- C. Stain Colors: Match Existing Wood Stain.

2.3 WOOD FILLERS

- A. Wood Filler Paste: MPI #91.

2.4 PRIMERS AND SEALERS

- A. Alkyd, Sanding Sealer, Clear: MPI #102.

2.5 STAINS

- A. Stain, Semi-Transparent, for Interior Wood: MPI #90.

2.6 WATER-BASED VARNISHES

- A. Varnish, Water Based, Clear, Semi-Gloss (Gloss Level 5): MPI #129.

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 Interior Wood Substrates: 15 percent, when measured with an electronic moisture meter.
- C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- D. Proceed with finish application only after unsatisfactory conditions have been corrected.

1. Beginning finish application constitutes Contractor's acceptance of substrates and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and finishing.
 1. After completing finishing operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
- C. Clean and prepare surfaces to be finished according to manufacturer's written instructions for each particular substrate condition and as specified.
 1. Remove dust, dirt, oil, and grease by washing with a detergent solution; rinse thoroughly with clean water and allow to dry. Remove grade stamps and pencil marks by sanding lightly. Remove loose wood fibers by brushing.
 2. Remove mildew by scrubbing with a commercial wash formulated for mildew removal and as recommended by stain manufacturer.
- D. Interior Wood Substrates:
 1. Scrape and clean knots, and apply coat of knot sealer before applying primer.
 2. Apply wood filler paste to open-grain woods, as defined in "MPI Architectural Painting Specification Manual," to produce smooth, glasslike finish.
 3. Sand surfaces that will be exposed to view and dust off.
 4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.

3.3 APPLICATION

- A. Apply finishes according to manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual."
 1. Use applicators and techniques suited for finish and substrate indicated.
 2. Finish surfaces behind movable equipment and furniture same as similar exposed surfaces.
 3. Do not apply finishes over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.

- B. Apply finishes to produce surface films without cloudiness, holidays, lap marks, brush marks, runs, ropiness, or other surface imperfections.

3.4 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing finish application, clean spattered surfaces. Remove spattered materials by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from finish application. Correct damage by cleaning, repairing, replacing, and refinishing, as approved by Resident Engineer, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced finished wood surfaces.

3.5 INTERIOR WOOD-FINISH-SYSTEM SCHEDULE

- A. Wood substrates, nontraffic surfaces, including wood trim, architectural woodwork, doors.
 - 1. Water-Based Varnish over Stain System:
 - a. Stain Coat: Stain, semi-transparent, for interior wood, MPI #90.
 - b. First Intermediate Coat: Water-based varnish matching topcoat.
 - c. Topcoat: Varnish, water based, clear, semi-gloss (Gloss Level 5), MPI #129.

END OF SECTION 099300

SECTION 101400 - SIGNAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:

- 1. Panel signs.

1.3 DEFINITIONS

- A. ADA-ABA Accessibility Guidelines: U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines."

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of sign.
- B. Shop Drawings: Show fabrication and installation details for signs. Including plans and elevations.
 - 1. Show sign mounting heights, mounting methods, and accessories.
 - 2. Provide message list, typestyles, graphic elements, including tactile characters and Braille, and layout for each sign.
- C. Samples for Initial Selection: For each type of sign material indicated that involves color selection.
- D. Samples for Verification: For each type of sign, include the following Samples to verify color selected:
 - 1. Acrylic Sheet: 8 by 10 inches (200 by 250 mm) for each color required.
 - 2. Panel Signs: Full-size Samples of each type of sign required including border.
 - 3. Approved samples will be returned for installation into project.
- E. Sign Schedule: Use same designations indicated on Drawings.
- F. Maintenance Data: For signs to include in maintenance manuals.

1.5 QUALITY ASSURANCE

- A. Source Limitations for Signs: Obtain each sign type indicated from one source from a single manufacturer.
- B. Regulatory Requirements: Comply with applicable provisions in the Americans with Disabilities Act (ADA) and with code provisions as adopted by authorities having jurisdiction.

1.6 PROJECT CONDITIONS

- A. Field Measurements: Where sizes of signs are determined by dimensions of surfaces on which they are installed, verify dimensions by field measurement before fabrication and indicate measurements on Shop Drawings.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Acrylic Sheet: ASTM D 4802, Category A-1 (cell-cast sheet), Type UVA (UV absorbing).
- B. Polycarbonate Sheet: Of thickness indicated, manufactured by extrusion process, coated on both surfaces with abrasion-resistant coating:
 - 1. Impact Resistance: 16 ft-lbf/in. (854 J/m) per ASTM D 256, Method A.
 - 2. Tensile Strength: 9000 lbf/sq. in. (62 MPa) per ASTM D 638.
 - 3. Flexural Modulus of Elasticity: 340,000 lbf/sq. in. (2345 MPa) per ASTM D 790.
 - 4. Heat Deflection: 265 deg F (129 deg C) at 264 lbf/sq. in. (1.82 MPa) per ASTM D 648.
 - 5. Abrasion Resistance: 1.5 percent maximum haze increase for 100 revolutions of a Taber abraser with a load of 500 g per ASTM D 1044.

2.2 PANEL SIGNS

- A. General: Provide panel signs that comply with requirements indicated for materials, thicknesses, finishes, colors, designs, shapes, sizes, and details of construction.
- B. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. ACE Sign Systems, Inc.
 - 2. Allenite Signs; Allen Marking Products, Inc.
 - 3. APCO Graphics, Inc.

4. ASI-Modulex, Inc.
 5. Best Sign Systems Inc.
 6. Innerface Sign Systems, Inc.
 7. Matthews International Corporation; Bronze Division.
 8. Mohawk Sign Systems.
 9. Seton Identification Products.
 10. Supersine Company (The)
- C. Interior Panel Signs: Provide smooth sign panel surfaces constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally from corner to corner, complying with the following requirements:
1. Acrylic Sheet: 0.080 inch thick.
 2. Laminated Sheet: High-pressure engraved stock with[contrasting color] face laminated to acrylic core [as selected by Architect from manufacturer's full range].
 3. Edge Condition: Square cut.
 4. Corner Condition: Square.
 5. Mounting: Framed.
 - a. Wall mounted with two-face tape.
 - b. Manufacturer's standard anchors for substrates encountered.
 6. Color: As indicated As selected by Architect from manufacturer's full range.
 7. Tactile Characters: Characters and Grade 2 Braille raised 1/32 inch above surface with contrasting colors.
- D. Panel Sign Frames:
1. PVC Frames: Extruded, high-impact PVC plastic.
 - a. Color: As selected by Architect from manufacturer's full range.
 - b. Profile: Square.
 - c. Corner Condition: Square.
 - d. Mounting: As indicated.

- 1) Wall mounted with two-face tape.
 - 2) Manufacturer's standard noncorroding anchors for substrates encountered.
- E. Tactile and Braille Sign: Manufacturer's standard process for producing text and symbols complying with ADA-ABA Accessibility Guidelines and with ICC/ANSI A117.1. Text shall be accompanied by Grade 2 Braille. Produce precisely formed characters with square-cut edges free from burrs and cut marks; Braille dots with domed or rounded shape.
1. Panel Material: Opaque acrylic sheet.
 2. Raised-Copy Thickness: Not less than 1/32 inch.
- F. Colored Coatings for Acrylic Sheet: For copy and background and frame colors, provide colored coatings, including inks, dyes, and paints, that are recommended by acrylic manufacturers for optimum adherence to acrylic surface and are UV and water resistant for three years for application intended.
1. Color: As selected by Architect from manufacturer's full range.

2.3 ACCESSORIES

- A. Anchors and Inserts: Provide nonferrous-metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as required for corrosion resistance. Use toothed steel or lead expansion-bolt devices for drilled-in-place anchors. Furnish inserts, as required, to be set into concrete or masonry work.

2.4 FABRICATION

- A. General: Provide manufacturer's standard signs of configurations indicated.
1. Mill joints to tight, hairline fit. Form joints exposed to weather to exclude water penetration.
 2. Preassemble signs in the shop to greatest extent possible. Disassemble signs only as necessary for shipping and handling limitations. Clearly mark units for reassembly and installation, in location not exposed to view after final assembly.
 3. Conceal fasteners if possible; otherwise, locate fasteners where they will be inconspicuous.

2.5 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" 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: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

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 work.
- B. Verify that items, including anchor inserts, are sized and located to accommodate signs.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Locate signs and accessories where indicated, using mounting methods of types described and complying with manufacturer's written instructions.
 - 1. Install signs level, plumb, and at heights indicated, with sign surfaces free of distortion and other defects in appearance.
 - 2. Interior Wall Signs: Install signs on walls adjacent to latch side of door where applicable. Where not indicated or possible, such as double doors, install signs on nearest adjacent walls. Locate to allow approach within 3 inches of sign without encountering protruding objects or standing within swing of door.
- B. Wall-Mounted Signs: Comply with sign manufacturer's written instructions except where more stringent requirements apply.
 - 1. Two-Face Tape: Mount signs to smooth, nonporous surfaces. Do not use this method for vinyl-covered or rough surfaces.
 - 2. Mechanical Fasteners: Use nonremovable mechanical fasteners placed through predrilled holes. Attach signs with fasteners and anchors suitable for secure attachment to substrate as recommended in writing by sign manufacturer.

3.3 CLEANING AND PROTECTION

- A. After installation, clean soiled sign surfaces according to manufacturer's written instructions. Protect signs from damage until acceptance by Resident Engineer.

END OF SECTION 101400

SECTION 102113 - TOILET COMPARTMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes toilet compartments and screens as follows:
 - 1. Type: Solid-plastic, polymer resin.
 - 2. Compartment Style: Overhead braced and floor anchored.
 - 3. Screen Style: Floor anchored.

1.3 SUBMITTALS

- A. Product Data: For each type and style of toilet compartment and screen specified. Include details of construction relative to materials, fabrication, and installation. Include details of anchors, hardware, and fastenings.
- B. Samples for Initial Selection: Manufacturer's color charts consisting of sections of actual units showing the full range of colors, textures, and patterns available for each type of compartment or screen indicated.

1.4 PROJECT CONDITIONS

- A. Field Measurements: Verify dimensions in areas of installation by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Accurate Partitions Corporation.
 - 2. Capitol Partitions, Inc.
 - 3. Global Steel Products Corp.
 - 4. Santana Products, Inc.

2.2 MATERIALS

- A. Solid-Plastic, Polymer Resin: High-density polyethylene (HDPE) with homogenous color throughout. Provide material not less than 1 inch thick with seamless construction and eased edges in color and pattern as follows:
 - 1. Color and Pattern: One color and pattern in each room as selected by Architect from manufacturer's full range of colors and patterns.
- B. Pilaster Shoes and Sleeves (Caps): ASTM A 666, Type 302 or 304 stainless steel, not less than 0.0312 inch thick and 3 inches high, finished to match hardware.
- C. Full-Height (Continuous) Brackets: Manufacturer's standard design for attaching panels and screens to walls and pilasters of the following material:
 - 1. Material: Stainless steel.
- D. Hardware and Accessories: Manufacturer's standard design, heavy-duty, operating hardware and accessories with full height hinges of the following material:
 - 1. Material: Stainless steel.
 - 2. Material: Chrome-plated brass.
- E. Overhead Bracing: Manufacturer's standard continuous, extruded-aluminum head rail with antigrip profile in manufacturer's standard finish.
- F. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel or chrome-plated steel or brass, finished to match hardware, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use hot-dip galvanized or other rust-resistant, protective-coated steel.

2.3 FABRICATION

- A. General: Provide standard doors, panels, screens, and pilasters fabricated for compartment system. Provide units with cutouts and drilled holes to receive compartment-mounted hardware, accessories, and grab bars, as indicated.
- B. Solid-Plastic, Polymer-Resin Compartments and Screens: Provide aluminum heat-sink strips at exposed bottom edges of HDPE units to prevent burning.
- C. Overhead-Braced-and-Floor-Anchored Compartments: Provide manufacturer's standard corrosion-resistant supports, leveling mechanism, fasteners, and anchors at pilasters to suit floor conditions. Make provisions for setting and securing continuous head rail at top of each pilaster. Provide shoes at pilasters to conceal supports and leveling mechanism.
- D. Floor-Anchored Screens: Provide pilasters and panels of same construction and finish as toilet compartments. Provide manufacturer's standard corrosion-resistant anchoring assemblies complete with threaded rods, lock washers, and leveling adjustment nuts at pilasters for structural connection to floor. Provide shoes at pilasters to conceal anchorage.

- E. Doors: Unless otherwise indicated, provide 24-inch- wide in-swinging doors for standard toilet compartments and 36-inch- wide out-swinging doors with a minimum 32-inch- wide clear opening for compartments indicated to be handicapped accessible.
 - 1. Hinges: Manufacturer's standard self-closing type that can be adjusted to hold door open at any angle up to 90 degrees.
 - 2. Latch and Keeper for In-Swinging Doors: Recessed latch unit designed for emergency access and with combination rubber-faced door strike and keeper.
 - 3. Latch and Keeper for Out-Swinging Doors: Manufacturer's standard surface-mounted latch unit with combination rubber-faced door strike and keeper designed for emergency access. Provide units that comply with accessibility requirements of authorities having jurisdiction at compartments indicated to be handicapped accessible.
 - 4. Coat Hook: Manufacturer's standard combination hook and rubber-tipped bumper, sized to prevent door from hitting compartment-mounted accessories.
 - 5. Door Bumper: Manufacturer's standard rubber-tipped bumpers at out-swinging doors.
 - 6. Door Pull: Manufacturer's standard unit that complies with accessibility requirements of authorities having jurisdiction at out-swinging doors. Provide units on both sides of doors at compartments indicated to be handicapped accessible.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, plumb, and level. Provide clearances of not more than 1/2 inch between pilasters and panels and not more than 1 inch between panels and walls. Secure units in position with manufacturer's recommended anchoring devices.
 - 1. Secure panels to walls and panels with full-height brackets.
- B. Overhead-Braced-and-Floor-Anchored Compartments: Secure pilasters to floor and level, plumb, and tighten. Secure continuous head rail to each pilaster with not less than 2 fasteners. Hang doors and adjust so tops of doors are parallel with overhead brace when doors are in closed position.
- C. Screens: Attach with anchoring devices according to manufacturer's written instructions and to suit supporting structure. Set units level and plumb and to resist lateral impact.

3.2 ADJUSTING AND CLEANING

- A. Hardware Adjustment: Adjust and lubricate hardware according to manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doors and swing doors in entrance screens to return to fully closed position.
- B. Provide final protection and maintain conditions that ensure toilet compartments and screens are without damage or deterioration at the time of Substantial Completion.

END OF SECTION 102113

SECTION 102800 – TOILET AND SHOWER ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Public-use washroom and shower accessories.
- B. Related Sections:
 - 1. Division 09 Section "Tiling" for ceramic toilet and bath accessories.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include the following:
 - 1. Construction details and dimensions.
 - 2. Anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
 - 3. Material and finish descriptions.
 - 4. Features that will be included for Project.
 - 5. Manufacturer's warranty.
- B. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required.
 - 1. Identify locations using room designations indicated.
 - 2. Identify products using designations indicated.

1.4 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For toilet and bath accessories to include in maintenance manuals.

1.5 QUALITY ASSURANCE

- A. Source Limitations: For products listed together in the same Part 2 articles, obtain products from single source from single manufacturer.

1.6 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.

- B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Stainless Steel: ASTM A 666, Type 304, 0.031-inch minimum nominal thickness unless otherwise indicated.
- B. Steel Sheet: ASTM A 1008/A 1008M, Designation CS (cold rolled, commercial steel), 0.036-inch minimum nominal thickness.
- C. Galvanized-Steel Sheet: ASTM A 653/A 653M, with G60 hot-dip zinc coating.
- D. Galvanized-Steel Mounting Devices: ASTM A 153/A 153M, hot-dip galvanized after fabrication.
- E. 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.
- F. Mirrors: ASTM C 1503, Mirror Glazing Quality, clear-glass mirrors, nominal 6.0 mm thick.

2.2 PUBLIC-USE WASHROOM ACCESSORIES

- A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated in the following sub-sections or comparable product by one of the following:
 - 1. A & J Washroom Accessories, Inc.
 - 2. American Specialties, Inc.
 - 3. Bobrick Washroom Equipment, Inc.
 - 4. Bradley Corporation.
 - 5. GAMCO Specialty Accessories; a division of Bobrick Washroom Equipment, Inc.
 - 6. Tubular Specialties Manufacturing, Inc.
- B. Toilet Tissue (Roll) Dispenser :
 - 1. Basis-of-Design Product: Bobrick B-6977.
 - 2. Description: Double-roll dispenser.
 - 3. Mounting: Recessed mounted.
 - 4. Operation: Noncontrol delivery with standard spindle.
 - 5. Capacity: Designed for 4-1/2- or 5-inch- diameter tissue rolls.
 - 6. Material and Finish: Stainless steel, No. 4 finish, satin.
- C. Toilet Tissue (Roll) Dispenser :
 - 1. Basis-of-Design Product: Bobrick 6867.
 - 2. Description: Double-roll dispenser.

3. Mounting: Surface mounted.
4. Operation: Noncontrol delivery with standard spindle.
5. Capacity: Designed for 4-1/2- or 5-inch- diameter tissue rolls.
6. Material and Finish: Stainless steel, No. 4 finish, satin.

D. Seat-Cover Dispenser:

1. Basis-of-Design Product: Bobrick 221.
2. Mounting: Surface mounted.
3. Minimum Capacity: 250 seat covers.
4. Exposed Material and Finish: Stainless steel, No. 4 finish (satin).

E. Liquid-Soap Dispenser:

1. Basis-of-Design Product: American Standard 4503.115.
2. Description: Designed for dispensing soap in liquid or lotion form.
3. Mounting: Through Lavatory.

F. Mirror Unit:

1. Basis-of-Design Product: Bobrick 165.
2. Frame: Stainless-steel channel.
3. Hangers: Produce rigid, tamper- and theft-resistant installation, screw locking
4. Size: 24" x 48"

G. Liquid-Soap Dispenser:

1. Basis-of-Design Product: Bobrick 2111.
2. Description: Designed for dispensing soap in liquid or lotion form.
3. Mounting: Vertically oriented, surface mounted.
4. Capacity: 40-fl. Oz.

H. Grab Bar(s):

1. Basis-of-Design Product: Bobrick 6806-99.
2. Mounting: Flanges with concealed fasteners.
3. Material: Type 304, Stainless steel, 0.05 inch thick.
4. Finish: Smooth, No. 4 finish (satin) on ends and slip-resistant texture in grip area.
5. Outside Diameter: 1-1/2 inches.
6. Configuration and Length: as shown on drawings and accessible diagrams.

- I. Electric Hand Dryer:
 - 1. Basis-of-Design Product: World DXRA52-Q973.
 - 2. Mounting: Semi-recessed mounted.
 - 3. Electrical: Verify with electrical drawings
 - 4. Material and Finish: Stainless steel, No. 4 finish, satin.

- J. Clothes Hooks:
 - 5. Basis-of-Design Product: Bobrick 2116.
 - 6. Mounting: Flanges with concealed fasteners.
 - 7. Material: Nickel plated Brass.
 - 8. Outside Diameter: 2-3/4"
 - 9. Length: 3 1/2" inch projection.

- K. Folding Shower seats:
 - 10. Basis-of-Design Product: Accessibility Professionals.
 - 11. Mounting flanges and Tubing: 18-8 type 304 Stainless Steel, 18 gauge.
 - 12. Seat Material: 1/2:" thick solid phenolic with white matte finish.
 - 13. Operation: Folding against wall with swing down legs.
 - 14. Size: And configuration per plan.

- L. Shower Curtain Rods:
 - 1. Basis-of-Design Product: Bobrick 6107.
 - 2. Mounting: Flanges with concealed fasteners.
 - 3. Material: 18-8 type 304, Stainless Steel, Satin finish.
 - 4. Outside Diameter: 1"
 - 5. Length: per drawings.
 - 6. Options: Bobrick 204-2 and 204-3 Shower Curtain(s) and B-204-1 hooks.

- M. Toilet Partitions:
 - 1. Basis-of-Design Product: Bobrick 1090, Sierra Series.
 - 2. Mounting: Floor Mounted and Overhead Braced partitions with heavy duty Stainless steel hardware.
 - 3. Material: Solid reinforced composite, with aluminum headrail.
 - 4. Thickness: 1/2" panels and 3/4" doors
 - 5. Color: per architect from standard colors

- N. Janitor Mop Sink Rack with Shelf:
 - 1. Basis-of-Design Product: Bobrick 239.
 - 2. Mounting: 18-8 type 304, Stainless Steel, Satin finish.

3. Material: 18-8 type 304, Stainless Steel, Satin finish.
 4. Dimensions: 8" x 34"
- O. Diaper Changing Station:
1. Basis-of-Design Product: Bobrick KB200-00.
 2. Mounting: Concealed with, Stainless Steel anchors.
 3. Material: Injection Molded Polypropelene.
 4. Dimensions: 4" deep x 35" long and 22" high
 5. Provide diaper station signage on toilet compartment door.
- P. Sanitary-Napkin Disposal Unit:
1. Basis-of-Design Product: Bobrick 254.
 2. Mounting: Surface mounted.
 3. Door or Cover: Self-closing, disposal-opening cover.
 4. Receptacle: Removable.
 5. Material and Finish: Stainless steel, No. 4 finish satin.

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.
- B. Grab Bars: Install to withstand a downward load of at least 250 lbf, when tested according to ASTM F 446.

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 recommendations

END OF SECTION 102800

SECTION 105113 - LOCKERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:

- 1. Standard lockers.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of locker
- B. Shop Drawings: For metal lockers. Include plans, elevations, sections, details, and attachments to other work.
 - 1. Show locker trim and accessories.
 - 2. Include locker identification system and numbering sequence.
- C. Samples for Initial Selection: For units with factory-applied color finishes.
- D. Samples for Verification: For metal lockers, in manufacturer's standard sizes.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer.
- B. Warranty: Sample of special warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For adjusting, repairing, and replacing locker doors and latching mechanisms to include in maintenance manuals.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
- B. Source Limitations: Obtain metal lockers and accessories from single source from single manufacturer to match size, color and configuration of existing lockers

Regulatory Requirements: Where lockers are indicated to comply with accessibility requirements, comply with "Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities", CBC 2007 title 24 part 2 and ICC/ANSI A117.1.

1.7 PROJECT CONDITIONS

- A. Field Measurements: Verify actual dimensions of recessed openings by field measurements before fabrication.

1.8 COORDINATION

- A. Coordinate sizes and locations of bases for metal lockers.
- B. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of work specified in other Sections to ensure that metal lockers can be supported and installed as indicated.

1.9 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal lockers that fail in materials or workmanship, excluding finish, within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures.
 - b. Faulty operation of latches and other door hardware.
 - 2. Damage from deliberate destruction and vandalism is excluded.
 - 3. Warranty Period for Lockers: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.2 MATERIALS

- A. HDPE ½” thick made from polymer resin
- B. Anchors: Material, type, and size required for secure anchorage to each substrate.
 - 1. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls, for corrosion resistance.
 - 2. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.

2.3 STANDARD LOCKERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Insert manufacturer's name; product name or designation or comparable product by one of the following or provide substitution request:
 - 1. Penco .
 - B. Locker Arrangement: Four tier, door swing per plan.
- C. Material: HDPE.
 - 1. Body: no mechanical fasteners
 - 2. Door: mesh door vent, with maximum ventilation.
 - 3. Latch Hooks: Equip doors with Accessible handle, submit for approval prior to installation.

- D. Equipment: Equip each locker with identification plate and the following unless otherwise indicated:
- E. Accessories:
 - 1. Base: Fabricated HDPE sheet to replace the existing locker base. Min height per details. Provide primed and painted finish, color per architect
 - 2. Continuous Sloping Tops: HDPE sheet to replace the existing locker type. Provide color per architect.
 - 3. Filler Panels: HDPE sheet to replace the existing locker tope. Provide color per architect
- F. Finish:
 - 1. Color: As selected by Architect from manufacturer's full range

2.4 FABRICATION

- A. Fabricate lockers square, rigid, and without warp and with faces flat and free of dents or distortion. Make exposed edges safe to touch and free of sharp edges and burrs.
 - 1. Form body panels, doors, shelves, and accessories from one-piece HDPE sheet.
 - 2. Provide fasteners, filler plates, supports, clips, and closures as required for complete installation.
- B. Fabricate each locker with an individual door and frame; individual top, bottom, and back; and common intermediate uprights separating compartments. Factory weld frame members of each locker together to form a rigid, one-piece assembly.
- C. Accessible Lockers: Fabricate as follows:
 - 1. Locate bottom shelf no lower than 15 inches (381 mm) above the floor.
 - 2. Where hooks, coat rods, or additional shelves are provided, locate no higher than 48 inches (1219 mm) above the floor.
- D. Hooks: Manufacturer's standard ball-pointed type, aluminum or steel; zinc plated.
- E. Identification Plates: Manufacturer's standard, plates, with numbers and letters at least 3/8 inch (9 mm) high.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine walls, floors, and support bases, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Install level, plumb, and true; shim as required, using concealed shims.
 - 1. Anchor locker runs at ends and at intervals recommended by manufacturer, but not more than 36 inches (910 mm) o.c. Using concealed fasteners, install anchors through backup reinforcing plates, channels, or blocking as required to prevent distortion.
 - 2. Anchor single rows of lockers to walls near top and bottom of lockers to floor.
 - 3. Anchor back-to-back lockers to floor.
- B. Equipment and Accessories: Fit exposed connections of trim, fillers, and closures accurately together to form tight, hairline joints, with concealed fasteners and splice plates.
 - 1. Attach hooks with at least two fasteners.
 - 2. Attach door locks on doors using security-type fasteners.
 - 3. Identification Plates: Identify metal lockers with identification indicated on Drawings.
 - a. Attach plates to each locker door, near top, centered, with at least two aluminum rivets.
 - b. Attach plates to upper shelf of each open-front locker, centered, with a least two rivets.
 - 4. Attach recess trim to recessed lockers with concealed clips.
 - 5. Attach filler panels with concealed fasteners. Locate filler panels where indicated on Drawings.
 - 6. Attach sloping-top units to lockers, with closures at exposed ends.
 - 7. Attach boxed end panels with concealed fasteners to conceal exposed ends of non-recessed lockers.
 - 8. Attach finished end panels with fasteners only at perimeter to conceal exposed ends of non-recessed lockers.

3.3 ADJUSTING, CLEANING, AND PROTECTION

- C. Clean, lubricate, and adjust hardware. Adjust doors and latches to operate easily without binding. Verify that integral locking devices operate properly.
- D. Protect lockers from damage, abuse, dust, dirt, stain, or paint. Do not permit use during construction.
- E. Touch up marred finishes, or replace lockers that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by locker manufacturer.

END OF SECTION 105113

SECTION 220500 - BASIC PLUMBING REQUIREMENTS, MATERIALS AND METHODS

PART 1 - GENERAL

1.0 RELATED DOCUMENTS

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

1.1 RELATED DOCUMENTS

- A. Where contradictions occur between this Section and the Greenbook, and between contract specifications and drawings, the most stringent of the two shall apply. The Owner's Representative shall decide which is most stringent.
- B. Provisions of this Section shall also apply to all Division 22 work.

1.2 DEFINITIONS

- A. "Contract Documents" constitute the drawings, specifications, general conditions, project manuals, etc., prepared by engineer (or other design professional in association with Engineer) for contractor's bid.
- B. "Construction Documents", "construction drawings", and similar terms for Division 22 work refer to installation diagrams, shop drawings and coordination drawings prepared by the contractor using the design intent indicated on the Engineer's contract documents. These specifications detail the contractor's responsibility for "Engineering by Contractor" and for preparation of construction documents.
- C. "(N)" indicates "new" equipment to be provided under this contract.
- D. "(E)" indicates "existing" equipment on site which may or may not need to be relocated as part of this work.
- E. "(R)" indicates existing equipment to be relocated as part of this work.
- F. "Furnish" means to "supply" and usually refers to an item of equipment.
- G. "Install" means to "set in place, connect and place in full operational order".
- H. "Provide" means to "furnish and install".
- I. "Equal" or "Equivalent" means "meets the specifications of the referenced product or item in all significant aspects". Significant aspects shall be as determined by the Owner's Representative.
- J. "Work by other(s) divisions", "re: _____ Division", and similar expressions means work to be performed under the contract documents, but not necessarily under the division or section of the work on which the note appears. It is the contractors' sole responsibility to coordinate the work of the contract between his/her suppliers, subcontractors and employees. If clarification is required, consult Owner's Representative before submitting bid.
- K. By inference, any reference to a "contractor" or "sub-contractor" means the entity, which has contracted with the Owner for the work of the Contract Documents.

- L. “Engineer” means the design professional firm, which has prepared these contract documents. All questions, submittals, etc. of this division shall be routed to the Engineer (through proper contractual channels).

1.3 COORDINATION WITHIN DIVISION 22

A. Contract Documents:

1. General: The Contract Documents are diagrammatic showing certain physical relationships, which must be established within Division 22 work and its interface with other work. Such establishment is the exclusive responsibility of the Contractor. Drawings shall not be scaled for the purpose of establishing dimensions, clearances or material quantities.
2. Supplemental Instructions: The exact location for some items in this Specification may not be shown on the Drawings. The location of such items may be established by the Owner’s Representative during the progress of the work.
3. Discrepancies:
 - a. Examine Drawings and Specifications of all Divisions of the work.
 - b. Report any discrepancies to the Owner’s Representative and obtain written instructions before proceeding.
 - c. Should there be a conflict within or between the Specifications or Drawings, the most stringent or higher quality requirements shall apply.
 - d. Items called for either in the Specifications or on the Drawings shall be required as if called for in both.
4. Constructability:
 - a. Examine Drawings and Specifications of all Divisions of the work.
 - b. Report any issues to the Owner’s Representative which may prevent installation of Division 22 work in accordance with the Contract Documents and the original construction contract.

- B. Contractor shall be responsible for providing proper documentation of equipment product data and shop drawings to all entities providing service.

- C. Coordination Drawings: Prepare coordination drawings in accordance with Greenbook, Section “Submittals” to scale of 1/4” = 1’-0” or larger, detailing major elements, components, and systems of mechanical equipment (i.e. equipment rooms, and exterior equipment areas) and materials in relationship with other system, installations, and building components. Indicate locations where space is limited for installation and access and where sequencing and coordination of installations are important to the efficient flow of the work, including (but not necessarily limited to) the following:

1. Indicate all major piping (HVAC, Plumbing and Fire Suppression), electrical equipment and conduits, structural, and architectural elements in these areas as well.
2. Sizes and locations of required concrete pads, piers, curbs, and bases.
3. Provide all necessary sections and elements for clarification.

4. Indicate all seismic restraint and support systems to be used for all mechanical equipment throughout the project.
 5. Ductwork and piping transitions from rooftop units to shafts or horizontal ducts.
 6. Failure to produce or submit coordination drawings does not dismiss the Contractor's responsibility for translating the design intent of the Contract Documents into Construction Drawings.
- D. CAD Drawings: For the purposes of facilitating the Contractor's shop drawings and record drawings, electronic AutoCAD drawings are available from the Engineer to the awarded Contractor. Coordinate with Owner's Representative.
- E. Existing Conditions:
1. Before submitting proposals for this work, each Bidder shall be familiar with plans and specifications and shall have examined the premises and understood the conditions under which he/she will be obliged to operate in performing his/her contract.
 2. No allowance will be made subsequently in this connection, on behalf of the Contractor, for any error through negligence on his/her part.
 3. Drawings of existing conditions may be available. Contractor is strongly encouraged to obtain relevant drawings to assist in his/her performance of the contract.
- F. Utility Connections:
1. Coordinate the connection of plumbing system with utilities and services.
 2. Comply with regulations of utility suppliers.
 3. The contract documents indicate the available information on existing utilities and services, and on new services (if any) to be provided to the project by utility companies and agencies.
 - a. Notify the Owner's Representative immediately if discrepancies are found.
 4. Coordinate mechanical utility interruptions one week in advance in writing with the Owner's Representative and the Utility Company.
 - a. Plan work so that duration of the interruption is kept to a minimum.

1.4 COORDINATION WITH OTHER DIVISIONS

- A. General:
1. Coordinate the Division 22 work with the progress of the work of the other trades.
 2. Complete the entire installation as soon as the condition of the building will permit.
 3. Contractor is responsible for coordination of his/her work with Owner's facility staff engaged in building automation, commissioning of systems, fire alarm system, etc.
- B. Coordination with electrical work: Refer to Division 26.
- C. Cutting and Patching: Refer Part 3 of this section.

D. Chases, Inserts and Openings:

1. Provide measurements, drawings, and layouts so that opening, inserts and chases in new construction can be built and coordinated as construction progresses.
2. Check sizes and locations of openings provided.
3. Any cutting and patching made necessary by failure to provide measurements, drawings, and layouts at the proper time shall be done at no additional cost to the Owner.

E. Support Dimensions: Provide dimensions and drawings so that concrete bases and other equipment supports to be provided under other Sections of the Specifications can be built at the proper time.

1.5 COORDINATION WITH EXISTING OCCUPIED AREAS

- A. Minimize disruptions to operation of existing plumbing systems in occupied areas.
- B. Coordinate any required disruptions with the Owner's Representative, one week in advance, in writing.
- C. Provide temporary connections to prevent long disruptions.

1.6 DEMOLITION AND WORK IN EXISTING AREA

- A. Remove existing equipment and materials as required.
- B. Verify the size and location of all existing services and utility lines prior to connection. The drawings show diagrammatically the approximate location of utilities where information is available, but the drawings are not exact as to quantity, extent or location. Exercise extreme caution during all phases of the work to locate, identify and protect existing services and utilities. Record the location of, and repair damage as required to existing services and utilities which are encountered as a result of work under this contract.
- C. Do work in a manner which will not cause inconvenience or danger to the occupants of the building, nor interfere with the other occupants; activities.
- D. Make all necessary alterations and additions to connect the existing with the new work so that when the work is complete, it will be in satisfactory operable condition. Provide all cutting and patching including concrete saw cutting and core drilling as required. Obtain approval from the structural engineer prior to performing concrete saw cutting or core drilling operations.
- E. All equipment and materials removed shall be legally disposed of off-site, unless otherwise noted.

1.7 ENGINEERING BY CONTRACTOR

- A. The construction of this building requires the Contractor to design several systems or subsystems. All such designs shall be the complete responsibility of the Contractor.
- B. Systems or subsystems which require responsibility by the Contractor and submitted to the Engineer for review include, but are not limited to:
 1. Equipment and piping supports, not detailed in the drawings.
 2. Pipe hangers and anchors not specified in these documents, or catalogued by the manufacturer.

3. Vibration Isolation/Seismic Restraint.
4. Underground piping distribution systems.
5. Thermal pipe stress analysis.

1.8 REGULATORY REQUIREMENTS

A. General:

1. **Regulatory Compliance:** Work performed under this Division shall comply with the latest currently adopted editions of Codes and Regulations including, but not limited to those listed below.
2. **Minimum Requirements:** The requirements of the Drawings and Specifications are the minimum that will be allowed, unless such requirements are exceeded by applicable codes or Regulations, in which case the Code or Regulation requirement shall govern.
3. **Code Changes:** Should a code change occur between time of proposal and date of permit issue, and the Contractor has unnecessarily delayed the acquisition of permits, the contractor shall hold the Owner free from additional expense resulting from such Code change.

B. Codes: Comply With the Currently Adopted (At Time of Contract Award) Following Codes:

1. City of San Diego Municipal Code, Ordinances and Regulations.
2. The City of San Diego Fire-Rescue Department Regulations and Requirements.
3. California Codes of Regulations, (CCR), Title 24, Latest Edition.
4. California Building Code (CBC), Latest Edition.
5. California Mechanical Code (CMC), Latest Edition.
6. California Plumbing Code (CPC), Latest Edition.
7. California Electric Code (CEC), Latest Edition.
8. California Fire Code (CFC), Latest Edition.
9. The City of San Diego Department of Health Services Regulations and Requirements.
10. City of San Diego Public Works Department Regulations and Requirements.
11. City of San Diego Industrial Waste Division Regulations and Requirements.
12. National Electric Code (NEC), Latest Edition.
13. California Energy Commission, Title 24.
14. State Elevator Safety Regulations (SESR).
15. National Fire Protection Association NFPA-101, Life Safety Code, Latest Edition for JCAHO accreditation.
16. Occupational Safety and Health Administration Regulations and Requirements (OSHA).

17. California Occupational Safety and Health Administration Regulations and Requirements (CAL-OSHA).
 18. South Coast Air Quality Management District Regulations and Requirements (SCAQMD).
 19. American Disability Act Regulations and Requirements (ADA).
 20. State of California Water Resources Control
- C. Comply With the Latest Editions of Applicable Regulations and Standards, Including:
1. National Fire Protection Associations (NFPA).
 2. Underwriter's Laboratories, Inc. (UL).
 3. American National Standards Institute (ANSI).
 4. American Society of Testing Materials (ASTM).
 5. American Society of Mechanical Engineers (ASME).
 6. American Welding Society Code (AWSC).
 7. American Water Works Association (AWWA).
 8. Compressed Gas Association (CGA).
 9. Cast Iron Soil Pipe Institute (CISPI).
 10. Manufacturers Standardization Society (MSS).
 11. National Bureau of Standards (NBS).
 12. Plumbing and Drainage Institute (PDI).
 13. Sheet Metal and Air Conditioning Contractors National Association (SMACNA).
- D. Requirements of Local Utility Companies: Comply with rules and regulations of local utility companies. Include in bid the cost of all valves, valve boxes, meter boxes, meters and such accessory equipment, which will be required for the project.
- E. Additional Regulations: Follow additional regulations which appear in individual Sections of these Specifications.
- F. Contradictions: Where codes are contradictory, follow the most stringent, unless otherwise indicated in Plans or Specifications. The Owner's Representative shall determine which is most stringent.
- G. Contract Documents Not in Compliance:
1. Where it is not noted that the Drawings and Specifications do not comply with the minimum requirements of the codes, either notify the Owner's Representative in writing during the Bidding Period of the revisions required to meet Code Requirements. After entering into contract, Contractor will be held to complete all work necessary to meet Code Requirements without additional expense to the Owner.
 2. Follow Drawings and Specifications where they are superior to Code Requirements.

- H. Permits:
 - 1. Contractor shall pay for and obtain all permits required by authorities and agencies having jurisdiction for the work in this Division.
 - 2. Post permits as required.
- I. Inspections and Tests:
 - 1. Arrange for all required inspections and tests.
 - 2. Pay all charges.
 - 3. Notify the Owner's Representative in writing 72 hours before tests.
 - 4. Submit one copy for Owners record of permits. Licenses, inspection reports and test reports.

1.9 EQUIVALENTS AND SUBSTITUTIONS

- A. Basis for Design: The manufacturer's name and product listed on the drawings, or listed first of several names in these Specifications, is used as a basis for design to establish space requirements, a standard of quality and performance.
- B. Equivalents: Products of one or more other manufacturer's names listed in these Specifications following the words "or equivalent by, or equal" may be selected, subject to paragraph below titled "Contractor's Responsibility for Equivalent and Substitutions."
- C. Other Options:
 - 1. For products specified by naming only one manufacturer, refer to paragraph below under "Substitutions".
 - 2. For products specified only by performance characteristics or reference standards, select any manufacturer meeting the requirements.
- D. Substitutions: Requests for acceptance of a product of manufacturer's name not listed in these specifications will be considered if any one of the following conditions is met:
 - 1. The named product is not available because of strikes or discontinuance of manufacture, and the proposed product is equivalent to the named product.
 - 2. The proposed product is superior to the named product, in the opinion of the Owner's representative.
 - 3. The proposed product is equivalent to the named product and its use will be to the advantage of the Owner, by the Owner receiving an equitable credit or cost savings. The Owner's Representative reserves the right to reject any substitution.
 - 4. Submit proposed substitutions with bid along with alternate price, complete descriptive data and a comparison of the substitute manufacturer's product with specified product. Request for acceptance of a product of manufacturer's name not listed in these specifications, is subject to the paragraph titled "Contractor's Responsibility Equivalents and Substitutions".
- E. Contractor's Responsibility for Equivalents and Substitutions:
 - 1. Items submitted as a substitution to the basis of design or listed general equivalents shall be identified as such and shall include a written request for substitution indicating the following:

- a. Contract price adjustment.
 - b. Contract time adjustment.
 - c. Item by item breakdown of differences between basis of design and substituted item.
 - d. Operation, maintenance and energy cost difference.
2. Products of manufacturer must match the features, construction, performance and size of those selected for design. Standard catalogued may require certain modifications to meet specified requirements.
 3. The responsibility for providing that specified requirements have been met remains with the manufacturer and contractor. Should the substituted item fail to perform in accordance with the Specifications, replace same with the originally specified item without extra cost to the contract.
 4. When requesting review of an equivalent or substituted product, submit a comparison chart listing features, construction, performance and sizes of named product versus equivalent or substituted product.
 5. Submittals for review of an equivalent or substituted product will be reviewed for acceptability when all the above requirements have been met. Contractor shall be responsible for all costs incurred by the Architect and Engineer for review of equivalency beyond initial review.
 6. Coordinate the installation of the product with all trades.
 7. Contractor shall be responsible for changes in electric wiring, materials and for all other additional costs of construction by all trades involved to accommodate the product to perform same as product used on the "Basis of Design".
 8. Coordination of General Equivalents and Substitutions: Where Contract Documents permit selection from general equivalents, or where substitutions are authorized, coordinate clearance and other interface requirements with mechanical and other work.
 9. Provide necessary additional items so that selected or substituted item operates equivalent to the Basis of Design and properly fits in the available space allocated for the Basis of Design.
 10. Contractor is responsible for assuring that piping, conduit, duct, flue and other service locations for general equivalents or substitutions do not cause access, service or operational difficulties any greater than would be encountered with the Basis of Design.
 11. Failure to comply with these requirements will result in immediate rejection of the request for substitution.

1.10 GENERAL SUBMITTAL REQUIREMENTS

A. Coordination and Sequencing:

1. Coordinate submittals 3 weeks (minimum) prior to expected order date so that work will not be delayed by submittals.

2. Do not submit product data, or allow its use on the project until compliance, with requirement of Contract Documents has been confirmed by Contractor.
3. Submittal is for information and record, unless otherwise indicated, and is not a change order request.
4. Submitting contractor is responsible for routing reviewed submittals to all parties affected including but not limited to electrical, building automation and temperature control, and test and balance subcontractors.
5. Make submittals for group of similar products or materials such as valves, fixtures, pumps, insulation, etc., or area of work complete and at one time, not in piecemeal fashion.
6. Identify submittals with Architect's project name and number, with item designation as indicated on drawings, and referenced to applicable paragraphs of the specifications. Submit in brochure form.
7. Submittals of products needed at start of Project for its installation, or those requiring a long lead time for assembly or manufacturing, should be submitted before the others.

B. Preparations of Submittals:

1. Provide permanent marking on each submittal to identify project, date, Contractor, Subcontractor, Supplier, submittal name and similar information to distinguish it from other submittals.
2. Indicate any portions of work, which deviate from the Contract Documents.
 - a. Explain the reasons for the deviations.
 - b. Show how such deviations coordinate with interfacing portions of other work.
3. Show Contractor's executed review and approval marking.
4. Provide space for the Owner's Representative "Action" marking.
5. Submittals, which are received from sources other than through Contractor's office, will be returned "Without Action".
6. Submittals shall be presented in a neat and legible fashion and shall be returned "Without Action" if presented in any other fashion.

C. Quantities: Submit six (6) copies.

1. Multiple System Items: Where a required submittal relates to an operational item of equipment used in more than one system, increase the number of final copies as necessary to complete the Maintenance Manuals for each system.
2. General Distribution:
 - a. Provide additional distribution of submittals (not included in foregoing copy submittal requirements) to Subcontractors, Suppliers, Fabricators, Installers, Governing Authorities and others as necessary for proper performance of the work.
 - b. Include such additional copies in transmittal to Owner's Representative where required to receive "Action" marking before final distribution.
 - 1) Show such distributions on transmittal forms.

- D. Response to Submittals: Where standard product data have been submitted, it is recognized:
1. That the Submitter has determined that the products fulfill the specified requirements.
 2. That the submittal is for the Owner's Representative information only, but will be returned with appropriate action where observed to be not in compliance with the requirements.
- E. If more than two submittals (either for shop drawings, as-builts drawings, or test and balance reports) are made by the contractor due to the incompleteness, non-compliance, errors, omissions, etc. the Owner reserves the right to charge the contractor for subsequent reviews by their consultants. Such extra fees shall be deducted from payments by the Owner to the Contractor.

1.11 SPECIFIC CATEGORY SUBMITTAL REQUIREMENTS

A. Manufacturer's Data:

1. Where pre-printed data covers more than one distinct product, size, type, material, trim, accessory group or other variation, mark submitted copy with black ink to indicate which of the variations is to be provided.
2. Delete or mark-put significant portions of pre-printed data, which are not applicable.
3. Where operating ranges are shown, mark data to show portion of range required for project application.
4. For Each Product, Include the Following:
 - a. Sizes.
 - b. Weights.
 - c. Speeds.
 - d. Capacities.
 - e. Piping and electrical connection sizes and locations.
 - f. Statements of compliance with the required standards and regulations.
 - g. Performance data.
 - h. Manufacturer's specifications and installation instructions.

B. Shop Drawings:

1. Prepare plumbing shop drawings, except diagrams, to accurate scale.
 - a. Show clearance dimensions at critical locations.
 - b. Show dimensions of spaces required for operation and maintenance.
 - c. Show interfaces with other, work, including structural support.

C. Test Reports:

1. Submit test reports, which have been signed and dated by the firm performing the test.

2. Prepare test reports in the manner specified in the standard or regulation governing the test procedure (if any) as indicated.
- D. Required Equipment and Shop Drawing Submittals:
1. Provide a submittal schedule with bid.
 2. Provide equipment submittals for each item of equipment specified or scheduled in the Contract Documents.
 3. Submittal schedule shall show each item of equipment, applicable section of the Specifications where it is described, applicable drawing number and schedule name where it is scheduled, date of Contractor's proposed submittal to the Owner's Representative, required date to receive submittal from the Owner's Representative and schedule order date.
 4. Provide a Mechanical Shop Drawing Schedule for submission to the Owner's Representative with the Submittal Schedule. Refer to Paragraph 1.03 – Coordination Within Division 22 – above.

1.12 COMPATIBILITY

- A. General: Provide products, which are compatible with other products of the mechanical work, and with other work, requiring interface with the mechanical work.
- B. Power Characteristics: Where power characteristics are not stated in Division 22 Sections, refer to the Sections of Division 26 and the Electrical Drawings for the power characteristics of each power driven item of mechanical equipment. Coordinate available power with Electrical Contractor before ordering equipment. Mechanical Contractor shall be responsible for ordering equipment to meet the available power characteristics. If there is a conflict between Division 22 documents and Division 26 documents, provide a written notification to the Owner's Representative for direction. Do not order equipment prior to determining the proper electrical service. No contract cost adjustment will be allowed for equipment ordered in conflict with the available power characteristics.

1.13 RECORD DRAWINGS

- A. Drawings:
1. Record of Project Progress: Purchase from the Architect a complete set of reproducible contract drawings and maintain drawings available at the job site for inspection. Keep an accurate, legible and continuously updated record of installed locations and all project revisions other than revised drawings issued by the Architect, including source and date of authorization. Utilize only contract drawing symbols for recording the work. Drawing notations to be sufficiently clear in the representation of the work, for utilization by a CADD operator (drafts person) who is not necessarily familiar with the installed work.
 2. Record of Installation: At the conclusion of the work, deliver one (1) set of blue prints of the progress drawings to the Owner's Representative for review. Following the review, Contractor shall have incorporated by a competent CADD operator all of the installed data represented on the project progress drawings.
 3. Include in Record Drawings the Following:
 - a. Revisions, including sketches, bulletins, change orders, written addenda and directives, clarifications and responses generated by requests for information (RFIs), regardless of source of the revision.

- b. Location and configuration of equipment with related housekeeping pads.
 - c. Location of fixtures, drains and appurtenances.
 - d. Physical routing of piping, underground, exposed, and above ceiling with locations of valves and accessories plainly marked and identified.
 - e. Location of piping below building and on exterior, valves, manholes, appurtenances and stub outs dimensioned from buildings and permanent structures, both horizontally and vertically.
 - f. Location of wall and ceiling access panels.
- B. Acceptance: As a condition for acceptance of the work, deliver two (2) sets of Auto CAD Latest Version CDs and one set of signed and dated reproducible drawings to the Owner's Representative and obtain a receipt.

1.14 OPERATING AND MAINTENANCE DATA

- A. Submission:
- 1. Submit three typed and bound copies of Operating and Maintenance (O&M) Manuals prior to scheduling systems demonstrations for the Owner's Representative.
 - 2. Bind each Maintenance Manual in one or more vinyl covered, 3-ring binders, with pockets for folded drawings.
 - a. Mark the spine of each binder with system identification and volume number.
- B. Required Contents:
- 1. Manuals shall have index with tab dividers for each major equipment section to facilitate locating information on a specific piece of equipment.
 - 2. Identify data within each section with drawing code numbers as they appear on Drawings and Specifications. Include as a minimum the following data:
 - a. Alphabetical list of system components, with the name, address and 24 hour telephone number of the company responsible for servicing each item during the first year of operation. Include point of contact for company.
 - b. Operating instructions for complete system including:
 - 1) Emergency procedures for fire and failure of major equipment.
 - 2) Major start, operation and shut down procedures.
 - c. Maintenance Instructions for Each Piece of Equipment Including:
 - 1) Equipment lists.
 - 2) Proper lubricants and lubricating instructions for each piece of equipment.
 - 3) Necessary cleaning, replacement and/or adjustment schedule.
 - 4) Product data.
 - 5) Installation instructions.
 - 6) Parts list.

- d. Marked or changed prints locating concealed parts and variations from the original system design (as-built drawings).
- e. Valve schedule and associated piping schematics.
- f. Copies of any extended equipment warranties which are greater than one year.

1.15 WARRANTIES

- A. The warranty period is two years after Date of Acceptance.
 1. During this period, provide labor and materials as required to repair or replace defects in the mechanical system at no additional cost to the Owner. Provide certificate with O&M Manual submittal, which guarantees same-day service response to Owners call for all such warranty service.
 2. Provide certificate for such items of equipment, which have warranties in excess of one year. Insert copies in O&M Manuals.
 3. Provide extended manufacturers warranties to cover two full years from date of acceptance if standard warranty starts any time prior to that date.
 4. At time of bid, submit additional costs or extended warranties for principal equipment (e.g. domestic water pressure booster pump, vacuum pump, air compressor, etc.).

1.16 SPARE PARTS, SPECIAL TOOLS

- A. Deliver spare parts to the Owner's Representative and obtain receipts at the time operating instructions are given to the Owner's personnel.
- B. Include the Following:
 1. V-Belts: One complete set of each size.
 2. Fuses: each type used for all equipment utilizing fuses. Quantity 10%, but not less than two.
 3. Pilot Light Lamps: Each type used on the project. Quantity of 10%, but not less than two.
 4. Special Tools: Furnish special tools required for assembly, adjustment, setting or maintenance of equipment if such tool is not readily available on the commercial tool market.
 5. Maintenance Paint: Furnish one can of touch-up paint for each different factory finish, which is to be the final finished surface of the product.
 6. Alternate Parts: Under the individual mechanical sections, there are listed spare parts to be furnished under a bid alternate. Should the alternate be accepted, such spare parts shall be similarly delivered to the Owner.

1.17 SYSTEM ACCEPTANCE

- A. Acceptance shall be contingent upon completion of final review and correction of all deficiencies. Satisfactory completion of the operational tests, which shall demonstrate compliance with all performance criteria, and the requirements of the Contract Documents.
- B. Request a Final Review Prior to System Acceptance After Completion of the Following:
 1. Installation of all systems required by Contract Documents.
 2. Submission and acceptance of service manuals.

3. Identification.
4. Cleaning.
5. Satisfactory operation of all systems for a period of one week.

1.18 MANDATORY GOVERNING PROVISION

- A. Omissions of words or phrases, such as “the Contractor shall”, in conformity with”, “shall be”, “as noted on the Drawings”, “according to the Drawings”, “an”, “the”, and “all” are intentional.
- B. Omitted words or phrases shall be supplied by inference.

1.19 OWNER FURNISHED EQUIPMENT

- A. All equipment called out in the Specifications or shown on the Drawings as “Owner Furnished Equipment” shall be installed and connected under this contract. Provide rough-ins for all future connections indicated, unless otherwise specifically indicated on Drawings.

1.20 TEMPORARY FACILITIES

- A. Light, heat, power, etc.
 1. Contractor shall be responsible for providing temporary electricity, heat and other facilities.
 2. Contractor shall be responsible for maintaining the equipment in an as-new condition. Equipment will not be turned over to the Owner until it is brought up to as-new condition.

1.21 SAFETY PROVISIONS

- A. Equipment Nameplates: provide power-oriented plumbing equipment with a permanent nameplate attached by the manufacturer, indicating:
 1. The manufacturer.
 2. Product name.
 3. Model number.
 4. Serial number.
 5. Speed.
 6. Capacity.
 7. Power characteristics.
 8. Labels of testing, or inspecting agencies.
 9. Other similar data.
- B. Where manufacturer affixed nameplate is not available, Contractor shall fabricate and attach nameplate.
- C. Guards:
 1. Unless equivalent guards are provided integral with the equipment, enclose each belt drive (including sheaves) on both sides in a galvanized, one inch, mesh screen of No. 18 gauge steel wire or expanded metal, fastened to an approved, structural steel frame, securely fastened to the equipment or floor.

2. Provide tachometer holes at shaft centers. Unless equivalent guards are provided integral with the equipment, install a solid guard of No. 20 gauge galvanized steel over the coupling of each item of direct-driven equipment.
3. Sides are not required on these guards except to ensure rigidity.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS

- A. Uniformity: Material and equipment of same type or classification shall be the product of the same Manufacturer, wherever possible.
- B. Application: Do not install any material or equipment in an application not recommended by the Manufacturer.
- C. Weatherproof Equipment: Equipment installed outdoors shall be designed for this purpose or shall be housed in a weatherproof enclosure. Enclosure shall be sheet metal, ventilated or insulated as required with hinged access doors, hardware and lock.

2.2 ACCESS PANELS

- A. For panels: comply with the following:
 1. Manufacturers:
 - a. Design Basis: Milcor Division, Inryco, Inc.
 - b. Other Acceptable Manufacturers:
 - 1) Birmingham Ornamental Iron Co.
 - 2) Karp Associates, Inc.
 - 3) Wilkenson Co., Inc.
 - 4) Zurn.
 - B. Construction:
 1. Doors: 14 gauge steel.
 2. Frames: 16 gauge steel.
 3. Fire Rating: Equivalent to construction in which installed.
 4. Latches: Flush or concealed 1/4 turn.
 5. Finish: Compatible with finish of construction in which installed.

2.3 FIRE STOPPING MATERIAL

- C. Manufacturers:
 1. Design Basis: 3M.
 2. Other Acceptable Manufacturers:
 - a. GE.
 - b. Metalines.

- D. General Requirements:
 - 1. Products to be used shall have been tested in accordance with ASTM E 814-88, and be listed in the UL Fire Resistance Directory.
 - E. Bare Piping:
 - 1. Model: FD 150, or CP-25.
 - F. Insulated Piping:
 - 1. Model: CP-25 or FS-195, Intumescent.
 - 2. “No-sag” or “self-leveling” as required.
 - G. Accessories:
 - 1. Provide fasteners, restricting collars, backing materials, and protective coatings as required to comply with the UL system listing.
- 2.3 WATERPROOFING
- A. Wherever work must penetrate waterproofing, do so with care. Openings waterproofing shall be absolutely watertight in a manner acceptable to the Resident Engineer.
 - B. Pipes through Roof: Refer to Architectural Detail for pipe flashing.
 - C. Pipes through Waterproof Slabs or Walls: Use waterproof sleeves or “Link-Seal” gaskets.
 - D. In no case shall the effective height of flashing be less than 5”.
 - E. Heavily coat all roof penetrations with roofing mastic.

PART 3 - EXECUTION

3.1 INSTALLATION GENERAL REQUIREMENTS

- A. Furnish, apply, install, connect, erect, clean, and condition manufactured materials and equipment as recommended in manufacturer’s printed directions (maintained on job site during installation).
- B. Provide all attachment devices and materials necessary to secure materials together or to other materials.
- C. Make allowance for ample and normal expansion and contraction for all building components and piping systems that are subject to such.
- D. Install materials only when conditions of temperature, moisture, humidity and conditions of adjacent building components are conducive to achieving the best installation results.
- E. Erect, install and secure components in a structurally sound and appropriate manner.
- F. Where necessary, temporarily brace, shore, or otherwise support members until final connections are installed.
- G. Leave all temporary bracing, shoring, or other structural supports in place as long as practical for safety and to maintain proper alignment.

- H. Handle materials in a manner to prevent scratching, abrading, distortion, chipping, breaking, or other disfigurement.
- I. Conduct work in a manner to avoid injury or damage to previously placed work.
- J. Any work so impaired or damaged shall be replaced at no expense to Owner.
- K. Fabricate and install materials true to line, plumb and level.
- L. Leave finished surfaces smooth and flat, free from wrinkles, wraps, scratches, dents and other imperfections.
- M. Furnish materials in longest practical lengths and largest practical sizes to avoid all unnecessary jointing.
- N. Make all joints secure, tightly fitted, and as inconspicuous as possible by the best, accepted practice in joinery and fabrication.
- O. Consult the Owner's Representative for mounting height or position of any unit not specifically indicated or located on Drawings or specified in Specifications.
- P. Job mixed multi-component materials used in the work shall be mixed in such regulated and properly sized batches that material can be used before it begins to "set".
- Q. Mixing of a partially "set" batch with another batch of fresh materials will not be accepted and entire batch shall be discarded and removed from site.
- R. Clean all mixing tools and appliances that can be contaminated prior to mixing of fresh materials.
- S. In addition to the above, refer to each Section of the Specifications for additional installation requirements for the proper completion of all work.

3.2 COORDINATION OF PLUMBING INSTALLATION

- A. Inspection and Preparation:
 - 1. Examine the work interfacing with plumbing work, and the conditions under which the work will be preformed, and notify the Owner's Representative of conditions detrimental to the proper completion of the work at original contract price.
 - 2. Do not proceed with the work until unsatisfactory conditions have been corrected.
- B. Layout:
 - 1. Layout the plumbing work in conformity with the Contract Drawings, Coordination Drawings and other Shop Drawings, product data and similar requirements so that the entire plumbing system will perform as an integrated system, properly interfaced with other work recognizing that portions of the work are shown only in diagrammatic form.
 - 2. Where coordination requirements conflict with individual system requirements, comply with the Owner's Representative decision on resolution of the conflict.
 - 3. Take necessary field measurements to determine space and connection requirements.
 - 4. Provide sizes and shapes of equipment so the final installation conforms to the intent of the Contract Documents.
 - 5. Provide necessary fittings to create offsets as required to coordinate with building structure and other trades, even if fittings are not shown on the Contract Drawings.

- C. Integrate plumbing work in ceiling spaces with the ceiling suspension system, light fixtures and other work, so that required performance of each will be achieved.

3.3 PRODUCT INSTALLATION

A. Manufacturer's instructions:

1. Except where more stringent requirements are indicated, comply with the product manufacturer's instructions and recommendations.
2. Consult with manufacturer's technical representatives, who are recognized as technical experts, for specific instructions on special projects conditions.
3. If conflict exists, notify the Owner's in writing and obtain his instruction before proceeding with the work in question.

B. Movement of Equipment:

1. Wherever possible, arrange for the movement and positioning of equipment so that enclosing partitions, walls and roofs will not be delayed or need to be removed.
2. Otherwise, advise Contractor of opening requirements to be maintained for the subsequent entry of equipment.

C. Heavy Equipment:

1. Coordinate the movement of heavy items with shoring and bracing so that the building structure will not be overloaded during the movement and installation.
2. Where plumbing products to be installed on the existing roof are too heavy to be hand-carried, do not transport across the existing roof deck. Position by crane or other device so as to avoid overloading or otherwise damaging the roof deck.

D. Clearances:

1. Install Piping and Ductwork:
 - a. Straight and true.
 - b. Aligned with other work.
 - c. Close to walls and overhead structure (allowing for insulation).
 - d. Concealed, where possible, in occupied spaces.
 - e. Out-of-the-way with maximum passageway and headroom remaining in each space.
2. Do not obstruct windows, doors and other openings.
3. Coordinate location of piping systems required to slope for drainage (over other service lines and ductwork).

3.4 PROTECTION OF WORK

- A. Provide protection against dust migration, rain, wind, storms, frost, or heat, so as to maintain all work, materials, apparatus and fixtures free from injury or damage.
- B. At end of each day's work, cover all new work likely to be damaged.
- C. Do not interrupt the integrity of the building security overnight.

- D. All pipe ends, valves and equipment left unconnected shall be capped, plugged or otherwise properly protected to prevent damage and the intrusion of foreign matter.
- E. Any equipment or piping systems found to have been damaged or contaminated above “MILL” or “SHOP” conditions shall be replaced or cleaned to the Owner’s Representative satisfaction.
- F. Provide initial water seal fill for all waste P-traps or similar traps.

3.5 PROTECTION OF POTABLE WATER SYSTEMS

- A. All temporary water connections shall be made with an approved back flow preventer.
- B. All hose bibs shall have as a minimum, a vacuum breaker, to prevent back flow.
- C. Direct connections to hydronic systems shall only be made through a reduced pressure back flow preventer.

3.6 OBJECTIONABLE NOISE AND VIBRATION

- A. Mechanical equipment and piping system shall operate without objectionable noise and vibration, as determined by the judgment of the Owner’s Representative.
- B. If objectionable noise and vibration should be produced, make necessary changes or additions required to produce satisfactory result without additional cost to the Owner.

3.7 CLOSING-IN OF UN-INSPECTED WORK

- A. Do not allow or cause any work to be covered up or enclosed until inspected, tested and approved.
- B. Should any work be enclosed or covered up before such inspection and test, Contractor shall, at his/her own expense, uncover work and after it has been inspected, tested and approved, make repairs with such materials as necessary to restore his/her work and that of other Divisions to original and proper condition.

3.8 CLEANING

- A. After installation is complete, clean all systems as indicated below.
- B. Piping and Equipment To Be Insulated: Clean exterior thoroughly to remove rust, plaster, cement and dirt before insulation is applied.
- C. Piping and Equipment Remain Un-insulated: Clean exterior thoroughly to remove rust, plaster, cement, dirt and other foreign substances.
- D. Piping and Equipment To Be Painted: Clean exterior to be exposed in completed structure. Remove rust, plaster, cement and dirt by wire brushing. Remove grease, oil and other foreign materials by wiping with clean rags and suitable solvents.
- E. During Progress of Work: Carefully clean up the premises and keep all portions of the building free of debris.
- F. Chrome Or Nickel Plated Work: Thoroughly polish.

3.9 DAMAGE RESPONSIBILITY

- A. Contractor shall be responsible for damage to the grounds, buildings or equipment and the loss of refrigerants, fuels or gases, caused by leaks or breaks in pipes for equipment furnished or installed under this Division.

3.10 PRELIMINARY OPERATION

- A. The Owner's Representative reserves the right to operate portions of the mechanical system on a preliminary basis without voiding the guarantee or relieving the Contractor of his/her responsibilities.

3.11 OPERATIONAL TESTS

- A. Before operational tests are performed, demonstrate to the Owner's Representative that systems and components are complete and fully charged with operating fluid and lubricants. Systems shall be operable and capable of maintaining continuous uninterrupted operation during the operating and demonstration period.
- B. After systems have been completely installed, connections made, and tests completed, operate the systems continuously for a period of five working days during the hours of a normal working day.
- C. Rotating equipment shall be in dynamic balance and alignment.
- D. Tests required in various sections herein shall be completed.
- E. Notify the Owner's Representative, in writing, two weeks in advance of this operational period.
- F. This operational test may be concurrent with instruction of the Owner's operating personnel.

3.12 COMPLIANCE TESTS

- A. Conduct tests for individual components, such as chiller, boiler, cooling tower, air handling unit, etc. of all portions of the installation as may be required by the various Sections of this Division to comply with the Contract Documents. Tests shall be made in the presence of the Owner's Representative. Costs of tests shall be borne by the Contractor. Contractor shall provide all instruments, equipment, labor and materials to complete the tests. These tests may be required at any time between the installation of the work and the end of the warranty period. Should these tests expose any defective materials, poor workmanship or variance with requirements of Contract Documents, Contractor shall make any changes necessary and remedy any defects at no cost to the Owner.

3.13 CUTTING AND PATCHING

- A. Provide measurements, drawings, and layouts to installers of other work so that required openings may be provided as construction progresses. Any cutting and patching made necessary by failure to provide this information shall be done at no increase in the contract amount.
- B. All cutting and patching of existing work required for work in Division 22 is included in Division 22. Cutting and patching is not work of Division 22, except as provided in Paragraph 3.02 A. of this Section.
- C. Where possible, mark openings to be cut on existing construction. Otherwise, provide measurements, drawings, and layouts to the trade doing the cutting so that openings may be provided as construction progresses.
- D. Cutting Concrete:
 - 1. Where authorized, cut openings through concrete for pipe penetration and similar services by core drilling or sawing.

2. Do not cut by hammer-driven chisel or drill.

E. Cutting:

1. Cut openings in accordance with layouts, measurements or drawings of the installer of work requiring openings. Cut openings in concrete by core drilling or sawing; not by hammer-driven chisel or drill.
2. Coordinate the location of all openings with structural drawings. Report any discrepancies to Resident Engineer. Do not proceed with work until discrepancies have been resolved.
3. Do not endanger or damage other work through the procedures and processes of cutting to accommodate mechanical work.
4. Review the proposed cutting with the Installer of the work to be cut, and comply with his recommendations to minimize damage.
5. Where necessary, engage the original Installer or other specialists to execute the cutting in the recommended manner.

F. Patching:

1. Where patching is required to restore other work because of either cutting or other damage inflicted during the installation of mechanical work, engage experienced craftsmen to complete the patching of the other work.
2. Restore the other work in every respect, including the elimination of visual defects in exposed finishes.
3. All openings in fire rated construction shall be patched and sealed with U.L. approved sealant to maintain the fire integrity of the structure.

G. Perform Cutting, and Patching Required To:

1. Uncover work to provide installation of ill-timed work.
2. Remove and replace defective work.
3. Remove and replace work not conforming to requirements of the Contract Documents.
4. Remove samples of installed work as specified for testing.
5. Install equipment and materials in existing structures.
6. Upon written instructions from Resident Engineer, uncover and restore work to provide Resident Engineer observation of concealed work.

H. Painting:

1. Prepare all surfaces for painting by another Division. Ductwork and piping joints to be clear and free of dirt, grease or excess joint sealant, caulking or solders.
2. Comply with requirements of Painting Sections of this Specification.

I. Structural Limitations:

1. Do not cut or drill into structural framing, walls, floors, decks, and other members intended to withstand stress, except with the Owner's Representative's written authorization.
 - a. Provide lintels, columns, braces and other temporary and permanent

supports made by cutting.

- b. Submit shop drawings of permanent supports.
- c. Do not penetrate legs of structural “T’s” or any other location where pre-stressed structural chords are likely to be encountered when cutting or drilling.

3.14 SLEEVES

- A. Provide sleeves for piping passing through walls, floors, and roofs.
- B. Set pipe sleeves and inserts in place before concrete is poured. Coordinate the placing of these items to avoid delaying concrete placing operations.
- C. Locate chases, shafts, and openings required for the installation of the mechanical work during framing of the structure. Do any additional cutting and boring required due to improperly located or omitted openings without additional cost to the Owner under the supervision of the Owner’s Representative. For such additional floor openings, in lieu of pipe sleeves, apply 3M Fire Barrier Watertight Silicone Sealant 3000 WT
- D. Coat surface of all sleeves in contact with concrete, masonry or soil with two coats of coal tar bitumastic paint.

- E. Provide Sleeves as Follows:

LOCATION

SLEEVE LENGTH

Interior Concrete or

Schedule 10 or heavier, black steel pipe.

Concrete Block Walls

Interior Gypsum Walls

Adjustable galvanized sheet metal with 2” lap along the longitudinal seam, wall flanges and plaster lip. 2” and smaller – 22 gauge, 3” through 6” – 20 gauge, 8” and larger – 18 gauge.

Membrane Waterproof Floor and Roof Construction

Galvanized cast iron body with flashing clamp, threaded for sleeve riser. (J.R. Smith 1760, Ancon, Zurn, Josam or equal.)

Non-membrane Floor Construction

Schedule 10 or heavier black steel pipe.

Exterior Concrete or Concrete Block Walls Below Grade

Schedule 40 galvanized steel pipe with a continuously welded water stop of 1/4” steel plate, hot-dipped galvanized after fabrication. Provide modular mechanical-type seal consisting of interlocking synthetic rubber links, with bolts, shaped to continuously fill the annular space between the conduit and sleeve. Tightening of bolts to form a watertight seal. Install per manufacturer’s directions. Thunderline Corporation “Link Seal” sealant assembly or equal by Metraflex “MetraSeal.”

Allow for the overall diameter of the mechanical seal device when spacing the sleeves or openings for pipe penetrations.

F. Length of Sleeves as Follows:

LOCATION

SLEEVE LENGTH

Floors

Equal to depth of floor construction including finish. Extend minimum of 1" above finished floor level within partitions, mechanical rooms, pipe chases and finished areas. Extend sleeves for non-metallic piping beyond floors or construction as required by local State Fire Marshall.

Roofs

Equal to depth of roof construction including insulation. Extend sleeves for non-metallic piping below roof or construction as required by State Fire Marshall.

Walls

Schedule 40 black steel sleeves in concrete or concrete block walls equal to depth of construction. Extend sheetmetal sleeves in gypsum walls 1/2" beyond both sides of the wall assembly. Equal to depth of construction. Extend sleeves for non-metallic piping beyond walls or construction as required by State Fire Marshall.

END OF SECTION 220500

SECTION 220700 - PLUMBING INSULATION

PART 1 – GENERAL

1.0 RELATED DOCUMENTS

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

1.1 DESCRIPTION

- A. Provide all plumbing insulation as indicated on the Drawings and as specified, complete.

1.2 SUBMITTALS

- A. Refer to Greenbook and Section 220500 BASIC PLUMBING REQUIREMENTS, MATERIALS AND METHODS.
- B. Submit Manufacturer's Product Data on the Following:
 1. Insulation.
 2. Jackets, coatings and protective finishes.
 3. Sealers, mastics and adhesives.
 4. Fitting covers.
 5. Inserts.

1.3 GENERAL

- A. Provide insulation tested on a composite basis (insulation, jacket, covering, sealer, mastic and adhesive) fire and smoke hazard ratings as tested by procedure ASTM E-84, NFPA 255, and UL 723 not exceeding:
 1. Flame Spread: 25 or Less.
 2. Smoke Developed: 50 or Less.
- B. Accessories such as adhesives, mastics, cements, tapes and fiberglass cloth for fittings shall have the same component rating as listed above.
- C. Insulation shall comply with FS-HH-1-552, HH-1-561, ASTM-C 547-67 and MIL-1-22344B.
- D. Products to be installed in air plenums (ceiling return air, fan rooms, etc.) shall be faced material WITH NO FIBERGLASS EXPOSED TO THE AIR and shall comply with NFPA Standards 90A and 90B.

1.4 PRODUCT DELIVERY

- A. Deliver insulation products in factory containers bearing manufacturer's label showing fire hazard rating, density and thickness.

1.5 DEFINITIONS

- A. Exposed Location: Located in mechanical rooms or other areas exposed to view.
- B. Concealed Location: Located in pipe chases, furred spaces, attics, crawl spaces, above suspended ceilings, or other locations not exposed to view.

1.6 COMPLIANCE

- A. Comply with the latest edition of National Commercial and Industrial Insulation Standards.
- B. Comply with the latest edition of the California Energy Commission Title 24 requirements.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Manufacturers: Owens-Corning, Johns Manville, CertainTeed, or Knauf.

2.2 PIPE INSULATION

- A. Materials:
 - 1. Fiberglass Pipe Insulation: Schuller Micro-Lok heavy density pipe insulation with ASJ jacket.
 - 2. Fiberglass Pipe Fitting Insulation: Schuller "Zeston" fitting covers with factory-cut fiberglass insulation insert.
 - 3. Flexible Unicellular Pipe Insulation: Therma-cel By Nomaco.
 - 4. Foam glass with vapor barrier coating Pittsburgh Corning, Cell-U-Foam.
- B. Thickness: (Thickness listed below is the minimum required. Provide thickness required by Local Building or Energy codes.)
 - 1. Service (Domestic) Hot Water Piping:
 - a. 2" and Smaller: 1"
 - b. 2½" and Larger: 1-1/2"
 - c. Runouts up to 2" and 10 Feet Long: 1/2"
- C. Repairs to Existing Insulation: Match thickness of existing insulation.
- D. Application: Unless Otherwise Indicated, Use the Following:

1. Inside, Above Ground: Fiberglass.
2. Exposed to View (Inside Building): Fiberglass with PVC jacket.
3. Outside, Exposed: Rigid closed cell with aluminum jacket.
4. Below Grade or Slab:
 - a. Pipe Size 1-1/2" and Less: Single piece of flexible closed cell insulation slipped over soft annealed copper tube without slitting insulation.
 - b. Pipe Size 2" and Larger: Rigid closed cell insulation with shrink fit jacket.
5. PVC: 1-1/2" thick fiberglass (duct) insulation, or 1" heavy density pipe insulation, installation to meet ASTM E84 (NFPA 255) flame spread and smoke developed ratings.

2.3 EQUIPMENT INSULATION

A. Materials:

1. Model: Domestic hot water storage tank insulation.
 - a. Description: Flexible board type insulation. 3 PCF glass fiber insulation with all purpose jacketing. Maximum thermal conductivity .32 BTU-IN/(hr-FT²-°F) at 150°F. Glass fibers oriented such that insulation will conform to rounded shapes while maintaining high compressive strength.
2. Equipment Insulation Accessories: Provide staples, bands, wire, wire netting, tape, corner angles, anchors, stud pins, metal covers, adhesives, cements, sealers, mastics and protective finishes as recommended by insulation manufacturer for applications indicated.

B. Thickness: (Thickness listed below is the minimum required. Provide thickness required by Local Building or Energy Codes.)

1. Domestic hot water pump: 1"
2. Domestic hot water storage tank: 2"

2.4 EXPOSED DRAINS, TRAPS AND DOMESTIC WATER SUPPLIES AT PLUMBING FIXTURES DESIGNATED FOR HANDICAPPED USE

- ### A. Fully molded, flexible molded finished insulation with P-trap assembly and two angle valve and water riser assemblies. Truebo Model No. 102 or equivalent by Bocar Products, Inc., McGuire Manufacturing Co., Inc., ProWrap or TCI Products.

PART 3 - EXECUTION

3.1 GENERAL

- A. Verify acceptability of all materials, which are to be used in air plenums (above ceiling, etc.). Materials must meet all requirements of the Local Building Code and Authority having jurisdiction.

3.2 PIPE INSULATION

- A. Insulate the following:

1. Domestic hot water piping.
2. Roof drain bodies and all horizontal storm water piping.
3. All existing piping which is currently insulated and which is modified as result of this work.

- B. Installation:

1. Install insulation on pipe system subsequent to testing and acceptance of tests.
2. Install insulation materials with smooth and even surfaces.
3. Insulate each continuous run of piping with full length units of insulation, with a single cut piece to complete the run.
4. Do not use cut pieces or scraps abutting each other.
5. Clean and dry pipe surfaces prior to insulating.
 - a. Butt insulation joints firmly together to ensure a complete and tight fit over surfaces to be covered.
6. Extend piping insulation without interruption through pipe clamps, hangers, walls, floors and similar piping penetrations, except where otherwise indicated.
7. Install protective metal shields, inserts and saddles where needed to prevent compression of insulation. Refer to Section 220529, HANGERS AND SUPPORTS FOR PLUMBING PIPING AND EQUIPMENT.
8. Except as noted cover valves, flanges, fittings and similar items in each piping system with equivalent thickness and composition of insulation as applied to adjoining pipe run.
 - a. Install factory-molded, pre-cut or job-fabricated units (at Installer's option), except where a specific form or type is indicated.
 - b. Do not cover:

- 1) Valve operators.
 - 2) Threaded or solder joint strainers.
 - 3) Balancing valves.
9. Mark location of unions and flanges covered by insulation with permanent paint or ink, or approved label.
 10. Maintain integrity of vapor-barrier jackets on insulation of storm drainage piping, and protect to prevent puncture or other damage.
 11. Insulate between pipe and pipe saddles. Provide suitable saddles.
 12. Seal Ends of Sections with Vapor Barrier Cement At:
 - a. 21 ft. intervals.
 - b. Valves and fittings.
 13. On underground pipe insulation, install unicellular insulation on pipe without slitting insulation. Seal all transverse joints with adhesive.
 14. Replace existing insulation removed or damaged because of work of this project.
 15. Insulate new pipes and replace insulation on existing pipes to remain where insulation was removed or damaged by demolition or revisions.
 16. Perform all work in a neat and workmanlike manner. Improper work will be cause for rejection.
 17. Insulate all acid waste/vent pipe in return air plenums with Armstrong AP Armaflex.

3.3 OUTDOOR PIPE INSULATION

- A. Install rigid closed cell insulation with butt joints of half pipe sections staggered. Insulation shall be held in place with strapping tape. Install aluminum jacket with all joints lapped to shed water. Apply a bead of silicone sealant at all transverse and longitudinal seams. Secure with aluminum bands, minimum of 2 per jacket section.

3.4 PROTECTION AND REPLACEMENT

- A. Replace damaged insulation, which cannot be repaired satisfactorily, including units with vapor barrier damage and moisture saturation.
- B. Protection: The insulation installer shall advise the Contractor of the required protection for the insulation work during the remainder of the construction period, to avoid damage and deterioration.
- C. Any fiber insulation product which becomes wetted is to be removed from the job site and disposed of properly.

END OF SECTION 220700

SECTION 221000 - PLUMBING PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DESCRIPTION

- a. Provide potable water, sanitary, storm, laboratory waste, compressed air, vacuum, specialty gas piping, and special drainage piping as indicated on the Drawings and as specified, complete.
- b. Furnish materials and perform labor required to complete this work for a complete and operable facility, including, but not limited to, the following:
 1. Plumbing fixtures, trim, carriers and accessories.
 2. Sanitary drainage, waste and vent systems with piping, sewage ejectors, drains, and accessories.
 3. Domestic and industrial soft hot water system with gas-fired water heaters, circulating pumps, controls, piping, valves, alarms and accessories.
 4. Seismic bracing of piping and equipment.
 5. Rough-ins and final connections to equipment furnished under other sections.
 6. Line and low voltage wiring, conduit and accessories as required for work under this section.
 7. Identification of piping systems and equipment.
 8. Excavation and backfill as required for work under this section.
 9. Shop drawings, wiring diagrams, equipment data, record drawings, and operating manuals.
 10. Hangers, anchors, sleeves, chases, metal supports, channels, and vibration isolation, as required for work under this section.
 11. Cleaning, patching, repairing, and painting as required for work under this section.
 12. Permits and fees.
 13. Testing, adjusting of completed work, inspections, and instruction.

1.3 GENERAL REQUIREMENTS

- a. Conform to all applicable requirements specified under Section 220500 BASIC PLUMBING REQUIREMENTS, MATERIALS AND METHODS.
- b. Conform to all applicable rules and regulations of local and state codes.
- c. Conform to all applicable electrical requirements specified under Division 26.

1.4 STANDARDS Materials shall comply with the following standards:

- a. American Society of Mechanical Engineers:
 1. ASME/ANSI B16.22 Wrought Copper and Copper Alloy Solder Joint Pressure Fittings.
 2. ANSI/ASME B40.1 Gauges – Pressure Indicating Dial Type – Elastic Element.
 3. ASME/BPVC SEC VII D1 Boiler and Pressure Vessel Code: Section VIII Pressure Vessels, Division 1.
- b. American Society for Testing and Materials:
 1. ASTM A-74 Cast iron:
 2. ASTM A-888 Cast iron pipe fittings.
 3. ASTM A 167 Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip
 4. ASTM A 269 Seamless and Welded Austenitic Stainless Steel Tubing for General Service
 5. ASTM A 403/A 403M Wrought Austenitic Stainless Steel Piping Fittings.
 6. ASTM B 43 Seamless Red Brass Pipe, Standard Sizes.
 7. ASTM B-88/B-88A Seamless Copper Water Tube, Copper Pipe Type K, L, M:
 8. ASTM B 280 Seamless Copper Tube for Air Conditioning and Refrigeration Field Service.
 9. ASTM B306 DWV Piping.
 10. ASTM C-564 Cast iron pipe couplings
- c. Copper Development Association:
 1. CDA 404/0 Copper Development Association, "Copper Tube Handbook."
- d. Manufacturers Standardization Society of the Valve and Fittings Industry, Inc.:
 1. MSS SP-58 "Pipe Hangers and Supports - Materials, Design and Manufacture."
 2. MSS SP-69 "Pipe Hangers and Supports – Selection and Application."
 3. MSS SP-89 "Pipe Hangers and Supports – Fabrication and Installation Practices."
- e. Comply with latest applicable NFPA Standards including:
 1. NFPA No. 30 Flammable and Combustible Liquids Code.
 3. NFPA No. 54 National Fuel Gas Code.

- 3.4NFPA No. 110 Emergency and Standby Power Systems.
b. Sheet Metal and Air Conditioning Contractors' National Association, Inc.:

1. SMACNA GFSR Guidelines for Seismic Restraints of Mechanical Systems and Plumbing Piping Systems.

c. Underwriters Laboratory (UL) Applicable requirements and labeling.

d. Manufacturers; Standards: In addition to the standards listed above, the laboratory gas and vacuum systems and their installation shall be in accordance with the manufacturer's published recommendations, instructions and specifications.

1.5 SUBMITTALS

e. Shop Drawings and Product Data:

1. The Following List Includes the Required Shop Drawings That Shall Be Submitted:

- a. Pressure reducing valves.
- b. Backflow preventers.
- c. Water hammer arresters.
- d. Plastic piping products.
- e. Plumbing fixtures, accessories and trim.
- f. Piping.

f. Shop Drawings: The laboratory piping contractor shall submit detailed shop drawings which thoroughly define the types and locations of piping, valves, wiring and related construction for each system specified, including Section 1.04. Details shall be adequate to illustrate that the components have been thoroughly coordinated and shall properly function as a complete system. Drawings shall clearly define components, materials, and clearances and shall show the intended layout and anchorage of all items of equipment and appurtenances, and relationships of the specified systems to other parts of the work including clearances for maintenance and operation. Shop drawings shall also include a complete description of seismic restraints and other precautions which may be necessary to the seismic zone within which the project occurs, as established by the governing codes.

1. System Equipment List: A complete list of all equipment and materials comprising each system, including manufacturer's descriptive and technical literature, performance charts and curves, catalog cuts, and installation instructions.
2. Spare Parts Roster: Recommended spare parts data shall be provided for each system specified. Data shall include a list of the parts recommended by the manufacturer to be replace after 1 and 3 years of service, with current unit prices and sources of supply.
3. Framed Operating Instructions:
 - a. The Contractor shall submit explanatory diagrams, instruction, simplified wiring and control diagrams showing the complete layout of the system, names and telephone numbers of emergency and service contacts, and any other information intended to be framed under glass or in laminated plastic.
 - b. Condensed operating instructions shall also be provided in the same format, explaining preventive maintenance procedures, methods of checking the system for normal safe operation, and procedures for safely starting and stopping the system.

- c. Approved material shall be posted in location as directed by the Engineer. The framed instructions shall be posted before final acceptance testing of the system.

1.6 QUALITY ASSURANCE

- A. Materials and Installation shall be by a third party entity for all testing and certifying.

PART 2 - PRODUCTS

2.1 DOMESTIC WATER PIPING

- A. Above ground inside buildings, size 3" and under.
 - 1. Pipe: Copper tube, hard temper, Type L, ASTM B8B.
 - 2. Fittings: Wrought copper, or cast bronze.
 - 3. Solder: Shall be lead free.
- B. Underground: ASTM B-88 Type K seamless copper tubing, hard temper, cold drawn. Wrap pipe and fittings with 10 mil thick, extruded high density polyethylene tape over primer with 55% overwrap and encase in watertight, 8 mil thick, low-density polyethylene (LLDPE) plastic tube with overwrap per AWWA Standard C105. Wrap and secure joints of plastic tubes per manufacturers' recommendations to prevent any soil contact with piping. Coat all bare metal appurtenances such as bolts, rods, joint harnesses, etc. with two layers of wax tape. Provide clean sand backfill to a depth of 6" in all directions.
- C. Use approved fittings for connections between dissimilar pipe systems.

2.2 WATER HAMMER ARRESTER

- A. Manufacturers: Sioux Chief Model: 652-A through 657-F, Josam, Zurn, C. Smith or equal.
- B. Type: Piston.
- C. Compression chamber: Pre-charged seamless copper chamber.
- D. Material: Copper.
- E. Standards: PDI WH201.

2.3 SANITARY SOIL, WASTE, VENT AND DRAIN PIPING

- A. Pipe and Fittings:
 - 1. Above Ground, Sizes 1-1/2" and Smaller: Schedule 40, ASTM A-53, Grade A or B, galvanized steel pipe with ANSI B16.12 cast iron screwed drainage fittings or service weight, ASTM A-888, cast iron hubless soil pipe and fittings with heavy duty stainless steel no-hub couplings or Type DWV, ASTM B-306, seamless, hard temper, cold drawn copper tubing with ANSI B16.29/B16.23 copper solder sweat drainage fittings. (Exception: DWV copper tube and fittings not to be used on branch lines serving urinals, blood gas analyzers or film processors.)
 - 2. Above Ground, Sizes 2" and Larger: Service weight, ASTM A-888, cast iron hubless soil pipe and fittings with heavy duty stainless steel no-hub couplings or Type DWV, ASTM B-306, seamless, hard temper, cold drawn copper tubing with ANSI B16.29/B16.23 copper solder sweat drainage fittings. (Exception: DWV copper tube and fittings not to be used on branch lines serving urinals, blood gas analyzers or film processors.)

3. Underground: Extra heavy weight, ASTM A-74, cast iron bell and spigot soil pipe and fittings with ASTM C-564 neoprene compression joints. Coat pipe and fittings with hot applied coal tar enamel and encase in water tight 8 mil thick, low-density polyethylene (LLDPE) plastic tube with overwrap per AWWA Standard C105. Wrap and secure joints of plastic tubes per manufacturers' recommendations to prevent any soil contact with piping. Coat all bare metal appurtenances such bolts, rods, joint harnesses, etc., with two layers of wax tape. Provide clean sand backfill to a depth of 6" in all directions.
- B. Vent Pipe Above Ground:
1. Sizes 1-1/2" and Smaller: Schedule 40, ASTM A-53, Grade A or B, galvanized steel pipe with ANSI B16.12 cast iron screwed drainage fittings or Type DWV, ASTM B-306, seamless, hard temper, cold drawn copper tubing with ANSI B16.29/B16.23 copper solder sweat drainage fittings.
 2. Sizes 2" and Larger: Service weight, ASTM A-888, no-hub cast iron soil pipe and fittings with heavy duty stainless steel no-hub couplings or Type DWV, ASTM B-306, seamless, hard temper, cold drawn copper tubing with ANSI B16.29/B16.23 copper solder sweat drainage fittings.
- C. Indirect Drain: Type M, ASTM B-88, seamless hard temper, cold drawn copper tubing with ANSI B16.29 wrought copper solder sweat drainage fittings.
- D. Cast Iron Soil Pipe Hubless Couplings: Heavy duty, 24 gauge, Type 304 18-8 chromium nickel stainless steel shield and clamp assembly with ASTM C564 neoprene sealing sleeve torqued to a minimum of 100 inch/lbs. Coupling shall be Factory Mutual approved per Standard 1680, Class I and installed per manufacturer's recommendations. Clamp-All "Hi-Torq 80", Anaco or equal.
- E. Joining for Copper DWV or Type M Tubing and Fittings: Silvabrite Bridgit, Stay-Safe 50 or equal lead free solder.
- F. Soil and vent exposed in finished spaces: DWV copper with DWV fittings.

2.4 HEAVY DUTY NO HUB COUPLINGS

- A. 1-1/2", 2", 3" and 4": 3" wide 304 stainless steel shield; (4) minimum stainless steel clamps; fixed and "floating" eyelet.
- B. 5" and over: 4" wide 304 stainless steel shield, with six (6) stainless steel clamps mounted in series.
- C. Torque to minimum 30 inch pounds per manufacturer's recommendation.
- D. Husky Series 4000 or equivalent by Clamp-All.

2.5 SOIL AND VENT PIPING PRODUCTS

- A. Use approved fittings for connections between dissimilar pipe systems.

- B. Manufacturers:
 - 1. Design basis: JR Smith.
 - 2. Other acceptable manufacturers:
 - a. Josam
 - b. Wade
 - c. Zurn
- C. Cleanout plugs:
 - 1. Material: Cast bronze or brass.
 - 2. Type: Countersunk.
 - 3. Threads: ANSI B2.1.
- D. Wall cleanout covers:
 - 1. Manufacturer: Josam or Zurn.
 - 2. Type: Frameless, round, low profile plate.
 - 3. Material: Stainless steel or chrome plated brass.
 - 4. Attachment: Single exposed flush screw.
 - 5. Finish:
 - a. Non-painted surfaces: Bright polished.
 - b. Surfaces to be Painted: Prime coat.
- E. Floor cleanouts:
 - 1. Manufacturer: Josam, Zurn, or equal.
 - 2. Body: Standard round Duco cast iron.
 - 3. Attachment: Bronze screws.
 - 4. Sleeve: Full thickness of floor slab.
 - 5. Top:
 - a. Where floor covering has rectangular pattern: Square.
 - b. Other areas: Round.
 - 6. Cover:
 - a. For vinyl tile and similar floor coverings: Recessed to receive inset of floor material.
 - b. For carpeted floor covering provide carpet cleanout marker.
 - c. Other areas: Nickel bronze scoriated finish.
- F. Exterior cleanouts to grade:
 - 1. Manufacturer: J.R. Smith or Zurn.
 - 2. Material: Duco cast iron.

3. Ferrule: Caulk type.
 4. Plug: Cast bronze countersunk type.
- G. Vandal-proof caps:
1. Model: 1741.
 2. Material: Duco cast iron.
 3. Attachment: Recessed allen set screw.

PART 3 - EXECUTION

3.1 GENERAL

- A. Testing: Test in accordance with the applicable Plumbing Code.
- B. Connections to equipment furnished under other sections:
1. Make final connections to all equipment shown on drawings as connected to supply and/or drain piping.
 2. Furnish all devices necessary for final connection, including:
 - a. Tail pieces.
 - b. Stops.
 - c. Supplies.
 - d. Traps.
- C. Corrosion protection:
1. Provide isolation between concrete or mortar and any copper pipe.
 2. All below grade piping shall be adequately protected from corrosion.
- D. Comply with Section 220529 HANGERS AND SUPPORTS FOR PLUMBING PIPING AND EQUIPMENT for pipe support requirements.

3.2 INSTALLATION OF DOMESTIC WATER PIPING AND PRODUCTS

- A. Install all horizontal water piping level and parallel to building construction (except piping noted to be drained down slope toward drain at 1" in 40 feet). Make any changes in direction with fittings, don't kink or bend. All vertical piping to be plumb. Provide dielectric isolation between uninsulated pipe and hangers. Provide plastic grommets when going through metal studs. Tape is not acceptable for dielectric isolation.
- B. Water hammer arrestors: Install arrestors as required per PDI Stds WH-201. At minimum any branch line connected to a flush valve shall have one arrestor. Size and locate as per PDI Std. WH-201. Provide access panel at each location.
- C. Disinfection:
1. After installation of all fixtures served, fill all domestic water lines with a chlorine-water solution of 50 parts per million minimum.
 2. Hold solution in pipe for at least 24 hours.
 3. Open and close all valves 3 times during chlorination.

4. Waste chlorine solution from each outlet.
5. Measure solution at end. If not 10 ppm, repeat.

3.3 INSTALLATION OF SOIL AND VENT PIPING

A. Couplings:

1. Provide heavy duty couplings on the following:
 - a. All no hub piping.
2. Provide standard duty couplings on the following:
 - a. Vent piping.
3. Coordinate vent terminations with HVAC Contractor to maintain clearance around equipment and a minimum of 15' clearance from outside air intakes.
4. Extend vent piping to elevation of adjacent roof well or screen wall top.

B. Gaskets: Install gaskets in accordance with manufacturer's recommendations for the use of lubricants, cements, and other special installation requirements.

C. Joint adapters: Make joints between cast iron pipe and other types of pipe with standard manufactured cast iron adapters and fittings.

D. Cleaning piping:

1. Clear the interior of pipe of dirt and other superfluous material as the work progresses.
2. Place plugs in the end of uncompleted pipe at the end of the day or whenever work stops.

E. Test plugs:

1. Provide test plugs in floor drains and roof drains at the time of installation.
2. Leave test plugs in place for the duration of construction until sewer or drainage system is complete.

F. Vent flashing:

1. Provide 4 lb. sheet lead (24" x 24" minimum).
2. Extend lead 5" above the vent and turned down into vent pipe.

G. Vent location: Do not install vents within 2 ft. of roof edge, parapet, wall line, or an "on-the-roof structure".

H. Neutralizing pit: Provide solid unexcavated earth or concrete support under concrete sump.

3.4 FIELD QUALITY CONTROL

A. Plumbing Piping Systems Leak Tests:

1. Potable Water Piping:

- a. General: After completion of the Work, but before final acceptance is made, Contractor shall run a test over a four-hour period of time to prove that the capacity and performance of all apparatus fittings and the system as a whole meets the requirements of the Specifications.

- b. Pressure Tests: Make pressure tests in the presence of the Owner's Representative.
 - 1) Below-Grade Potable Water Service: After the pipe is laid, the joints completed, and the trench partially backfilled, leaving the joints exposed for examination, the newly laid piping or any valved section of piping shall, unless otherwise specified, be subjected for four (4) hours to a pressure of 200 psig pressure at the points of reading. All exposed pipe, joints, fittings, and valves shall be examined during the open trench test. Use a Bristol recording device, data disc to be given to Owner's Representative after successful completion of test. Joints showing visible leakage shall be made tight. Defective pipe, fittings, or valves that fail the pressure test, shall be retested at no additional cost to the Owner until the test results are approved by the Owner's Representative.
 - 2) Cold and hot water services within the building shall be tested at 120 psi for a period of 4 hours. Any joints showing visible leakage shall be cut out and remade; peening of joints shall not be permitted. Sections of pipework containing remade joints shall be retested. Tests shall be carried out using Bristol recording device. Data disc shall be given to the Owner's Representative after successful completion of test.

2. Sanitary Piping:

- a. Make pressure tests in the presence of the Owner's Representative.
- b. All waste drainage piping, including branch bends and ferrule joints, shall be tested by closing all openings before any fixtures are set and filling the entire system with water, or by air pressure tests as specified below and approved by the Owner's Representative.
- c. All underground piping shall be tested hydraulically at a minimum static head of 10 feet. Leakage at any point in the system shall be cause for rejection.
- d. All aboveground piping shall be tested hydraulically by closing all openings in the piping system, except the highest opening above the roof, and by filling the system to the point of overflowing. In no case shall the pressure exerted on the system be less than 10 feet of head. Leakage at any joint shall be cause for rejection. If the leaking joint can be adjusted to stop leakage, the Owner's Representative, pending his approval of the type of adjustment, may accept the joint. If not accepted by the Owner's Representative, Contractor shall replace as approved at no additional cost to the Owner.
- e. When it is impractical to test hydraulically, air test may be substituted for hydraulic testing. Air shall be forced into the closed system at a uniform pressure to balance a column of mercury 10 inches in height or a pressure of 5 pounds per square inch.

- f. Under any of the previously described tests, the air or water pressure shall remain constant, after stabilization, for not less than fifteen (15) minutes without any further addition of air or water.

\Disinfection of Domestic Hot/Cold Water Systems:

3. General: All newly installed water systems and lines shall be disinfected by a Contractor-furnished commercial water line chlorinator. The commercial chlorinator shall also take water samples for bacteriological analysis. These samples shall be submitted to a California state licensed testing laboratory by the chlorinator.
4. Incurred Costs: All expenses that may result from the disinfection and testing of water systems and lines, and the taking and analysis of water samples shall be borne by Contractor.
5. Advance Notice: Contractor shall notify the Owner's Representative in writing, at least 72 hours in advance of all disinfection and testing procedures. All disinfection and testing procedures shall occur in the presence of an EH&S representative. Notification shall include location, number of chlorinations and tests, day and time.
6. Labor and Materials: Contractor's chlorinator shall furnish labor, equipment, materials and transportation needed to correctly disinfect and test domestic and laboratory hot/cold water systems and fire lines and to take water samples for bacteriological analysis. This includes all items needed to facilitate the introduction of the disinfecting agent into the water systems/lines such as service cocks and valves.
7. Disinfecting Agents: Chlorine is approved for water system disinfection and may be used in gaseous or liquid form. Other types of disinfecting agents may be used only with the prior approval of the Owner's Representative.
8. Disinfecting Procedure: The disinfection of water systems and lines shall be in accordance with the requirements of Title 22, California Code of Regulations (CCR) and the American Water Works Association (AWWA) standards. The Disinfecting Procedure Shall Include the Following:
 - a. Post signs on all water outlets of the system being disinfected reading "Water System Being Chlorinated - Do Not Drink" or a similar warning.
 - b. With system full of water and under "main" pressure, open all faucets to permit simultaneous trickle flow.
 - c. Introduce the disinfectant into the system until a test of the water at each outlet shows a free chlorine residual concentration of:
 - 1) 25 Parts per Million (ppm): This chlorine concentration shall be held in the pipes for a 24 hour period.
 - 2) 100 ppm: This chlorine concentration shall be held in the pipes for a 3 hour period.
 - d. The test made of the water after the retention time shall indicate a chlorine residual concentration of not less than half of the original concentration. Repeat the disinfection procedure until this standard is attained.

- e. After satisfactory completion of the above test, flush out system until diethyl-p-phenylenediamine (DPD) tests at the water outlets reveal that the free chlorine residual is less than 0.5 ppm or equal to the flushing water chlorine residual.
9. Water Samples for Bacteriological Analysis:
- a. Water samples for bacteriological analysis, shall be collected by Contractor's chlorinator in sample bottles prepared as required by Title 22, CCR and AWWA standards. Samples shall be taken from a representative number of water outlets so as to ensure an accurate sampling of the water system/line. Water samples shall be taken in the presence of an EH&S representative (The Owner may also collect a sample).
 - b. The water samples shall be delivered by Contractor's chlorinator in a timely manner to a California state approved water analysis laboratory. The samples must test negative for coliform organisms and less than 500 for a Standard Plate Count (HPLC).
 - c. If the results are positive, the above steps 6(a) through 6(f) shall be repeated. Two consecutive negative tests must be obtained prior to using the water system.
10. Final Results: Submit a copy of the laboratory analysis to Owner's Representative and EH&S. If the analysis results do not meet the standards specified, the disinfecting procedure shall be repeated until the specified standards are met, at no additional cost to the Owner. The complete procedure may take up to 4 days if negative results are obtained. This procedure will be longer if the results are positive.

3.5 ADJUSTMENT AND CLEANING

- A. Potable Water Piping: After piping is erected, flush all piping before sterilizing the potable water system.

END OF SECTION 221000

SECTION 224000 - PLUMBING FIXTURES

PART 1 - GENERAL

1.0 RELATED DOCUMENTS

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

1.1 DESCRIPTION

- A. Provide plumbing fixtures and trim as shown on the Drawings and as specified including fastenings, accessory features, and other items which are necessary to make a complete installation.

1.2 REFERENCE STANDARDS

- A. In addition to codes listed in Section 220500 BASIC PLUMBING REQUIREMENTS, MATERIALS AND METHODS, fixtures shall conform to current commercial standards for sanitary cast iron enameled ware and staple vitreous china plumbing fixtures recommended by the U.S. Department of Commerce.

1.3 SUBMITTALS

- A. Shop Drawings and Product Data:
 1. Refer to Section 220500 BASIC PLUMBING REQUIREMENTS, MATERIALS AND METHODS, for procedures.
 2. Shop drawings to be submitted include all plumbing fixtures and trims, accessories, appliances, appurtenances, equipment and support and indicated materials and finishes, dimensions, construction details, and flow-control rates for each type of fixture indicated.

1.4 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Protection of Fixtures and Trim: Protect the plumbing fixtures and accessories during construction. Replace at no cost to Owner any fixture or accessory that is marred, scratched, defaced, or broken.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Provide factory fabricated fixtures.
- B. Provide trim, carriers, valves and accessories as required for complete installation.
- C. All carriers are floor mounted unless otherwise noted.
- D. Plumbing Fixtures:

1. Accessible plumbing fixtures shall comply will all of the requirements of CBC Section 1115B.
 2. Heights and location of all fixtures shall be according to CBC Sections 1115B.4 and Table 1115B-1.
 3. Fixtures controls shall comply with CBC Section 1115B.4 and Table 1115B.4.4.4 for showers, 1115B.4.3.1 for lavatories, 1115B.4.1.5 for toilets and 1115B.4.2.3 for urinals.
 4. Sinks shall not exceed 6-1/2'' in depth, CBC Section 1115B.4.7.1.
- E. Refer to Drawings for plumbing fixture schedule.
- F. Comply with State of California Water Conservation requirements for new plumbing fixtures: W.C.=1.6 gpf; lavs = 0.5 gpm; urinals = 1.0 gpf and showers = 2.5 gpm maximum.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Install each fixture with trap, easily removable for servicing and cleaning.
- B. Provide chrome plated, rigid or flexible supplies to fixtures with stops, reducers and escutcheons.
- C. Finish wall and floor penetrations when exposed to view in finished areas with set screw type, chrome plated brass escutcheons.
- D. Set plumbing fixtures level and plumb, spaced in accordance with dimensioned Drawings, and securely install to be rigid.
- E. Install wall mounted lavatories, urinals and water closets with wall carriers mounted to the floor.
- F. Solidly attach floor mounted water closets to floor with lag screws.
- G. Cover fixture bolts with china bolt caps of the same color as the fixture and set in place with plaster of paris.
- H. Securely anchor flush valves behind or within walls to be rigid and not subject to movement due to push or pull action on the valve.
- I. Fixture mounting heights:
 1. Refer to Architectural drawings.
- J. Floor Drains:
 1. Refer to Architectural and Laboratory drawings for exact locations and additional installation requirements.
 2. Install floor drains with P-traps and vent as required.

3. Install drains on the center line of sheet lead pan in waterproofed areas and in floors above lowest floor.
4. Clamp pan into drain flashing collar.
5. Install strainers immediately after completion of finish floor installation.
6. Coordinate locations with mechanical equipment (e.g. coils, pumps, chillers, cooling towers, etc.).

3.2 ADJUSTING AND CLEANING

A. Cleaning:

1. Clean strainers, traps, aerators, and valves of debris, sand and dirt.
2. At completion, thoroughly clean plumbing fixtures and equipment.

B. Adjusting: After cleaning and flushing operations are accomplished, adjust flush valves, faucets, showers for proper flow.

3.3 PROTECTION

A. Protect fixtures and related components from damage before, during, and after installation to date of Final Acceptance or Owner move-in. Provide protective coverings or other protection as required.

B. Inspect each installed unit for damage to finish. If feasible, restore and match finish to original at site; otherwise, remove fixture and replace with new unit.

C. Feasibility and match to be judged by Resident Engineer or Engineer.

D. Remove cracked or dented units and replace with new units.

3.4 INSTALLATION OF PIPING, VALVES AND EQUIPMENT

A. General: Refer to Section 220500 BASIC PLUMBING REQUIREMENTS, MATERIALS AND METHODS.

B. Pitch: Run all horizontal sanitary and drain piping smaller than 4" at a uniform grade of not less than 1/4" per foot. Run all horizontal sanitary and drain piping 4" and larger at a uniform grade of not less than 1/8" per foot unless otherwise noted on the drawings.

C. Water piping within walls and rough-ins for fixtures and equipment: Provide copper plated steel support system soldered to piping and secured to building construction so that pipes cannot be displaced. Provide trisolator or fire retardant closed cell elastomeric material between support system and building construction or other piping. Holdrite or equivalent.

D. Waste and vent piping within walls and rough-ins for fixtures and equipment: Provide copper plated steel support system for copper DWV piping or galvanized steel support system for cast iron or galvanized piping. Secure supports to piping and building construction so that pipes cannot be displaced. Provide felt strip isolation between dissimilar metals. Provide trisolator for fire retardant closed cell elastomeric material between support system and building construction or other piping. Holdrite or equivalent.

- E. Piping through walls serving fixtures, equipment and outlets. Provide temporary plastic sleeve installed around piping serving plumbing fixtures, equipment and outlets to provide clearance between the pipe and drywall or plaster construction at the point of pipe penetration. After the plumbing rough-in and drywall installation is completed, the plastic sleeve shall be removed and Type GR fire retardant sponge material installed to seal the pipe penetration. Specialty Products Acousto-sleeve or equivalent.
- F. Underground piping: No-hub soil pipe not permitted.
- G. Unions and flanges: Provide on piping to inlet and outlet of all apparatus and equipment to facilitate removal of equipment, and downstream of all shutoff valves.
- H. Water hammer arresters: Install water hammer arresters at all quick closing valves such as flush valves, float valves, solenoid valves, etc. Size and locate all water hammer arresters as recommended by PDI Manual WH 201.
- I. Non-potable water outlets: Identify each non-potable water outlet with a permanent engraved beveled edge bakelite name plate reading "DANGER - UNSAFE WATER - DO NOT DRINK".

3.5 PLUMBING FIXTURES INSTALLATION

- A. Installation: Set fixtures level and in proper alignment with respect to walls and floors, and sets of fixtures equally spaced. Install supplies in proper alignment with fixtures and with each other. Install flush valves in alignment with the fixture without vertical or horizontal offsets.
- B. Grouting: Grout all wall mounted fixtures watertight where fixture is in contact with wall with flexible white mildew resistant silicone caulking. Grout all floor mounted fixtures with plaster of Paris.
- C. Caulking: Caulk all deck mounted trim at the time of assembly, including fixture and casework mounted. Caulk all self-rimming sinks installed in casework.
- D. Trim: Make up trim with care and with the proper tools in order that no tool marks show after installation.
- E. Fixture backing: Provide backing for wall hung fixtures other than for those with supports or carriers.
 - 1. Stud walls: Install 1/4" x 6" wide steel flat backing plate to the inside web of the studs and secured to at least three studs by welding or bolting.
 - 2. Concrete walls: Securely fasten steel brackets with heavy expansion shields and bolts of proper length.

3.6 CLEANOUTS

- A. Size: Cleanouts of same nominal size as pipe they serve except where they occur in piping 4" and larger, in which case they shall be 4" in size.
- B. Accessibility: Make all cleanouts accessible. Use graphite on all cleanouts with all threads being thoroughly greased after acceptable pressure test.
- C. Locations:
 - 1. At all horizontal offsets.
 - 2. At ends of all lines more than 5' in length.

3. At 100' maximum intervals in all horizontal runs within the buildings lines, unless otherwise shown on the drawings.
4. t base of all stacks.
5. For cleanouts in finished portions of building, locations subject to Owner's representative's approval before installation.

3.7 DISINFECTION OF WATER SYSTEMS

- A. General: Disinfect all hot and cold water systems per AWWA Standard C651-92 and the following.
- B. Qualification, performance requirement, supervision and testing: Work performed and certified by an independent contractor, selected by this Contractor and approved by the Owner's representative. Work will not be acceptable if performed by the installing contractor of the plumbing and piping system or any subcontractor of the installing contractor. Perform disinfection under supervision of the Owner's Representative. Give two days notice. Disinfection shall be subject to written approval upon receipt of satisfactory laboratory test results.
- C. Certification: Submit four certificates stating (1) system capacity, (2) disinfectant used, (3) time and rate applied, and (4) resultant residuals in parts per million at completion of work.
- D. Disinfecting agent: Use chlorine solution of type approved for water system disinfection.
- E. Preparation:
 1. Service cock: Provide service cock or valve within 3' of supply main for introducing disinfecting agent into lines.
 2. Flushing: Leave each fixture for outlet wide open after final pressure tests until flow shows only clear water.
 3. Domestic hot water temperature: Reduce to that of cold water system during disinfecting procedure.
- F. Procedure:
 1. Flushing: With system full of water and under main pressure, open all outlets.
 2. Inject disinfectant through service cock at slow, even, continuous rate until orthotolidine test at each outlet shows chlorine residual concentration of more than 50 parts per million (ppm).
 3. Close all outlets and valves including service valve at main and injection cock. Maintain for 24 hours.
 4. Test: Orthotolidine test, after 24 hour period, shall indicate minimum chlorine residual concentration of 50 ppm. If not, repeat disinfection procedure until this standard is attained.
 5. Final flushing: After satisfactory completion of above test, flush out system until orthotolidine tests show maximum chlorine residual of 0.6 ppm.
- G. Bacteriological analysis of water: After final flushing, analyze water samples to test negative for coil-aerogene organisms. Analysis to indicate total plate count less than 100 bacteria per cc or equal to control sample.

- H. Final approval: If analysis results are not satisfactory, repeat disinfection procedure until specified standards are met.

3.8 TESTING AND ADJUSTING

- A. General: Adjust each piece of equipment and all systems to insure proper functioning of controls, elimination of noise and vibration, and left in first-class operating condition.
- B. Defective work: Remove and replace any piece of apparatus, work, or material failing any tests. Retest portion of work replaced by Contractor at his own expense.
- C. Notice: Provide 48 hour notice that piping is ready for testing. Test in accordance with all local and state ordinances.
- D. Protection: Isolate all equipment subject to damage from test pressure. Make no test against a service valve or meter.
- E. Tests:
 - 1. Domestic and industrial water systems: Test with water at a hydrostatic pressure of 200 psi.
 - 2. Reverse osmosis water systems: Test air at a hydrostatic pressure of 100 psi. After the systems have passed the pressure test, flush the system with demineralized water until a resistivity of 2 (10^6) OHM-CM is reached with no trace of oil.
 - 3. Sanitary, sewer, waste, vent, acid waste, acid vent, drain and storm water systems: Fill piping with water, to top of highest point, at not less than 5 psi.
 - 4. Fuel gas, fuel oil, compressed air, and engine exhaust systems: Test with air at 150 psi. Test each joint with soap suds.
 - 5. Duration: Maintain all tests, unless otherwise noted, without leaks or pressure loss for a minimum period of 8 hours.
- F. Flow test: Conduct flow test on all fixture drains, roof drains, floor drains, area drains, floor sinks, etc., prior to building occupancy. Allow full flow of water into each drain for 15 minutes and check for leaks, stoppage or sluggish flow. Clean drains where necessary. Test must be witnessed by the Owner's Representative.
- G. Perform operational tests on all machinery and devices to determine compliance with specifications. Equipment to function quietly and efficiently. Repair or correct undue noise or vibration caused by malfunctioning of piping and equipment before acceptance.

3.9 LABELS AND IDENTIFICATION

- A. Provide valve tags, piping systems and equipment identifications as specified in Section 220553, IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT.

END OF SECTION 224000

SECTION 225000 - PLUMBING SPECIALTIES

PART 1 - GENERAL

1.2 RELATED DOCUMENTS

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

1.3 SUMMARY

- A. This Section includes the following plumbing specialties:

1. Backflow preventers.
2. Trap seal primer valves.
3. Drain valves.
4. Miscellaneous piping specialties.
5. Sleeve penetration systems.
6. Flashing materials.
7. Cleanouts.
8. Floor drains.
9. Hose Bibbs

1.4 DEFINITIONS

- A. Don't use plastic above grade.

1.5 PERFORMANCE REQUIREMENTS

- A. Provide components and installation capable of producing piping systems with following minimum working-pressure ratings, unless otherwise indicated:
 1. Domestic Water Piping: 125 psig.
 2. Sanitary Waste and Vent Piping: 10-foot head of water.

1.6 SUBMITTALS

- A. Product Data: Include rated capacities and shipping, installed, and operating weights. Indicate materials, finishes, dimensions, required clearances, and methods of assembly of components; and piping and wiring connections for the following:
 1. Water hammer arresters, air vents, and trap seal primer valves and systems.
 2. Drain valves, hose bibbs, hydrants, and hose stations.
 3. Cleanouts, floor drains, open receptors, trench drains, and roof drains.
 4. Sleeve penetration systems.

- B. Shop Drawings: Diagram power, signal, and control wiring.
- C. Field test reports.
- D. Maintenance Data: For plumbing specialties to include in maintenance manuals. Include the following:
 - 1. Trap seal primer valves and systems.

1.7 QUALITY ASSURANCE

- A. Product Options: Drawings indicate size, profiles, and dimensional requirements of plumbing specialties and are based on the specific system indicated. Refer to Greenbook.
- B. Plumbing specialties shall bear label, stamp, or other markings of specified testing agency.
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- D. ASME Compliance: Comply with ASME B31.9, "Building Services Piping," for piping materials and installation.
- E. NSF Compliance:
 - 1. Comply with NSF 14, "Plastics Piping Components and Related Materials," for plastic domestic water piping components. Include marking "NSF-pw" on plastic potable-water piping and "NSF-dwv" on plastic drain, waste, and vent piping.
 - 2. Comply with NSF 61, "Drinking Water System Components--Health Effects, Sections 1 through 9," for potable domestic water plumbing specialties.

PART 2 - PRODUCTS

2.2 Products section is to be used if replacement of the existing components is deemed necessary, or if shown on plumbing plans. Some specification sections may not be required.

2.3 MANUFACTURERS

- A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:
 - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the products specified.
 - 2. Products: Subject to compliance with requirements, provide one of the products specified.

3. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the manufacturers specified.
4. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

2.4 TRAP SEAL PRIMER VALVES

- A. Supply-Type Trap Seal Primer Valves: ASSE 1018, water-supply-fed type, with the following characteristics:
 1. Manufacturers:
 - a. E & S Valves.
 - b. Josam Co.
 - c. Precision Plumbing Products, Inc.
 - d. Smith, Jay R. Mfg. Co.
 - e. Tyler Pipe; Wade Div.
 - f. Watts Industries, Inc.
 - g. Zurn Industries, Inc.
 2. 125-psig minimum working pressure.
 3. Bronze body with atmospheric-vented drain chamber.
 4. Inlet and Outlet Connections: NPS 1/2 threaded, union, or solder joint.
 5. Gravity Drain Outlet Connection: NPS 1/2 threaded or solder joint.
 6. Finish: Chrome plated, or rough bronze for units used with pipe or tube that is not chrome finished.
- B. Trap Seal Primer System: Factory-fabricated, automatic-operation assembly for wall mounting with the following:
 1. Available Manufacturers:
 2. Manufacturers:
 - a. Precision Plumbing Products, Inc.
 3. Piping: NPS 3/4, ASTM B 88, Type L; copper, water tubing inlet and manifold with number of NPS 1/2 outlets as indicated.
 4. Cabinet: Steel box with stainless-steel cover.
 5. Electric Controls: 24-hour timer, solenoid valve, and manual switch for 120-V ac power.
 6. Water Hammer Arrester: ASSE 1010.

7. Vacuum Breaker: ASSE 1001.

2.5 MISCELLANEOUS PIPING SPECIALTIES

- A. Water Hammer Arresters: ASSE 1010 or PDI-WH 201, metal-bellows type with pressurized metal cushioning chamber. Sizes indicated are based on ASSE 1010 or PDI-WH 201, Sizes A through F.
 1. Available Manufacturers:
 2. Manufacturers:
 - a. Josam Co.
 - b. Smith, Jay R. Mfg. Co.
 - c. Tyler Pipe; Wade Div.
 - d. Zurn Industries, Inc.; Specification Drainage Operation.
- B. Roof Flashing Assemblies: Manufactured assembly made of 4-lb/sq. ft. thick, lead flashing collar and skirt extending at least 10 inches from pipe with galvanized steel boot reinforcement, and counter flashing fitting.
 1. Available Manufacturers:
 2. Manufacturers:
 - a. Acorn Engineering Company; Elmdor/Stoneman Div.
 3. Open-Top Vent Cap: Without cap.
 4. Low-Silhouette Vent Cap: With vandal-proof vent cap.
 5. Extended Vent Cap: With field-installed, vandal-proof vent cap.
- C. Open Drains: Shop or field fabricate from ASTM A 74, Service class, hub-and-spigot, cast-iron, soil-pipe fittings. Include P-trap, hub-and-spigot riser section; and where required, increaser fitting, joined with ASTM C 564, rubber gaskets.
- D. Deep-Seal Traps: Cast-iron or bronze casting, with inlet and outlet matching connected piping and cleanout trap seal primer valve connection.
 1. NPS 2: 4-inch- minimum water seal.
 2. NPS 2-1/2 and Larger: 5-inch- minimum water seal.
- E. Floor-Drain Inlet Fittings: Cast iron, with threaded inlet and threaded or spigot outlet, and trap seal primer valve connection.
- F. Vent Caps: Cast-iron body with threaded or hub inlet and vandal-proof design. Include vented hood and set-screws to secure to vent pipe.

- G. Vent Terminals: Commercially manufactured, shop- or field-fabricated, frost-proof assembly constructed of galvanized steel, copper, or lead-coated copper. Size to provide 1-inch enclosed air space between outside of pipe and inside of flashing collar extension, with counter flashing.
- H. Expansion Joints: ASME A112.21.2M, assembly with cast-iron body with bronze sleeve, packing gland, and packing; of size and end types corresponding to connected piping.

2.6 SLEEVE PENETRATION SYSTEMS

- A. Available Manufacturers:
- B. Manufacturers:
 - 1. ProSet Systems, Inc.
- C. Description: UL 1479, through-penetration firestop assembly consisting of sleeve and stack fitting with firestopping plug.
 - 1. Sleeve: Molded PVC plastic, of length to match slab thickness and with integral nailing flange on one end for installation in cast-in-place concrete slabs.
 - 2. Stack Fitting: ASTM A 48 (ASTM A 48M), gray-iron, hubless-pattern, wye-branch stack fitting with neoprene O-ring at base and gray-iron plug in thermal-release harness in branch. Include PVC protective cap for plug.
 - a. Special Coating: Include corrosion-resistant interior coating on fittings for plastic chemical waste and vent stacks.

2.7 FLASHING MATERIALS

- A. Lead Sheet: ASTM B 749, Type L51121, copper bearing, with the following minimum weights and thickness, unless otherwise indicated:
 - 1. General Use: 4-lb/sq. ft., 0.0625-inch thickness.
 - 2. Vent Pipe Flashing: 3-lb/sq. ft., 0.0469-inch thickness.
 - 3. Burning: 6-lb/sq. ft., 0.0938-inch thickness.
- B. Copper Sheet: ASTM B 152, of the following minimum weights and thickness, unless otherwise indicated:
 - 1. General Applications: 12 oz./sq. ft..
 - 2. Vent Pipe Flashing: 8 oz./sq. ft..
- C. Zinc-Coated Steel Sheet: ASTM A 653/A 653M, with 0.20 percent copper content and 0.04-inch minimum thickness, unless otherwise indicated. Include G90 hot-dip galvanized, mill-phosphatized finish for painting if indicated.
- D. Elastic Membrane Sheet: ASTM D 4068, flexible, chlorinated polyethylene, 40-mil minimum thickness.

- E. Fasteners: Metal compatible with material and substrate being fastened.
- F. Metal Accessories: Sheet metal strips, clamps, anchoring devices, and similar accessory units required for installation; matching or compatible with material being installed.
- G. Solder: ASTM B 32, lead-free alloy.
- H. Bituminous Coating: SSPC-Paint 12, solvent-type, bituminous mastic.

2.8 CLEANOUTS

- A. Cleanouts: Comply with ASME A112.36.2M.
 - 1. Application: Floor cleanout, wall cleanout and for installation in exposed piping.
 - 2. Available Products:
 - 3. Products:
 - a. Josam Co.
 - b. Josam Co., Blucher-Josam Div.
 - c. LSP Products Group.
 - d. Sioux Chief Manufacturing Co., Inc.
 - e. Smith, Jay R. Mfg. Co.
 - f. Tyler Pipe, Wade Div.
 - g. Watts Industries, Inc., Drainage Products Div.
 - h. Zurn Industries, Inc., Jonespec Div.
 - i. Zurn Industries, Inc., Specification Drainage Operation

2.9 HOSE BIBBS

- A. Hose Bibbs: Bronze body with replaceable seat disc complying with ASME A112.18.1M for compression-type faucets. Include NPS 1/2 or NPS 3/4 threaded or solder-joint inlet, of design suitable for pressure of at least 125 psig; integral, nonremovable, drainable hose-connection vacuum breaker; and garden-hose threads complying with ASME B1.20.7 on outlet.
 - 1. Include operating key with each operating-key hose bibb.
 - 2. Include integral wall flange with each chrome- or nickel-plated hose bibb.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Refer to Division 22 Section "Basic Mechanical Materials and Methods" for piping joining materials, joint construction, and basic installation requirements.
 - 1. Set ground hydrants with box flush with grade.
 - 2. Set post hydrants in concrete paving or in 1 cu. ft. of concrete block at grade.
- B. Install trap seal primer valves with outlet piping pitched down toward drain trap a minimum of 1 percent and connect to floor-drain body, trap, or inlet fitting. Adjust valve for proper flow.
- C. Install cleanouts in aboveground piping and building drain piping according to the following, unless otherwise indicated:
 - 1. Size same as drainage piping up to NPS 4. Use NPS 4 for larger drainage piping unless larger cleanout is indicated.
 - 2. Locate at each change in direction of piping greater than 45 degrees.
 - 3. Locate at minimum intervals of 50 feet for piping NPS 4 and smaller and 100 feet for larger piping.
 - 4. Locate at base of each vertical soil and waste stack.
- D. Install cleanout deck plates with top flush with finished floor, for floor cleanouts for piping below floors.
- E. Install cleanout wall access covers, of types indicated, with frame and cover flush with finished wall, for cleanouts located in concealed piping.
- F. Install flashing flange and clamping device with each stack and cleanout passing through floors with waterproof membrane.
- G. Install vent flashing sleeves on stacks passing through roof. Secure over stack flashing according to manufacturer's written instructions.
- H. Install floor drains at low points of surface areas to be drained. Set grates of drains flush with finished floor, unless otherwise indicated.
 - 1. Position floor drains for easy access and maintenance.
 - 2. Set floor drains below elevation of surrounding finished floor to allow floor drainage. Set with grates depressed according to the following drainage area radii:
 - a. Radius, 30 Inches or Less: Equivalent to 1 percent slope, but not less than 1/4-inch total depression.
 - b. Radius, 30 to 60 Inches: Equivalent to 1 percent slope.

- c. Radius, 60 Inches or Larger: Equivalent to 1 percent slope, but not greater than 1-inch total depression.
3. Install floor-drain flashing collar or flange so no leakage occurs between drain and adjoining flooring. Maintain integrity of waterproof membranes where penetrated.
 4. Install individual traps for floor drains connected to sanitary building drain, unless otherwise indicated.
- I. Fasten wall-hanging plumbing specialties securely to supports attached to building substrate if supports are specified and to building wall construction if no support is indicated.
 - J. Fasten recessed-type plumbing specialties to reinforcement built into walls.
 - K. Install wood-blocking reinforcement for wall-mounting and recessed-type plumbing specialties.
 - L. Install individual shutoff valve in each water supply to plumbing specialties. Use ball, gate, or globe valve if specific valve is not indicated. Install shutoff valves in accessible locations.
 - M. Install air vents at piping high points. Include ball, gate, or globe valve in inlet.
 - N. Install traps on plumbing specialty drain outlets. Omit traps on indirect wastes unless trap is indicated.
 - O. Install escutcheons at wall, floor, and ceiling penetrations in exposed finished locations and within cabinets and millwork. Use deep-pattern escutcheons if required to conceal protruding pipe fittings.

2.3 CONNECTIONS

- A. Piping installation requirements are specified in other Division 22 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Install piping adjacent to equipment to allow service and maintenance.
- C. Connect plumbing specialties to piping specified in other Division 22 Sections.

2.4 FLASHING INSTALLATION

- A. Fabricate flashing from single piece unless large pans, sumps, or other drainage shapes are required. Join flashing according to the following if required:
 1. Lead Sheets: Burn joints of lead sheets 6-lb/sq. ft., 0.0938-inch thickness or thicker. Solder joints of lead sheets 4-lb/sq. ft., 0.0625-inch thickness or thinner.
 2. Copper Sheets: Solder joints of copper sheets.
- B. Install sheet flashing on pipes, sleeves, and specialties passing through or embedded in floors and roofs with waterproof membrane.

1. Pipe Flashing: Sleeve type, matching pipe size, with minimum length of 10 inches, and skirt or flange extending at least 8 inches around pipe.
 2. Sleeve Flashing: Flat sheet, with skirt or flange extending at least 8 inches around sleeve.
 3. Embedded Specialty Flashing: Flat sheet, with skirt or flange extending at least 8 inches around specialty.
- C. Set flashing on floors and roofs in solid coating of bituminous cement.
 - D. Secure flashing into sleeve and specialty clamping ring or device.
 - E. Install flashing for piping passing through roofs with counterflashing or commercially made flashing fittings.

2.5 LABELING AND IDENTIFYING

- A. Equipment Nameplates and Signs: Install engraved plastic-laminate equipment nameplate or sign on or near each trap seal primer system.
 1. Text: Distinguish among multiple units, inform operator of operational requirements, indicate safety and emergency precautions, and warn of hazards and improper operations, in addition to identifying unit.

2.6 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect field-assembled trap seal primer systems and their installation, including piping and electrical connections. Report results in writing.
 1. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
 2. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation. Remove malfunctioning units, replace with new units, and retest.
 3. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

2.7 PROTECTION

- A. Protect drains during remainder of construction period to avoid clogging with dirt and debris and to prevent damage from traffic and construction work.
- B. Place plugs in ends of uncompleted piping at end of each day or when work stops.

2.8 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain trap seal primer systems.

END OF SECTION 225000

SECTION 233113 – METAL DUCTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SCOPE

- A. The work under this Section includes everything necessary for and incidental to executing and completing the Heating, Ventilating and Air Conditioning work, except as hereinafter specifically excluded.

1.3 WORK INCLUDED

- A. Work included shall be as indicated on the drawings, including but not limited to the following:

Ductwork.

1.4 DELIVERY AND STORAGE OF MATERIALS

- A. Provide for the safety and good condition of all materials and equipment until final acceptance by the Resident Engineer. Protect all materials and equipment from damage from any cause whatever, and provide adequate and proper storage facilities during the progress of the work. Replace all damaged and defective work precedent to filing application for final acceptance.

PART 2 - PRODUCTS

2.1 SHEET METAL AND DUCTWORK

- A. The contractor shall furnish and install all sheet metal ductwork and plenums shown on plans, except where otherwise noted sheet metal shall be galvanized steel. Construction and gauges shall conform to the requirements of Table 6, or Standard 6 in the California Mechanical Code, 2001 Edition. Installation of ducts shall conform to the requirements of The 2001 California Mechanical Code and SMACNA HVAC Duct Construction Standards, 1995 Edition, unless more restrictive within this specification. Duct shall have smooth interiors and all seams, braces, and hangers shall be on the outside. Ductwork exposed in occupied areas shall be free from visual imperfections including, pitting, seam marks, stains, discoloration and other imperfections, including those that would impair painting. Duct shall be constructed for a minimum static pressure of 2" w.c., unless otherwise noted.

Transverse Joints: Ductmate, or Ward proprietary duct connection systems will be accepted. Ductwork constructed using these systems will refer to the manufacturers guidelines for intermediate reinforcement size and spacing, and joint reinforcements. Sheet metal gauges shall conform to the California Mechanical Code. Manufacturer specified gauges are not acceptable unless heavier than mentioned above.

TDC/TDF/T-24 shall be constructed as a SMACNA T-24 flange. Use of these joint systems shall be limited to duct sizes up to 24", and operating pressures up to 1" w.g.

- B. Where turning vanes are indicated on the drawings, or as required by this specification, they shall be 22 gauge single vane with a 3/4" trailing edge type, in accordance with 1995 SMACNA Duct Construction Standards, Figure 2-3. All square turn elbows to have turning vanes.

1.2 FLEXIBLE CONNECTORS

- A. Flexible Connectors: Not Applicable to Project

1.3 DUCT SEALANTS

- A. Multi-Component Urethane: ASTM C920, Type M, Grade NS, Class 50; Uses T,, M, A, and O; two component, chemical curing, nonstaining, nonbleeding, color as selected.

Dymeric 240/240FC.

Vulkem 227.

PART 3 - EXECUTION

3.1 METAL AND DUCTWORK INSTALLATION

- A. Duct shall be suspended in accordance with SMACNA guidelines from structural parts of the building.
- B. All changes in direction of ducts shall be made with an inside radius not less than the width of the duct.
- C. Changes in shape of ducts shall be made at small angles, sides of ducts shall diverge or converge at an angle not greater than 15° whenever possible or as shown on the plans.
- D. All branch take offs, including individual discharge outlets, shall have volume dampers.
- E. All square turn elbows greater than 45° shall have turning vanes and shall be cross-crimped.
- F. All seams and transverse joints on all ducts shall be made airtight with Vulkem polyurethane sealant. Duct tape will not be accepted. Clean duct of oil or other foreign substance prior to application. All duct systems shall be sealed to a leakage rate not to exceed 5% of the fan flow.
- G. All ducts shall be installed in the locations and the sizes shown on the drawings. Should it be found that any necessary duct dimensions have been omitted from the drawings, the Contractor shall notify the Resident Engineer, who will supply the dimensions, and the Contractor shall then construct the ducts in accordance with these sizes. Should it be found impractical to install any duct of the exact sizes given, a duct of a different shape but having the same resistance shall be installed; the sizes of the substitute duct shall be approved by the Resident Engineer.
- H. All ducts shall be installed true to line and grade. All concealed horizontal ducts shall be installed to leave the greatest possible headroom under them unless for clearances of other work they need to be installed at an intermediate plane. Where necessary, changes of elevation in the ducts shall be made to secure this result, but not without approval of the Resident Engineer.
- I. All ductwork, grilles, etc., shall be thoroughly cleaned and free of dust and debris before and after installation.

- J. All round branch duct take-off connections to rectangular sheet metal duct shall be accomplished using a flared spin-in fitting. Fitting size shall be same size of branch take-off duct.

3.2 SEALANT INSTALLATION

- A. Install primer and sealants in accordance with ASTM C 1193 and manufacturer's instructions.
- B. Apply primer where required for sealant adhesion.
- C. Install sealants immediately after joint preparation.
- D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.

END OF SECTION 233113

SECTION 233423 – HVAC POWER VENTILATORS

PART 1 - GENERAL

1.1 GENERAL CONDITIONS

- A. The Drawings and general provisions of the contract, including General and Special Supplementary Conditions and Greenbook Specification Sections, apply to this Section.

1.2 SCOPE

- A. The work under this Section includes everything necessary for and incidental to executing and completing the Heating, Ventilating and Air Conditioning work, except as hereinafter specifically excluded.

1.3 WORK INCLUDED

- A. Work included shall be as indicated on the drawings, including but not limited to the following:

Inline Exhaust Fans

PART 2 - PRODUCTS

2.1 INLINE EXHAUST FAN (BELT DRIVE)

- A. Duct mounted fan shall be of the centrifugal belt driven in-line type. The fan housing shall be of the square design constructed of heavy gauge galvanized steel and shall include square duct mounting collars.
- B. Fan construction shall include two removable access panels located perpendicular to the motor mounting panel.
- C. The fan wheel shall be centrifugal backward inclined, constructed of aluminum and shall include a wheel cone carefully matched to the inlet cone for precise running tolerances. Wheels shall be statically and dynamically balanced.
- D. Motors shall be heavy duty ball bearing type, carefully matched to the fan load and furnished at the specified voltage, phase and enclosure. Motors and drives shall be mounted out of the airstream.
- E. Precision ground and polished fan shafts shall be mounted in permanently sealed, lubricated pillow block ball bearings. Bearings shall be selected for a minimum (L50) life in excess of 200,000 hours at maximum cataloged operating speed.
- F. Drives shall be sized for a minimum of 150% of driven horsepower. Pulleys shall be of the fully machined cast iron type, keyed and securely attached to the wheel and motor shafts.
- G. Motor pulleys shall be adjustable for final system balancing. A NEMA 1 disconnect switch shall be provided as standard, except with explosion resistant motors, where disconnects are optional. Factory wiring shall be provided from motor to the handy box.

- H. All fans shall bear the AMCA Certified Ratings Seal for both sound and air performance.
- I. Each fan shall bear a permanently affixed manufacturer's nameplate containing the model number and individual serial number for future identification.
- J. Fans shall be Model BSQ as manufactured by Greenheck.

PART 3 - EXECUTION

3.1 CONTROLS

- A. Sensor and low voltage (24/48V) control wire shall be in conduit. Use varistors on all inputs and outputs.

END OF SECTION 233423

SECTION 233713 DIFFUSERS, REGISTERS AND GRILLES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SCOPE

- A. The work under this Section includes everything necessary for and incidental to executing and completing the Heating, Ventilating and Air Conditioning work, except as hereinafter specifically excluded.

1.3 WORK INCLUDED

- A. Work included shall be as indicated on the drawings, including but not limited to the following:
 - Diffusers.
 - Registers.
 - Grilles.
 - Louvers

PART 2 - PRODUCTS

2.1 AIR DISTRIBUTION DEVICES

- A. All diffusers shall be aluminum construction.
- B. Ceiling exhaust registers shall be perforated diffusers. Price model APDDR, or approved equal. Finish being white powder coat.
- C. Round ceiling diffusers shall be surface mounted with four cones and fully adjustable core. Diffusers shall be Price model ARCD, or approved equal. Provide round neck reducer when required. Finish being white powder coat.
- D. Wall return register shall have horizontal blades. Price model 610ZD, aluminum construction, or approved equal. Finish being white powder coat.

2.2 LOUVERS

- A. All louvers shall be aluminum construction.
- B. Exhaust louvers shall have a minimum of 54% free area. Ruskin model ELF375DX or approved equal. Air velocity through free area shall not exceed 700 fpm.

PART 3 - EXECUTION

3.1 PERFORMANCE:

- A. Contractor shall provide the required air throw and spread no apparent drafts or excessive air movement within the air conditioned area. Any air distribution accessories required to affect these conditions shall be provided and installed by Contractor.
- B. Grilles, registers or ceiling diffusers causing excessive air movements, drafts or objectionable noise, shall be replaced at no cost to the Owner.

END OF SECTION 233713

SECTION 260000 – GENERAL ELECTRICAL REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SCOPE:

- A. Work Included: All labor, materials, appliances, tools, equipment necessary for and incidental to performing all operations in connection with furnishing, delivery and installation of the work of this Section, complete, as shown on the drawings and/or specified herein. Work includes, but is not necessarily limited to the following:
 - 1. Examine all other sections for work related to those other sections and required to be included as work under this section.
 - 2. Examine the general provisions and requirements for electrical work.

1.3 GENERAL SUMMARY OF ELECTRICAL WORK:

- A. These specifications and drawings are intended to cover a complete operation of systems. The omission of expressed references to any item of labor or material for the proper execution of the work in accordance with present practice of the trade shall not relieve the Contractor from providing such additional labor and materials.
- B. This specification, the drawings and General Conditions over the complete furnishing and installation of the electrical system and all related work including, but not limited to the following:
 - 1. Replace lighting and receptacles.

1.4 WORK NOT INCLUDED:

- A. The furnishing and/or installation of electrical motors are by Mechanical Division 23.
- B. The painting of any conduits, equipment or devices, unless specifically noted otherwise.

1.5 COORDINATION:

- A. Examine all other sections of these specifications and drawings to determine the complete scope of the electrical work and coordinate all of the electrical work required for the entire project. Provide the correct electrical service to each piece of electrical equipment, and check and coordinate the required electrical service and controls with the actual equipment provided under the other sections of the project.

1.6 INTERPRETATION OF DRAWING:

- A. These drawings showing the layout of the electrical system indicate approximate locations of outlets, apparatus and equipment. The runs of feeders and branch circuits shown on the drawings are schematic only and are not intended to show the exact routing and location of conduits and conduit termination.

1.7 ORDINANCES AND REGULATIONS:

- A. All work and materials shall be in full accordance with the latest rules of the Municipal Agency, the National Board of Fire Underwriters and State of California Code of Regulations (CCR) Title 24.

- B. Nothing in these plans and specifications is to be construed as permitting work not conforming to these codes.
- 1.8 PERMITS AND INSPECTIONS:
- A. Apply and pay for all permits required by any of the legally constituted public authorities for the installation or construction of the work included under this Division.
- 1.9 REFERENCE STANDARDS:
- A. Materials and workmanship shall conform to the editions of the following standards, codes, or specifications in effect on the date of this specification, unless otherwise specified.
 - Codes and Regulations of the Jurisdictional Authorities
 - CEC 2007 California Electrical Code (CCR Title 24 Part 3), based on the 2005 National Electrical Code.
 - California Code of Regulations (CCR) Title 24 Parts 1 through 12.
 - NEMA National Electrical Manufacturers Association - applicable standards
 - NFPA National Fire Protection Association – applicable sections referenced by CCR Title 24
 - UL Underwriter's Laboratories, Inc. - applicable standards
 - B. UL Label: All electrical materials and equipment falling within the scope of the underwriters' standards shall bear the UL Label.
- 1.10 EXAMINATION OF DRAWINGS AND SITE:
- A. Contractor shall carefully examine the site and existing building, shall compare the drawings with the existing electrical installations, and shall thoroughly familiarize himself with all existing conditions within the scope of this work.
- 1.11 SEQUENCING AND SCHEDULING OF WORK:
- A. Coordinate work with the work of the other trades, so that the work may proceed as expeditiously as possible.
- 1.12 ELECTRICAL CHARACTERISTICS:
- A. Electrical characteristics for this project are 208Y/120 volts, three phase, 4 wire, 60 hertz.

PART 2 - PRODUCTS

2.1 MATERIALS:

- A. All material shall be new unless specifically noted otherwise.

2.2 OUTLET BOXES:

- A. Outlet boxes shall be used as pull boxes wherever possible, and junction boxes or pull boxes shall be installed only as required by the drawings or specifications, or as directed.
- B. Unless otherwise specified or noted on the drawings, boxes for the various outlets shall be as follows:
 - 1. For convenience outlets, use metallic 4" sq x 2 1/8" deep boxes with single gang plaster ring.

2. Any exposed wiring device box shall be cast iron only, no cast aluminum.
 3. Flat wiring will not be used
- C. All outlet boxes shall be accurately placed and securely fastened to the structure independent of the conduit.
- 2.3 CAST BOXES:
- A. Outlet boxes installed on fan units, mechanical equipment or other areas where cast boxes are required shall be cast metal with threaded plugged conduit openings and a gasket cover plate specifically designed for the box use and intend function. Cast boxes shall be Rayco or approved equal.
- 2.4 RECEPTACLES:
- A. Ground fault interrupter (GFCI) type and duplex receptacles shall be rated for 20 ampere, 120v/277v industrial type, and shall be installed as specified for standard duplex receptacles. GFCI receptacles shall be Hubbell HBL 5362 or equal.
- 2.5 CONNECTORS TERMINAL LUGS AND FITTINGS:
- A. All connectors shall be UL listed for the intended use.
 - B. For #10 AWG and smaller conductor cable: Tin-plated copper pressure connectors with nonflammable, self-extinguishing insulation grip with temperature rating equal to that of conductor insulation.
 - C. For #8 AWG to #4/0 AWG conductor cable: Tin-plated copper compression connectors and terminal lugs with nylon insulating sleeve for insulation grip.
- 2.6 INSULATING TAPE:
- A. Plastic tape: Vinyl plastic tape with rubber-based pressure-sensitive adhesive, pliable at zero degrees F.
 - B. Acceptable Manufacturers: Minnesota Mining and Minerals Co. (3M) #33 or an approved equal.
- 2.7 ELECTRICAL METALLIC TUBING:
- A. All wiring inside the building shall be Electrical metallic tubing shall be galvanized or sherardized. Couplings and connectors shall be galvanized or cadmium plated and shall be of the compression type, equal to Appleton 95T series for couplings and 86T series for insulated box connectors.
 - B. No BX or MC cable allowed.
- 2.8 FLEXIBLE METALLIC CONDUIT:
- A. Flexible metallic conduit shall be hot dipped galvanized steel and shall have all fittings hot dipped galvanized or sherardized. Fittings shall be the squeeze type. Fittings, which use a screw to bind against tubing, will not be accepted. Neoprene jacketed flexible metallic conduit and connectors shall be used in all moist or weatherproof applications. Fittings shall be equal to Appleton "STN" series.
 - B. Flexible conduit shall be by one of the manufacturers listed for rigid conduit. "Jake" connectors shall be provided. Setscrew type connectors are not acceptable.
 - C. Flexible conduit exposed to weather or located in wet or damp locations shall be the weatherproof type with an extruded polyvinyl chloride jacket, as manufactured by American Brass Company, Columbia, Anaconda or Electri-Flex Co.

2.9 WIRE AND CABLE:

- A. Furnish and install Anaconda, General Cable, General Electric, Habirshaw, Okonite, Paranite, Phelps-Dodge, Cerro, Collyer, Rome or Triangle Wire and Cable. All wire shall be delivered to the job in unbroken packages, and each package shall bear the Underwriters' and Manufacturer's labels, showing the date of manufacture and the maximum allowable voltage.
- B. Minimum wiring size will be #12 AWG stranded. Except for control circuits will be #14 AWG stranded wire. No solid wire allowed.
- C. Conductors shall be soft drawn annealed copper, ninety-eight (98%) percent conductivity, continuous from outlet to outlet, without welds, splices or joints.
- D. All conductors shall be copper.
- E. One neutral for every one circuit pulled. Not sharing of neutral wires.

2.10 INSULATION:

- A. Conductors of the follow types shall be used in the following locations:
 - 1. Indoor branch circuit and feeder cables in all sizes shall have "THHN-2" or "THWN-2", 600-volt insulation unless noted otherwise.
- B. All conductors supplied under the scope of this project shall be insulated for 600 volts minimum. Wire and cable shall meet the applicable requirements of CEC and UL 83 for the type of insulation, jacket, and conductor specified or indicated. Wires and cables manufactured more than 12 months prior to date of delivery to the site shall not be used.
- C. Temperature rating: comply with CEC 110.14(C).
- D. Color-Coding of Secondary Phase Conductors: Use the following colors:
 - 1. 208Y/120-V Conductors:
 - a. Phase A: Black
 - b. Phase B: Red
 - c. Phase C: Blue
 - d. Neutral: White
 - e. Ground: Green

2.11 MARKING AND NAME PLATES:

- A. Name plates: Furnish and install a minimum size of 1" high and 3" wide by 3/32" thick matte white (for normal power) and red (for emergency power) laminated phenolic nameplates with 1/4" white characters engraved in the plastic for all items of electrical equipment including, but not limited to switchboards, panel boards, automatic transfer switches, motor control centers, feeder circuit breakers, relays, time switches, disconnect switches, exposed pull or junction boxes, and all control equipment. Name plates will be attached with 2 cadmium-plated screws. Adhesive attachment will not be acceptable. Punch strip tape type name plates with card holders in any form are prohibited.

- B. Provide wire marker on each conductor in electrical panel pull box, outlet, and junction box. This includes all disconnects and connections. *If more than one neutral conductor is present, mark each related circuit and panel number.
- C. Label outside of all cover plates of wiring devices and junction boxes with circuit and panel number. Each branch circuit device cover plate will be labeled (engraved or silk screen) to indicate the branch circuit and panel number. Devices will include, but not be limited to, the following: toggle switches, dimmer switches and receptacle.

PART 3 - EXECUTION

3.1 INSTALLATION:

- A. All work shall be in conformance with recognized practices of the National Electrical Contractors Association (NECA) NECA 1 – Standard Practices for Good Workmanship in Electrical Contracting.
 - 1. The Contractor shall perform all cutting and patching of construction work that may be required for the proper installation of the electrical work. All patching shall be of the same materials, workmanship, and finish as, and shall accurately match all surrounding work.
 - 2. All work shall be done under the Owner's instructions, and, when so required, by the trade which performed the original work.
- B. Electrical outlets, devices and equipment furnished by disciplines under the scope of this project shall be installed and fully connected to the electric circuits.
 - 1. The Contractor shall furnish the necessary flexible conduit, connectors, cords, and other equipment that may be required for the proper connection of equipment.
 - 2. The Contractor shall furnish and install conduit, wiring, and connections required by the heating ventilating and air conditioning system for line and low voltage devices as required.

3.2 LOCATIONS AND DIMENSIONS:

- A. Install all material and equipment in such a manner as to avoid obstructions, preserve clearances, maintain code spacing and keep openings and passageways clear.
- B. These drawings are diagrammatic to the extent that many offsets, bends, fittings and exact locations are not shown. Determine the best methods, exact locations and routes for installation and note any conflicts or obstructions. The locations shown for conduits, outlets, materials and equipment may be refined to meet the architectural, structural and mechanical conditions with the approval of the Owner.

3.3 OUTLET BOXES:

- A. Outlet boxes shall be installed. All devices shall be installed in outlet boxes sized per CEC according to the conductor fill. Where oversized boxes are necessary due to the number of conductors, the contractor shall furnish the required box size.

- B. Outlet boxes shall be independently supported to framing, ceiling slabs or other structures in an approved manner. Conduit shall not be the sole support of outlet boxes.

3.4 EQUIPMENT GROUNDING:

- A. Comply with CEC and local amendments.
- B. A green insulated copper ground wire, sized per CEC shall be provided with each feeder or branch circuit of operating over 50 volts to ground. This ground wire shall be used for the grounding of all equipment.
- C. Ground conductors for branch circuit wiring shall be attached at each outlet to the back of the box using drilled and tapped holes and washer head screws, #10-32 x3/8" screw minimum.
- D. Each panelboard, switchboard, pullbox or any other enclosure in which several ground wires are terminated shall be equipped with a ground bus secured to the interior of the enclosure. The bus ampacity shall be equal to the phase bus size and shall have a separate lug for each ground conductor. No more than one conductor shall be installed per lug.

3.5 FLEXIBLE METALLIC CONDUIT:

- A. Final connections of conduit systems to all motors and direct wired vibrating equipment (including transformers) for interior and exterior locations not to exceed three (3) foot length.
- B. Light fixture connections in accessible locations (6 feet maximum)

3.6 INSTALLING WIRE:

- A. All circuit and feeder wires shall be continuous from switch to terminal or farthest outlet. No joints shall be made except in pull, junction or outlet boxes, or in panel or switchboard.
- B. All branch circuit and fixture wiring joints, splices and tapes for conductors #10 and smaller shall be made with UL listed connectors listed for 600 volts. Connector bodies shall consist of a cone shape expandable coil spring insert, insulated with Teflon or plastic shell. The connectors shall be the "Wing Nut" as manufactured by "Ideal Industries" or "Scotchlok" as manufactured by Minnesota Mining Manufacturing Company.
- B. Make all connections and splices necessary to properly install and complete the work. All splices shall be taped. All connections and splices shall be electrically and mechanically perfect, and in strict accordance with all Code requirements.

3.7 SUBMITTALS, FINAL WALK THRU AND MANUALS:

A. Submittals

All electrical submittals will be provided as called out in the Greenbook. All comments will be in writing within five days. This is very important to us in Maintenance.

B Final Walk Thru

All manuals and training on all electrical system will be done at this time, which includes, but not limited to: testing of emergency systems, time clocks, lights, and exhaust fans. Provide one set of blue prints, spec book, and submittals.

C Manual and Documentation

The Contractor will furnish operation and maintenance manuals for each electrical system and for each piece of equipment. The complete manual, bound in hardback binders, or and approved equivalent will be provided to the Owner's Representative. The number of copies will be as indicated in Whitebook. One manual will be furnished prior to the time that the system or equipment tests are performed to the electrical shop:

City of San Diego
General Services / Facilities Division
Electrical Crew, Suite A, Bldg. 38
San Diego, CA 92102

The remaining manuals will be furnished before the contract is completed. The following identification will be inscribed on the cover; the words OPERATING AND MAINTENANCE MANUAL, the name and location of the building, the name of the Contractor, and the contract number.

The manual will include the names, address, and the telephone numbers of each Subcontractor installing equipment and systems, and of the local representatives for each item of equipment and each system. The manual will have a table of contents and be assembled to conform to the table of contents with tab sheets placed before instructions covering each subject. The instruction sheets will be legible with large sheets of drawings folded in. The manual will include, but not limited to, the following:

- A. System layout showing components.
- B. Devices and controls.
- C. Wiring and control diagrams showing operation and control of each component.
- D. Sequence of operation describing start-up, operation, and shutdown.
- E. Functional description of the principal system components.
- F. Installation instructions.
- G. Maintenance and overhaul instructions.
- H. Lubrication schedule including type, grade, temperature range, and frequency.
- I. Safety precautions, diagrams and illustrations.

D. Training:

User staff and maintenance personnel will be thoroughly trained (minimum of 4 hours) in the use of each electrical system or major piece of equipment installed. This training will be provided as a part of the Contractors bid to supply the system or equipment. Additional training requirements, will be as specified in the subsequent sections of Division 26.

It will be the responsibility of the Contractor to provide equipment with the proper electrical characteristics for the electrical service provided. All necessary electrical components to provide a complete system will be furnished

END OF SECTION 260000

SECTION 334616 - GEOCOMPOSITE SUBDRAINAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes foundation, subsoil drainage systems.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Greenbook section 300 "Earthwork" for excavating, trenching, and backfilling.
 - 2. Division 7 Section "Crystalline Waterproofing."

1.3 SUBMITTALS

- A. General: Submit each item in this Article according to the Conditions of the Contract and Whitebook Specification Sections.
- B. Product data for the following:
 - 1. Drainage panels and drainage.

1.4 COORDINATION

- A. Coordinate foundation drainage system installation with excavating, trenching, and backfilling.
- B. Coordinate drainage panel installation with waterproofing of walls below grade.
- C. Coordinate piping termination with storm drainage system.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide one of the following:
 - 1. Molded-Sheet Drainage Panels:
 - a. Amerdrain 500; American Wick Drain Corp.
 - b. Hydroduct; Grace: W.R. Grace & Co.; Construction Products Div.
 - c. Sheet Drain; GREENSTREAK Plastic Products Co., Inc.
 - d. Hydraway 100; Monsanto Co.
 - e. CCW Miradrain 6000XL//6200XL; Carlisle.

2.2 PIPES AND FITTINGS

- A. General: Include pipes, fittings, couplings, and joint materials.
- B. Perforated, Polyvinyl Chloride (PVC) Sewer Pipe and Fittings: ASTM D 2729, bell-and-spigot ends, for loose joints.

2.3 MOLDED-SHEET DRAINAGE PANELS

- A. Description: Prefabricated, composite drainage panels, made with drainage core and filter fabric, for use as part of foundation drainage system.

B. Drainage Core: 3-dimensional, nonbiodegradable, molded-plastic-sheet material designed to effectively conduct water to foundation drainage system under maximum soil pressures.

1. Minimum Flow Rate: 15 gpm/foot at 1 hydraulic gradient and 3600 psf normal pressure when tested according to ASTM D 4716.

C. Filter Fabric: Nonwoven geotextile fabric of polypropylene (PP) or polyester fibers, or combination of both.

2.4 SOIL MATERIALS

A. Impervious Fill: Clayey gravel and sand mixture capable of compacting to dense state.

B. Drainage Fill: Washed, evenly graded mixture of crushed stone, or crushed or uncrushed gravel, ASTM D 448, coarse aggregate, Size No. 57, with 100 percent passing 1-1/2-inch sieve and not more than 5 percent passing No. 8 sieve.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces and areas for suitable conditions where foundation drainage systems are to be installed. Do not proceed until unsatisfactory conditions have been corrected.

3.2 FOUNDATION DRAINAGE SYSTEM APPLICATIONS

A. Systems with 4-Inch Piping: As follows:

1. Perforated, polyvinyl chloride (PVC) sewer pipe and fittings for loose, bell-and-spigot joints.

2. Completed Walls: Position the panel with the flat side against the wall and filter fabric toward the soil/drainage side. Provide contact adhesive or a washer headed concrete nail may be used to attach the panel against the concrete wall. Over waterproofing membrane: Place the system drain over the waterproofing membrane.

3.3 PIPING INSTALLATION

A. Drawing plans and details indicate general location and arrangement of foundation drainage system piping.

B. Install piping beginning at low points of system, true to grades and alignment indicated, with unbroken continuity of invert. Bed piping with full bearing, solidly in filtering material. Install gaskets, seals, sleeves, and couplings according to manufacturer's written instructions and other requirements indicated.

1. Install piping pitched down in direction of flow, at a minimum slope of 1 percent

2. Apply and compact impervious fill material to raise low areas or where unsatisfactory bearing soil may occur.

C. Use increasers, reducers, and couplings made for different sizes or materials of pipes and fittings being connected. Reduction of pipe size in direction of flow is prohibited.

D. Extend piping and connect to storm drainage system, of sizes and in locations indicated. Terminate piping as indicated.

3.4 PIPE JOINT CONSTRUCTION AND INSTALLATION

- A. General: Join and install pipe and fittings as indicated and according to the following.
- B. Polyvinyl Chloride (PVC) Pipe and Fittings: As follows:
 - 1. Join ASTM D 2729 perforated, sewer pipe and fittings with loose, bell-and-spigot joints.
 - 2. Install according to ASTM D 2321.
 - 3. Install perforated pipe with perforations down.

3.5 DRAINAGE PANEL INSTALLATION

- A. Install according to manufacturer's written instructions and as indicated. Coordinate placement with other foundation drainage materials.
 - 1. Comply with manufacturer's written instructions for securing drainage panels to substrate. Use adhesives and mechanical fasteners recommended by manufacturer. Lap edges of fabric and extend fabric around foundation drainage pipe according to manufacturer's recommendations. Do not penetrate waterproofing. Protect installed panels during backfilling.

3.6 SOIL MATERIAL INSTALLATION

- A. Impervious Fill at Footings: Place impervious fill material on subgrade adjacent to bottom of footing after concrete footings have been cured and forms removed. Place and compact impervious fill to dimensions indicated but not less than 6 inches deep and 12 inches wide.
- B. Filtering Material: Place supporting layer of filtering material over compacted subgrade where drainage pipe is to be laid to depth indicated or, if not indicated, to compacted depth of not less than 4 inches.

3.7 CLEANING AND PROTECTION

- A. A. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to owner's acceptance. Remove construction debris from project site and legally dispose of debris.
- B. B. Protection: Protection installed products finished surfaces from damage during construction.

3.8 FIELD QUALITY CONTROL

- A. Testing: Test drain piping with water or visually check piping to ensure free flow before backfilling. Remove obstructions, replace damaged components, and repeat test until results are satisfactory.

END OF SECTION 334616

APPENDIX A
Notice of Exemption

NOTICE OF EXEMPTION

(Check one or both)

TO: X RECORDER/COUNTY CLERK
P.O. Box 1750, MS A-33
1600 PACIFIC HWY, ROOM 260
SAN DIEGO, CA 92101-2422
OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET, ROOM 121
SACRAMENTO, CA 95814

FROM: CITY OF SAN DIEGO
DEVELOPMENT SERVICES DEPARTMENT
1222 FIRST AVENUE, MS 501
SAN DIEGO, CA 92101

PROJECT NO.: WBS # PROJECT TITLE: THE POOL, VISTA TERRACE ADA IMPROVEMENTS

PROJECT LOCATION-SPECIFIC: The Vista Terrace Pool is located at 301 Athey Avenue, San Diego, CA 92173.

PROJECT LOCATION-CITY/COUNTY: San Diego/San Diego

DESCRIPTION OF NATURE AND PURPOSE OF THE PROJECT: This project will provide an accessible path of travel from the parking lot to the building entrance in accordance with the Americans with Disabilities Act (ADA). Other improvements include upgrades to the restrooms and building facilities to comply with ADA requirements. The project will require demolition of the existing walkway and retaining wall to construct a new accessible path. The project will also demolish several interior and exterior walls of the building to provide ADA improvements.

NAME OF PUBLIC AGENCY APPROVING PROJECT: City of San Diego

NAME OF PERSON OR AGENCY CARRYING OUT PROJECT: City of San Diego, E&CP Dept/David Manela
600 B Street, Suite 800 (MS 908A)
San Diego, CA 92101
619-533-5186

EXEMPT STATUS: (CHECK ONE)

- () MINISTERIAL (SEC. 21080(b)(1); 15268);
() DECLARED EMERGENCY (SEC. 21080(b)(3); 15269(a));
() EMERGENCY PROJECT (SEC. 21080(b)(4); 15269 (b)(c)
(X) CATEGORICAL EXEMPTION: 15301(A) (EXISTING FACILITIES)
() STATUTORY EXEMPTIONS:

REASONS WHY PROJECT IS EXEMPT: The City of San Diego conducted an Initial Study which determined that this project does would not result in any impacts to the environment. The project will be constructed entirely within the existing developed site and would not have an impact on any historical or biological resources. This project meets the criteria set forth in CEQA Section 15301 which allows for minor alteration of existing structures and facilities involving a negligible or no expansion of use and where exceptions listed in CEQA Section 15300.2 would not apply.

LEAD AGENCY CONTACT PERSON: JEAN CAMERON

TELEPHONE: (619) 446-5379

IF FILED BY APPLICANT:

- 1. ATTACH CERTIFIED DOCUMENT OF EXEMPTION FINDING.
2. HAS A NOTICE OF EXEMPTION BEEN FILED BY THE PUBLIC AGENCY APPROVING THE PROJECT?
() YES () NO

IT IS HEREBY CERTIFIED THAT THE CITY OF SAN DIEGO HAS DETERMINED THE ABOVE ACTIVITY TO BE EXEMPT FROM CEQA

Signature/Title

OCTOBER 21, 2010
DATE

CHECK ONE:
(X) SIGNED BY LEAD AGENCY

DATE RECEIVED FOR FILING WITH COUNTY CLERK OR OPR:

APPENDIX B

Location Map

APPENDIX C

Fire Hydrant Meter Program

CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS	NUMBER DI 55.27	DEPARTMENT Water Department
SUBJECT FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)	PAGE 1 OF 10	EFFECTIVE DATE October 15, 2002
	SUPERSEDES DI 55.27	DATED April 21, 2000

1. **PURPOSE**

- 1.1 To establish a Departmental policy and procedure for issuance, proper usage and charges for fire hydrant meters.

2. **AUTHORITY**

- 2.1 All authorities and references shall be current versions and revisions.
- 2.2 San Diego Municipal Code (NC) Chapter VI, Article 7, Sections 67.14 and 67.15
- 2.3 Code of Federal Regulations, Safe Drinking Water Act of 1986
- 2.4 California Code of Regulations, Titles 17 and 22
- 2.5 California State Penal Code, Section 498B.0
- 2.6 State of California Water Code, Section 110, 500-6, and 520-23
- 2.7 Water Department Director

Reference

- 2.8 State of California Guidance Manual for Cross Connection Programs
- 2.9 American Water Works Association Manual M-14, Recommended Practice for Backflow Prevention
- 2.10 American Water Works Association Standards for Water Meters
- 2.11 U.S.C. Foundation for Cross Connection Control and Hydraulic Research Manual

3. **DEFINITIONS**

- 3.1 **Fire Hydrant Meter:** A portable water meter which is connected to a fire hydrant for the purpose of temporary use. (These meters are sometimes referred to as Construction Meters.)

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- 3.2 **Temporary Water Use:** Water provided to the customer for no longer than twelve (12) months.
- 3.3 **Backflow Preventor:** A Reduced Pressure Principal Assembly connected to the outlet side of a Fire Hydrant Meter.

4. **POLICY**

- 4.1 The Water Department shall collect a deposit from every customer requiring a fire hydrant meter and appurtenances prior to providing the meter and appurtenances (see Section 7.1 regarding the Fees and Deposit Schedule). The deposit is refundable upon the termination of use and return of equipment and appurtenances in good working condition.
- 4.2 Fire hydrant meters will have a 2 ½" swivel connection between the meter and fire hydrant. The meter shall not be connected to the 4" port on the hydrant. All Fire Hydrant Meters issued shall have a Reduced Pressure Principle Assembly (RP) as part of the installation. Spanner wrenches are the only tool allowed to turn on water at the fire hydrant.
- 4.3 The use of private hydrant meters on City hydrants is prohibited, with exceptions as noted below. All private fire hydrant meters are to be phased out of the City of San Diego. All customers who wish to continue to use their own fire hydrant meters must adhere to the following conditions:
 - a. Meters shall meet all City specifications and American Water Works Association (AWWA) standards.
 - b. Customers currently using private fire hydrant meters in the City of San Diego water system will be allowed to continue using the meter under the following conditions:
 - 1. The customer must submit a current certificate of accuracy and calibration results for private meters and private backflows annually to the City of San Diego, Water Department, Meter Shop.

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2. The meter must be properly identifiable with a clearly labeled serial number on the body of the fire hydrant meter. The serial number shall be plainly stamped on the register lid and the main casing. Serial numbers shall be visible from the top of the meter casing and the numbers shall be stamped on the top of the inlet casing flange.
3. All meters shall be locked to the fire hydrant by the Water Department, Meter Section (see Section 4.7).
4. All meters shall be read by the Water Department, Meter Section (see Section 4.7).
5. All meters shall be relocated by the Water Department, Meter Section (see Section 4.7).
6. These meters shall be tested on the anniversary of the original test date and proof of testing will be submitted to the Water Department, Meter Shop, on a yearly basis. If not tested, the meter will not be allowed for use in the City of San Diego.
7. All private fire hydrant meters shall have backflow devices attached when installed.
8. The customer must maintain and repair their own private meters and private backflows.
9. The customer must provide current test and calibration results to the Water Department, Meter Shop after any repairs.
10. When private meters are damaged beyond repair, these private meters will be replaced by City owned fire hydrant meters.

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11. When a private meter malfunctions, the customer will be notified and the meter will be removed by the City and returned to the customer for repairs. Testing and calibration results shall be given to the City prior to any re-installation.
12. The register shall be hermetically sealed straight reading and shall be readable from the inlet side. Registration shall be in hundred cubic feet.
13. The outlet shall have a 2 ½ "National Standards Tested (NST) fire hydrant male coupling.
14. Private fire hydrant meters shall not be transferable from one contracting company to another (i.e. if a company goes out of business or is bought out by another company).

4.4 All fire hydrant meters and appurtenances shall be installed, relocated and removed by the City of San Diego, Water Department. All City owned fire hydrant meters and appurtenances shall be maintained by the City of San Diego, Water Department, Meter Services.

4.5 If any fire hydrant meter is used in violation of this Department Instruction, the violation will be reported to the Code Compliance Section for investigation and appropriate action. Any customer using a fire hydrant meter in violation of the requirements set forth above is subject to fines or penalties pursuant to the Municipal Code, Section 67.15 and Section 67.37.

4.6 **Conditions and Processes for Issuance of a Fire Hydrant Meter**

Process for Issuance

- a. Fire hydrant meters shall only be used for the following purposes:
 1. Temporary irrigation purposes not to exceed one year.

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2. Construction and maintenance related activities (see Tab 2).
 - b. No customer inside or outside the boundaries of the City of San Diego Water Department shall resell any portion of the water delivered through a fire hydrant by the City of San Diego Water Department.
 - c. The City of San Diego allows for the issuance of a temporary fire hydrant meter for a period not to exceed 12 months (365 days). An extension can only be granted in writing from the Water Department Director for up to 90 additional days. A written request for an extension by the consumer must be submitted at least 30 days prior to the 12 month period ending. No extension shall be granted to any customer with a delinquent account with the Water Department. No further extensions shall be granted.
 - d. Any customer requesting the issuance of a fire hydrant meter shall file an application with the Meter Section. The customer must complete a "Fire Hydrant Meter Application" (Tab 1) which includes the name of the company, the party responsible for payment, Social Security number and/or California ID, requested location of the meter (a detailed map signifying an exact location), local contact person, local phone number, a contractor's license (or a business license), description of specific water use, duration of use at the site and full name and address of the person responsible for payment.
 - e. At the time of the application the customer will pay their fees according to the schedule set forth in the Rate Book of Fees and Charges, located in the City Clerk's Office. All fees must be paid by check, money order or cashiers check, made payable to the City Treasurer. Cash will not be accepted.
 - f. No fire hydrant meters shall be furnished or relocated for any customer with a delinquent account with the Water Department.
 - g. After the fees have been paid and an account has been created, the

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meter shall be installed within 48 hours (by the second business day). For an additional fee, at overtime rates, meters can be installed within 24 hours (within one business day).

4.7 Relocation of Existing Fire Hydrant Meters

- a. The customer shall call the Fire Hydrant Meter Hotline (herein referred to as "Hotline"), a minimum of 24 hours in advance, to request the relocation of a meter. A fee will be charged to the existing account, which must be current before a work order is generated for the meter's relocation.
- b. The customer will supply in writing the address where the meter is to be relocated (map page, cross street, etc). The customer must update the original Fire Hydrant Meter Application with any changes as it applies to the new location.
- c. Fire hydrant meters shall be read on a monthly basis. While fire hydrant meters and backflow devices are in service, commodity, base fee and damage charges, if applicable, will be billed to the customer on a monthly basis. If the account becomes delinquent, the meter will be removed.

4.8 Disconnection of Fire Hydrant Meter

- a. After ten (10) months a "Notice of Discontinuation of Service" (Tab 3) will be issued to the site and the address of record to notify the customer of the date of discontinuance of service. An extension can only be granted in writing from the Water Department Director for up to 90 additional days (as stated in Section 4.6C) and a copy of the extension shall be forwarded to the Meter Shop Supervisor. If an extension has not been approved, the meter will be removed after twelve (12) months of use.
- b. Upon completion of the project the customer will notify the Meter Services office via the Hotline to request the removal of the fire hydrant meter and appurtenances. A work order will be generated

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for removal of the meter.

- c. Meter Section staff will remove the meter and backflow prevention assembly and return it to the Meter Shop. Once returned to the Meter Shop the meter and backflow will be tested for accuracy and functionality.
- d. Meter Section Staff will contact and notify Customer Services of the final read and any charges resulting from damages to the meter and backflow or its appurtenance. These charges will be added on the customer's final bill and will be sent to the address of record. Any customer who has an outstanding balance will not receive additional meters.
- e. Outstanding balances due may be deducted from deposits and any balances refunded to the customer. Any outstanding balances will be turned over to the City Treasurer for collection. Outstanding balances may also be transferred to any other existing accounts.

5. **EXCEPTIONS**

- 5.1 Any request for exceptions to this policy shall be presented, in writing, to the Customer Support Deputy Director, or his/her designee for consideration.

6. **MOBILE METER**

- 6.1 Mobile meters will be allowed on a case by case basis. All mobile meters will be protected by an approved backflow assembly and the minimum requirement will be a Reduced Pressure Principal Assembly. The two types of Mobile Meters are vehicle mounted and floating meters. Each style of meters has separate guidelines that shall be followed for the customer to retain service and are described below:

- a) **Vehicle Mounted Meters:** Customer applies for and receives a City owned Fire Hydrant Meter from the Meter Shop. The customer mounts the meter on the vehicle and brings it to the Meter Shop for

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inspection. After installation is approved by the Meter Shop the vehicle and meter shall be brought to the Meter Shop on a monthly basis for meter reading and on a quarterly basis for testing of the backflow assembly. Meters mounted at the owner's expense shall have the one year contract expiration waived and shall have meter or backflow changed if either fails.

- b) **Floating Meters:** Floating Meters are meters that are not mounted to a vehicle. **(Note: All floating meters shall have an approved backflow assembly attached.)** The customer shall submit an application and a letter explaining the need for a floating meter to the Meter Shop. The Fire Hydrant Meter Administrator, after a thorough review of the needs of the customer, (i.e. number of jobsites per day, City contract work, lack of mounting area on work vehicle, etc.), may issue a floating meter. At the time of issue, it will be necessary for the customer to complete and sign the "Floating Fire Hydrant Meter Agreement" which states the following:

- 1) The meter will be brought to the Meter Shop at 2797 Caminito Chollas, San Diego on the third week of each month for the monthly read by Meter Shop personnel.
- 2) Every other month the meter will be read and the backflow will be tested. This date will be determined by the start date of the agreement.

If any of the conditions stated above are not met the Meter Shop has the right to cancel the contract for floating meter use and close the account associated with the meter. The Meter Shop will also exercise the right to refuse the issuance of another floating meter to the company in question.

Any Fire Hydrant Meter using reclaimed water shall not be allowed use again with any potable water supply. The customer shall incur the cost of replacing the meter and backflow device in this instance.

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7. FEE AND DEPOSIT SCHEDULES

- 7.1 **Fees and Deposit Schedules:** The fees and deposits, as listed in the Rate Book of Fees and Charges, on file with the Office of the City Clerk, are based on actual reimbursement of costs of services performed, equipment and materials. These deposits and fees will be amended, as needed, based on actual costs. Deposits, will be refunded at the end of the use of the fire hydrant meter, upon return of equipment in good working condition and all outstanding balances on account are paid. Deposits can also be used to cover outstanding balances.

All fees for equipment, installation, testing, relocation and other costs related to this program are subject to change without prior notification. The Mayor and Council will be notified of any future changes.

8. UNAUTHORIZED USE OF WATER FROM A HYDRANT

- 8.1 Use of water from any fire hydrant without a properly issued and installed fire hydrant meter is theft of City property. Customers who use water for unauthorized purposes or without a City of San Diego issued meter will be prosecuted.
- 8.2 If any unauthorized connection, disconnection or relocation of a fire hydrant meter, or other connection device is made by anyone other than authorized Water Department personnel, the person making the connection will be prosecuted for a violation of San Diego Municipal Code, Section 67.15. In the case of a second offense, the customer's fire hydrant meter shall be confiscated and/or the deposit will be forfeited.
- 8.3 Unauthorized water use shall be billed to the responsible party. Water use charges shall be based on meter readings, or estimates when meter readings are not available.
- 8.4 In case of unauthorized water use, the customer shall be billed for all applicable charges as if proper authorization for the water use had been obtained, including but not limited to bi-monthly service charges, installation charges and removal charges.

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- 8.5 If damage occurs to Water Department property (i.e. fire hydrant meter, backflow, various appurtenances), the cost of repairs or replacements will be charged to the customer of record (applicant).

Water Department Director

- Tabs: 1. Fire Hydrant Meter Application
2. Construction & Maintenance Related Activities With No Return To Sewer
3. Notice of Discontinuation of Service

APPENDIX

Administering Division: Customer Support Division

Subject Index: Construction Meters
Fire Hydrant
Fire Hydrant Meter Program
Meters, Floating or Vehicle Mounted
Mobile Meter
Program, Fire Hydrant Meter

Distribution: DI Manual Holders



Application For Fire Hydrant Meter

(EXHIBIT A)

For Office Use Only

Department: METER SHOP 619 527 7449
2797 Camino Cholas • San Diego, California 92105-5097 • FAX 619 527 3125

NS Req:	Fac #:
Date:	By:

Application Date:	Requested Install Date:
-------------------	-------------------------

Fire Hydrant Location: (Attach detailed map, Thomas Bros. map location or construction drawing.)

Specific Use of Water:

Any return to Sewer or Storm Drain, if so, explain:

Estimated Duration of Meter Use: Check Box if Reclaimed Water

Company Information

Company Name:

Mailing Address:

City: State: Zip Code: Phone: ()

*Business License #: *Contractor License #:

**A copy of the Contractor's License and/or Business License is required at the time of meter issuance.*

Name and Title of Agent: Phone: ()

Site Contact Name and Title: Phone: ()

Pager #: Cell: ()

Responsible Party Name: Title:

Social Security or Cal ID #: Phone: ()

Signature: Date:

Guarantees payment of all charges resulting from the use of this meter. Insures that employees of this organization understand the proper use of Fire Hydrant Meter.

Fire Hydrant Meter Removal Request

Check Box to Request Removal of Above Meter Requested Removal Date:

Provide current Meter location if different from above:

Signature: Title: Date:

Phone: () Pager: ()

For Office Use Only

<input type="checkbox"/> City Meter	<input type="checkbox"/> Private Meter		
CIS Account #:	Deposit Amount: \$	Fees Amount: \$	
Meter Serial #:	Meter Size:	Meter Make & Style:	
Backflow #:	Backflow Size:	Meter Make & Style:	
Name:	Signature:	Date:	

\$1,108.45 - FOR 24 HR INSTALLATION
 \$1,052.26 - FOR 48 HR INSTALLATION

FHM App Created: 11/2/00-htp

"Exhibit B"

CONSTRUCTION AND MAINTENANCE RELATED ACTIVITIES WITH NO RETURN TO SEWER:

**Auto Detailing
Backfilling
Combination Cleaners (Vactors)
Compaction
Concrete Cutters
Construction Trailers
Cross Connection Testing
Dust Control
Flushing Water Mains
Hydro blasting
Hydro Seeding
Irrigation (for establishing irrigation only; not continuing irrigation)
Mixing Concrete
Mobile Car Washing
Special Events
Street Sweeping
Water Tanks
Water Trucks
Window Washing**

Note: If there is any return to sewer or storm drain, then sewer and/or storm drain fees will be charged.

"Exhibit C"

Date

Name of Responsible Party
Company Name and address
Account Number: _____

Subject: Discontinuation of Fire Hydrant Meter Service

Dear Water Department Customer:

The authorization for use of Fire Hydrant Meter # _____ located at (Meter location address) ends in 60 days and will be removed on or after (Date authorization expires). Extension requests for an additional 90 days must be submitted in writing for consideration 30 days prior to the discontinuation date. If you require an extension, please refer to the Water Departments', Department Instruction (D.I.) 55.27 for further information and procedure.

Mail your request for an extension to :

City of San Diego, Water Department
Attn: Meter Services
2797 Caminito Chollas
San Diego, Ca. 92105-5097

Should you have any questions regarding this matter, please call the Fire Hydrant "Hot Line" at: (xxx) xxx-xxx.

Sincerely,

City of San Diego Water Department



Fire Hydrant Meter Relocate/Removal Request

(EXHIBIT D)

For Office Use Only

NS Req:	FHM Fac #:
Date:	By:

Date:

Instruction: Complete pertinent information then FAX both form and map to (xxx) xxx-xxxx, mail, or hand-deliver to the City of San Diego, Water Department/Meter Shop at: 2707 Caminito Chollas San Diego, CA 92105

Meter Information

Billing Account #:	Requested Move Date:
Current Fire Hydrant Meter Location:	
New Meter Location: (Attach a detailed map, Thomas Bros map location or construction drawing.)	

Company Information

Company Name:			
Mailing Address			
City:	State:	Zip Code:	Phone: ()
Name and Title of Requestor:			Phone: ()
Site Contact Name and Title			Phone: ()
Pager #:			Cell: ()
Responsible Party Name authorizing relocation fee:			
Signature:	Title:	Date:	

Fire Hydrant Meter Removal Request

<input type="checkbox"/> Check Box to Request Removal of Above Meter	Requested Removal Date:	
Provide current Meter location if different from above:		
Signature:	Title:	Date:
Phone: ()	Pager: ()	

For Office Use Only

CIS Account #:	Fees Amount: \$		
Meter Serial #:	Size:	Make/Style	
Backflow #:	Size:	Make/Style	
Name:	Signature:	Date:	

FHM Relocate_Removal Form

FHM App Created: 11/2/00-htp

APPENDIX D
Sample City Invoice

City of San Diego, Field Engineering Div., 9485 Aero Drive, SD CA 92123						Contractor's Name:					
Project Name:						Contractor's Address:					
SAP No. (WBS/IO/CC)											
City Purchase Order No.						Contractor's Phone #:			Invoice No.		
Resident Engineer (RE):						Contractor's Fax #:			Invoice Date:		
RE Phone#:			RE Fax#:			Contact Name:			Billing Period:		
Item #	Item Description	Contract Authorization				Previous Estimate		This Estimate		Totals to Date	
		Unit	Qty	Price	Extension	%/QTY	Amount	% / QTY	Amount	% / QTY	Amount
1	2 Parallel 4" PVC C900	LF	1,380	\$34.00	\$46,920.00						
2	48" Primary Steel Casing	LF	500	\$1,000.00	\$500,000.00						
3	2 Parallel 12" Secondary Steel	LF	1,120	\$53.00	\$59,360.00						
4	Construction and Rehab of PS 49	LS	1	\$150,000.00	\$150,000.00						
5	Demo	LS	1	\$14,000.00	\$14,000.00						
6	Install 6' High Chain Link Fence	LS	1	\$5,600.00	\$5,600.00						
7	General Site Restoration	LS	1	\$3,700.00	\$3,700.00						
8	10" Gravity Sewer	LF	10	\$292.00	\$2,920.00						
9	4" Blow Off Valves	EA	2	\$9,800.00	\$19,600.00						
10	Bonds	LS	1	\$16,000.00	\$16,000.00						
11	Field Orders	AL	1	80,000	\$80,000.00						
11.1	Field Order 1	LS	5,500	\$1.00	\$5,500.00						
11.2	Field Order 2	LS	7,500	\$1.00	\$7,500.00						
11.3	Field Order 3	LS	10,000	\$1.00	\$10,000.00						
11.4	Field Order 4	LS	6,500	\$1.00	\$6,500.00						
12	Certified Payroll	LS	1	\$1,400.00	\$1,400.00						
CHANGE ORDERS											
Change Order 1			4,890								
Items 1-4					\$11,250.00						
Item 5-Deduct Bid Item 3		LF	120	-\$53.00	(\$6,360.00)						
Change Order 2			160,480								
Items 1-3					\$95,000.00						
Item 4 Deduct Bid Item 1		LF	380	-\$340.00	(\$12,920.00)						
Item 5-Encrease bid Item 9		LF	8	\$9,800.00	\$78,400.00						
Change Order 3 (Close Out)			-121,500								
Item 1 Deduct Bid Item 3			53	-500.00	(\$26,500.00)						
Item 2 Deduct Bid Item 4		LS	-1	45,000.00	(\$45,000.00)						
Items 3-9			1	-50,500.00	(\$50,500.00)						
SUMMARY								Total This	\$ -	Total Billed	\$0.00
A. Original Contract Amount						Retention and/or Escrow Payment Schedule					
B. Approved Change Order 1 Thru 3						Total Retention Required as of this billing					
C. Total Authorized Amount (A+B)						Previous Retention Withheld in PO or in Escrow					
D. Total Billed to Date						Add'l Amt to Withhold in PO/Transfer in Escrow:					
E. Less Total Retention (5% of D)						Amt to Release to Contractor from PO/Escrow:					
F. Less Total Previous Payments											
G. Payment Due Less Retention						Contractor Signature and Date:					
H. Remaining Authorized Amount											

APPENDIX E

Materials Typically Accepted By Certificate of Compliance

Materials Typically Accepted by Certificate of Compliance

1. Soil amendment
2. Fiber mulch
3. PVC or PE pipe up to 16 inch diameter
4. Stabilizing emulsion
5. Lime
6. Preformed elastomeric joint seal
7. Plain and fabric reinforced elastomeric bearing pads
8. Steel reinforced elastomeric bearing pads
9. Waterstops (Special Condition)
10. Epoxy coated bar reinforcement
11. Plain and reinforcing steel
12. Structural steel
13. Structural timber and lumber
14. Treated timber and lumber
15. Lumber and timber
16. Aluminum pipe and aluminum pipe arch
17. Corrugated steel pipe and corrugated steel pipe arch
18. Structural metal plate pipe arches and pipe arches
19. Perforated steel pipe
20. Aluminum underdrain pipe
21. Aluminum or steel entrance tapers, pipe downdrains, reducers, coupling bands and slip joints
22. Metal target plates
23. Paint (traffic striping)
24. Conductors
25. Painting of electrical equipment
26. Electrical components
27. Engineering fabric
28. Portland Cement
29. PCC admixtures
30. Minor concrete, asphalt
31. Asphalt (oil)
32. Liquid asphalt emulsion
33. Epoxy

C. BIDDER's QUESTIONS

- Q1. Existing column to be repaired in the equipment room – confirm column material.
- A1. Column material is a standard 3”dia. steel pipe column.
- Q2. Is fence/gate at Family Toilet Rooms to be removed?
- A2. Yes, remove the 8’ tall sections of fence and gate and return to Owner – do not re-install. See A-SK-01.
- Q3. Civil drawings call for existing asphalt paving to be milled and resurfaced. Can paving be removed and replaced?
- A3. Asphalt paving should be installed as indicated on the plans.
- Q4. At the pre-bid meeting you verbally indicated that Alternate #1, and Alternate #2 are part of the base bid. This information has not been published on E-BIDBOARD. Please clarify.
- A4. The information is indicated in the Contract Document Volume 1, Page 14, INVITATIONS TO BIDS, Item 2. DESCRIPTION OF WORK, last paragraph.

D. VOLUME 1

1. To SSP, **ADD** the following:

ADD: 803-1.1 Lead Containing Ceramic Tiles.

1. The City of San Diego’s Asbestos and Lead Management Program (ALMP) has performed an asbestos and lead inspection for Vista Terrace Pool ADA Upgrades involved with this contract. There are lead containing ceramic tiles in the shower walls and possibly asbestos elbows inside the wall cavities on hot water piping. The Contractor shall not include any costs associated with mitigation of the asbestos and lead materials as it will be performed by others after NTP.
2. The inspection and sampling performed by the ALMP was conducted without using destructive methods. Therefore, it is possible for the Contractor to encounter additional suspected hazardous materials as the walls are opened during demolition. The Contractor and his staff shall continue looking for suspected materials throughout this process.
3. If additional suspected asbestos materials or loose and flaky lead paint are identified, stop work in that area and immediately notify the Engineer.
4. The City will undertake confirmation of the materials and determine if abatement is required. If abatement is required, the City will conduct such abatement at no cost to the Contractor.
5. The Contractor shall remain out of that work area if abatement is required. There will be no additional financial compensation to the Contractor during the removal of this ACM or loose and flaky lead paint.

6. Coatings that have lead content below the 5000 parts per million (ppm) thresholds for lead based paint:
 1. If the Contractor salvages components or building materials that have intact lead containing coatings on them, the Contractor shall ensure the lead is disclosed to all persons accepting their salvaged material. Submit to the City a letter of evidence from the person accepting the lead coated salvaged material.
 2. Where the paint or component contains lead above 600 ppm but below the 5000 ppm the Contractor shall use "lead safe work practices" to protect their employees.
 3. After demolition is complete, all loose paint chips present shall be collected by the Contractor, have a waste characterization performed, and then properly disposed of.
 4. Debris generated from demolition that will be salvaged via crushing shall be segregated into separate piles for lead containing and non-lead containing debris. The Contractor shall perform testing for lead on all crushed concrete and other aggregate materials they may be reusing or selling.

2. To Technical Specifications, SECTION 102113 – TOILET COMPARTMENTS, PART 2 – PRODUCTS, 2.1 MANUFACTURERS, page 172, item A. Manufacturers, **ADD** the following:
 5. Scranton Products as acceptable Manufacturer.

3. To Technical Specifications, SECTION 105113 – LOCKERS, PART 2 – PRODUCTS, pages 181 through 182, **DELETE** in its entirety and **SUBSTITUTE** with the following:

PART 2 – PRODUCTS

 1. MANUFACTURERS
 - A. Manufacturer: Subject to compliance with requirements, provide products by one of the following:
 1. American Locker Security Systems, Inc.
 2. Lyon.
 3. Penco.
 4. Republic Storage Systems Co., Inc.
 2. MATERIALS
 1. Cold-Rolled Steel Sheet: ASTM A 366/A 366M, matte finish, suitable for exposed applications, and stretcher leveled or roller leveled to stretcher-leveled flatness.
 2. Expanded Metal: ASTM F 1267, Type II (flattened), 3/4-inch mesh, minimum 0.0747 inch thick, with at least 70 percent open area.

3. Electrolytic Zinc-Coated Steel Sheet: ASTM A 591/A 591M, commercial quality, coating Class C; mill phosphatized; suitable for exposed applications; and stretcher leveled or roller leveled to stretcher-leveled flatness.
4. Fasteners: Zinc- or nickel-plated steel, slotless-type exposed bolt heads, and self-locking nuts or lock washers for nuts on moving parts.

3. LOCKERS

1. Body: Form tops and bottoms from minimum 0.0598-inch- thick steel sheet.
 - A. Sides and Intermediate Partitions: Either perforated or expanded metal as follows:
 1. Expanded-Metal: Form from minimum 0.0897-inch- thick expanded metal; welded to minimum 0.1046-inch- thick steel angle or minimum 0.0598-inch- thick, steel channel frame.
 2. Perforated Metal: Form from minimum 0.0598-inch- thick steel sheet, with manufacturer's standard perforations, square or diamond shaped.
 - B. Backs: Form from minimum 0.0598-inch- thick steel sheet where exposed. For back-to-back lockers, form from expanded or perforated metal as specified for sides and partitions.
 - C. Frames: Form welded frames from minimum 0.0598-inch-thick, steel sheet channels or minimum 0.1046-inch- thick steel angles.
 1. Latch Hooks: Form from minimum 0.1046-inch-thick steel; welded or riveted to door frames.
 2. Cross Frames: Form intermediate channel cross frames between tiers from minimum 0.0598-inch-thick steel sheet. Weld to vertical frame members.
 - D. Doors: Either perforated or expanded metal as follows:
 1. Perforated Steel Doors: Form doors from one-piece perforated steel sheet with flanged edges, complying with the following:
 2. Sheet Thickness: 0.0747 inch minimum.
 3. Perforations: Provide manufacturer's standard perforations, either square or diamond shape.

- E. Hinges: Heavy-duty, minimum 0.0500-inch- thick steel, full loop, five or seven knuckle; tight pin; minimum 2 inches high. Weld to inside of door frame and attach to door with at least two factory-installed fasteners that are completely concealed and tamper resistant when door is closed.
 - 1. Provide at least three hinges for each door more than 42 inches high and at least two hinges for each door 42 inches high or less.
- F. Recessed Handle and Latch: Manufacturer's standard housing, formed from 0.0359-inch- thick nickel-plated steel or stainless steel, with integral door pull, recessed for latch lifter and locking devices; nonprotruding latch lifter; and automatic, prelocking, pry-resistant latch, as follows:
 - 1. Provide minimum three-point latching for each door more than 42 inches high; minimum two-point latching for each door 42 inches high or less.
 - a. Provide strike and eye for padlock.
 - 2. Provide single-point gravity or spring-actuated latch with padlock lug for multiple tier lockers.

4. LOCKS

- A. Fabricate lockers to receive padlocks which are not in contract.

E. PLANS

- 1. To Drawing number 35609-13-D (A-100), **REVISE** partial floor plans with Page 6 of 8 of this Addendum.
- 2. To Drawing number 35609-14-D (A-101), **REVISE** partial floor plans with Page 7 of 8 of this Addendum and **ADD** the following note:

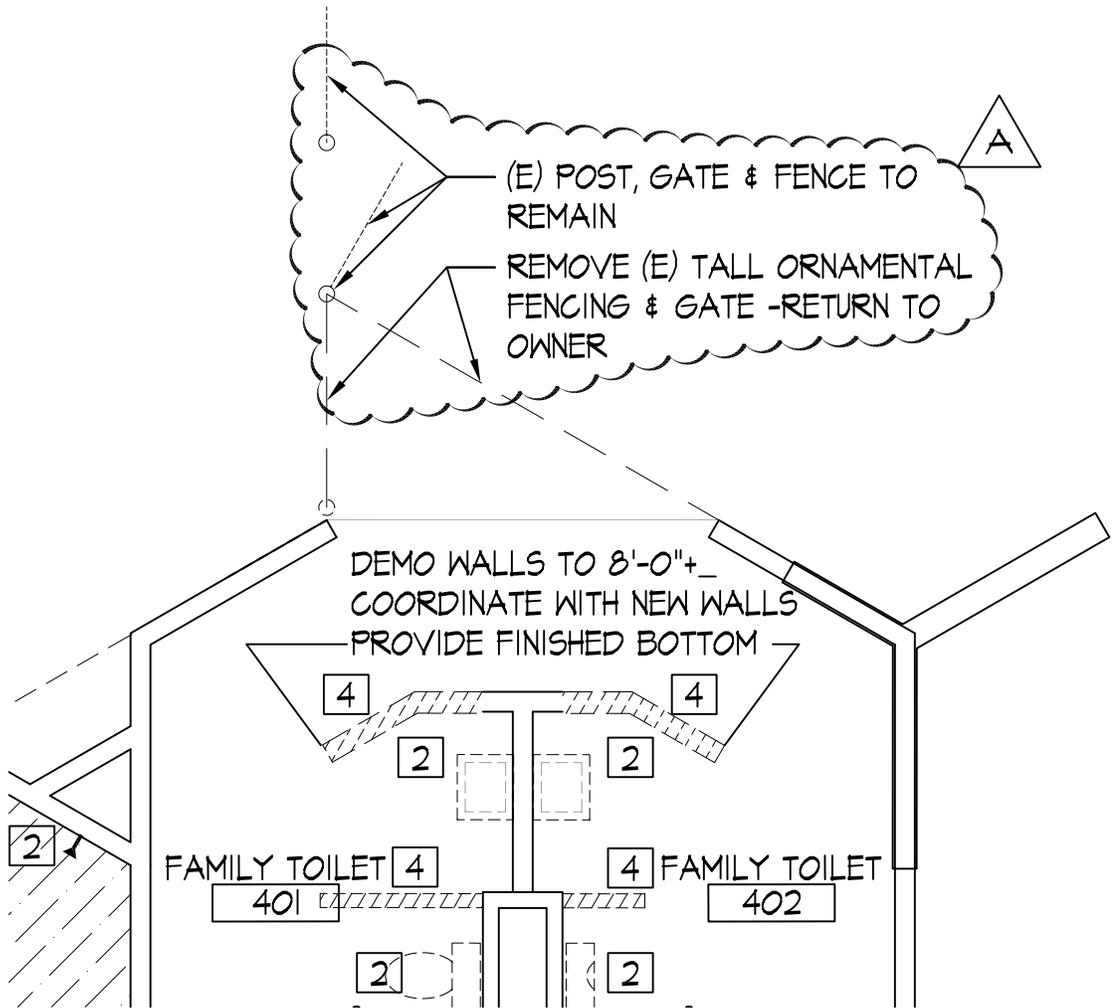
Furnish and install new battery operated pool lift, Spectrum Products model "Traveller II XRC 500" or EQ with cart, cover, and battery.
- 3. To Drawing number 35609-19-D (A-203), **REVISE KEY NOTE 19** and partial floor plans with Page 8 of 8 of this Addendum.

Tony Heinrichs, Director
Public Works Department

Dated: *June 26, 2012*
San Diego, California

TH/AR/eg

J:\0342 Vista Terrace\03-Drawings\Vista Terrace\Sheets\A-SK-01 Addendum #.dwg : 6/20/2012 9:00 AM

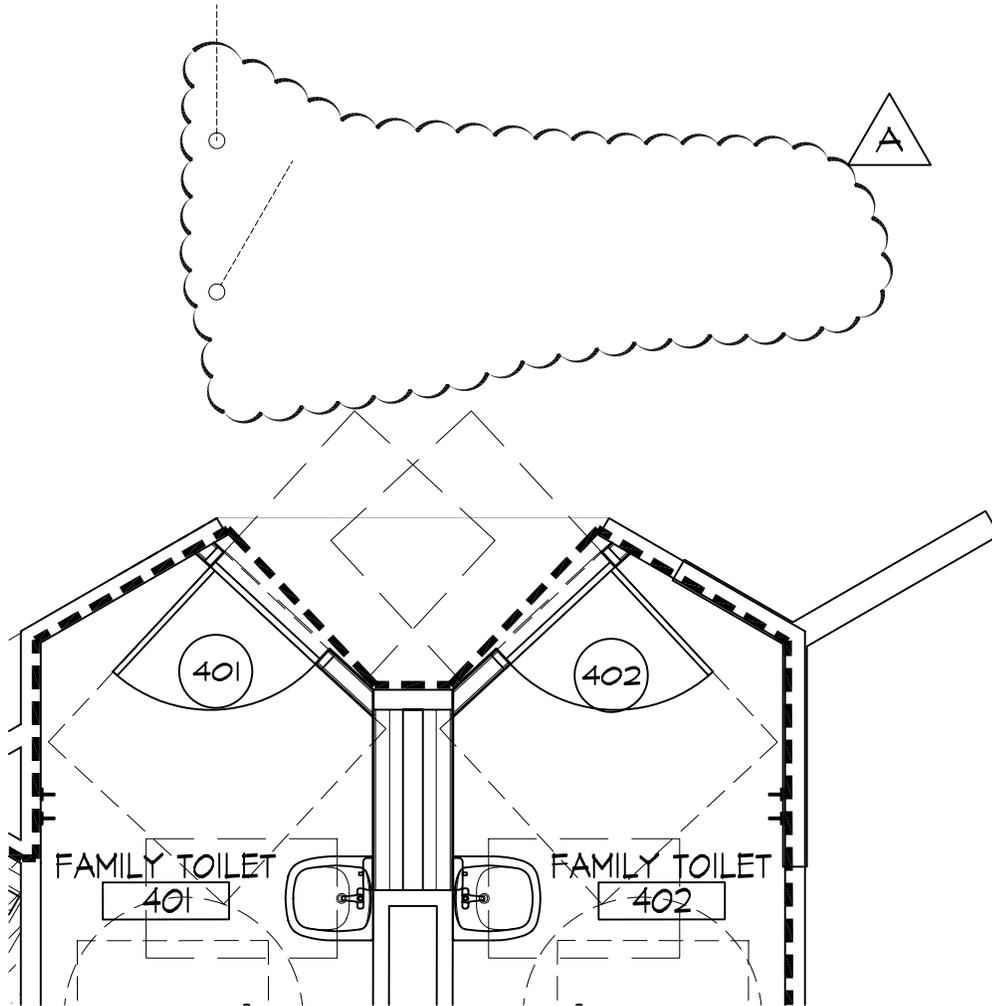


1 PARTIAL DEMOLITION PLAN 2
1/4" = 1'-0"

△ ADDENDUM 'A'

ARCHITECT:  PLATT/WHITELAW ARCHITECTS, INC. 4034 30TH STREET SAN DIEGO, CA 92104 PH: (619) 546-4326 FAX: (619) 546-4350	DRAWING DESCRIPTION: (E) FENCING TO BE REMOVED	REFERENCE: SHEET A-100 35609-13-D
	FOR: CITY OF SAN DIEGO, CALIFORNIA <small>ENGINEERING AND CAPITAL PROJECTS DEPARTMENT</small>	PROJECT: VISTA TERRACE POOL <small>ACCESSIBILITY IMPROVEMENTS</small>
		DRAWING: ADDENDUM A A-SK-01

J:\0342 Vista Terrace\03-Drawings\Vista Terrace\Sheets\A-SK-01 Addendum #.dwg : 6/20/2012 9:00 AM

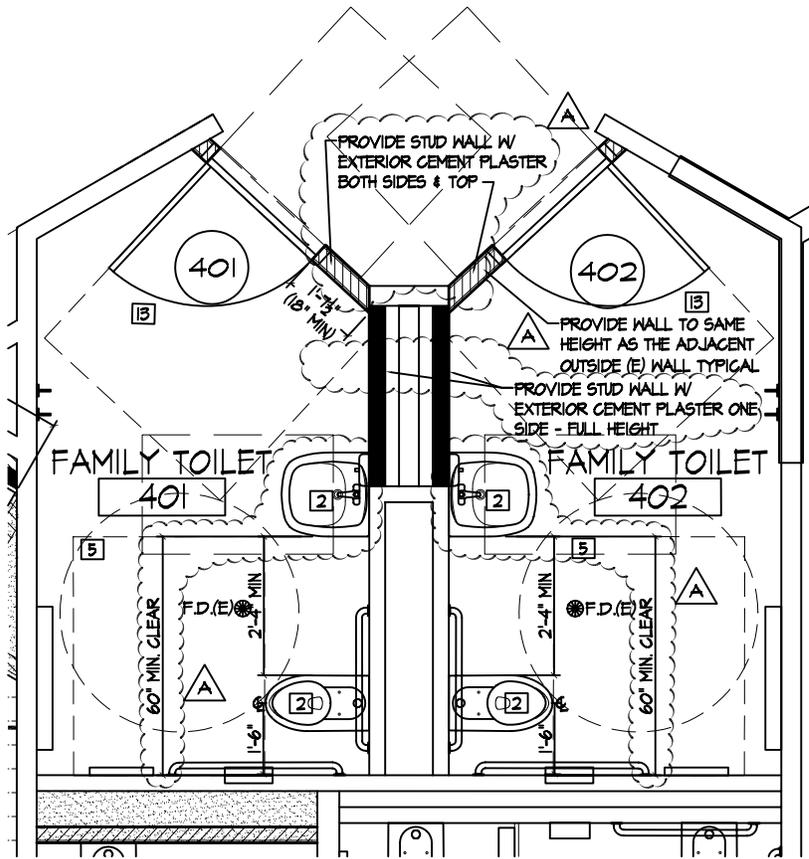


① PARTIAL FLOOR PLAN N
 1/4" = 1'-0"

△ ADDENDUM 'A'

ARCHITECT:  PLATT/WHITELAW ARCHITECTS, INC. 4034 30TH STREET SAN DIEGO, CA 92104 PH: (619) 546-4326 FAX: (619) 546-4350	DRAWING DESCRIPTION: REMOVE RELOCATED FENCE FROM PROJECT SCOPE	REFERENCE: SHEET A-101 35609-14-D
		DATE: 6/20/2012 BY: JB/SS
FOR: CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT	PROJECT: VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS	DRAWING: ADDENDUM A A-SK-02

J:\0342 Vista Terrace\03-Drawings\Vista Terrace\Sheets\A-SK-01 Addendum #.dwg : 6/20/2012 9:01 AM



○ PARTIAL FLOOR PLAN ○
 1/4" = 1'-0" N

△
 19 PROVIDE TILED LID O/ WATERPROOF MEMBRANE O/ WATER RESISTANT PLYWOOD AT 8'-0"± BETWEEN THE WALLS, SLOPE TO DRAIN 1/4"/FT.

△ ADDENDUM 'A'

ARCHITECT:  PLATT/WHITELOW ARCHITECTS, INC. 4034 30TH STREET SAN DIEGO, CA 92104 PH: (619) 546-4326 FAX: (619) 546-4350	DRAWING DESCRIPTION: ADD WALL FINISH NOTES - ADD DIMENSION - REVISE KEYNOTE #19	REFERENCE: SHEET A-203 35609-19-D DATE: 6/20/2012 BY: JB/SS
FOR: CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT	PROJECT: VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS	DRAWING: ADDENDUM A A-SK-03

City of San Diego

CONTRACTOR'S NAME: APR CONSTRUCTION, INC.
ADDRESS: 3916 MURRAY HILL ROAD, LA MESA, CA 91941
TELEPHONE NO.: 619 247-7327 FAX NO.: 619 414-3835
CITY CONTACT: SIYAVASH HAGHKHAH, 600 B Street Suite 800, MS 908A, San Diego, CA 92101
Email: shaghkhah@sandiego.gov, Phone: 619-533-5186, Fax: 619-533-5176
CA/AR/egz



CONTRACT DOCUMENTS FOR

VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

VOLUME 2 OF 2

BID NO.:	<u>K-12-5264-DBB-3</u>
SAP NO. (WBS/IO/CC):	<u>B-00933</u>
CLIENT DEPARTMENT:	<u>1714</u>
COUNCIL DISTRICT:	<u>8</u>
PROJECT TYPE:	<u>GA</u>

THIS CONTRACT IS SUBJECT TO THE FOLLOWING:

- THE CITY'S SUBCONTRACTING PARTICIPATION REQUIREMENTS FOR SLBE PROGRAM.

**THIS BIDDING DOCUMENT TO BE SUBMITTED IN ITS ENTIRETY
REFER TO INVITATION TO BIDS FOR TIME, DATE, AND LOCATION**

TABLE OF CONTENTS

Volume 2 - Bidding Documents

The following forms must be completed in their entirety and submitted with the Bid. Include the form(s) even if the information does not apply. Where the information does not apply write in N/A. Failure to include any of the forms may cause the Bid to be deemed **non-responsive**. If you are uncertain or have any questions about any required information, contact the City no later than 14 days prior to Bid due date.

<u>DESCRIPTION</u>	<u>PAGE NUMBER</u>
1. Bid/Proposal	3-5
2. Bid Bond	6
3. Non-collusion Affidavit to be Executed By Bidder and Submitted with Bid	7
4. Contractors Certification of Pending Actions	8
5. Equal Benefits Ordinance Certification of Compliance	9
6. Proposal (Bid)	10-11
7. Form AA35 List of Subcontractors	12
8. Form AA40 Named Equipment/Material Supplier List	13

BIDDING DOCUMENTS

PROPOSAL

Bidder's General Information

To the City of San Diego:

Pursuant to "Invitation to Bids", specifications, and requirements on file with the City Clerk, and subject to all provisions of the Charter and Ordinances of the City of San Diego and applicable laws and regulations of the United States and the State of California, the undersigned hereby proposes to furnish to the City of San Diego, complete at the prices stated herein, the items or services hereinafter mentioned. The undersigned further warrants that this bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

The undersigned bidder(s) further warrants that bidder(s) has thoroughly examined and understands the entire Contract Documents (plans and specifications) and the Bidding Documents therefore, and that by submitting said Bidding Documents as its bid proposal, bidder(s) acknowledges and is bound by the entire Contract Documents, including any addenda issued thereto, as such Contract Documents incorporated by reference in the Bidding Documents.

IF A SOLE OWNER OR SOLE CONTRACTOR SIGN HERE:

- (1) Name under which business is conducted _____ N/A
- (2) Signature (Given and surname) of proprietor _____ N/A
- (3) Place of Business (Street & Number) _____ N/A
- (4) City and State _____ N/A Zip Code _____ N/A
- (5) Telephone No. _____ N/A Facsimile No. _____ N/A

IF A PARTNERSHIP, SIGN HERE:

- (1) Name under which business is conducted _____ N/A
- (2) Name of each member of partnership [indicate character of each partner, general or special (limited)]:
_____ N/A

BIDDING DOCUMENTS

(3) Signature (Note: Signature must be made by a general partner)

N/A

Full Name and Character of partner

N/A

(4) Place of Business (Street & Number) N/A

(5) City and State N/A

Zip Code

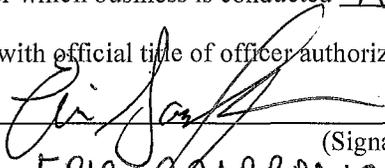
(6) Telephone No. N/A

Facsimile No. N/A

IF A CORPORATION, SIGN HERE:

(1) Name under which business is conducted APR CONSTRUCTION, INC.

(2) Signature, with official title of officer authorized to sign for the corporation:



(Signature)

ERIC SCARBROUGH

(Printed Name)

PRESIDENT

(Title of Officer)

(Impress Corporate Seal Here)

(3) Incorporated under the laws of the State of CALIFORNIA

(4) Place of Business (Street & Number) 3916 MURRAY HILL ROAD

(5) City and State LA MESA, CA

Zip Code 91941

(6) Telephone No. 619 247-7327

Facsimile No. 619 464-3835

THE FOLLOWING SECTIONS MUST BE FILLED IN BY ALL PROPOSERS:

In accordance with the "INVITATION TO BIDS", the bidder holds a California State Contractor's license for the following classification(s) to perform the work described in these specifications:

LICENSE CLASSIFICATION B

LICENSE NO. 940651

EXPIRES 12/31

2013

This license classification must also be shown on the front of the bid envelope. Failure to show license classification on the bid envelope may cause return of the bid unopened.

TAX IDENTIFICATION NUMBER (TIN): [REDACTED]

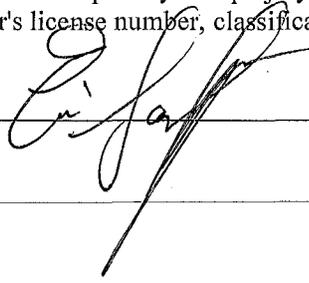
E-Mail Address: ERIC19168@AOL.COM

BIDDING DOCUMENTS

THIS PROPOSAL MUST BE NOTARIZED BELOW:

I certify, under penalty of perjury, that the representations made herein regarding my State Contractor's license number, classification and expiration date are true and correct.

Signature

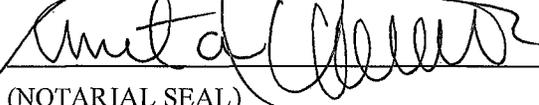


Title

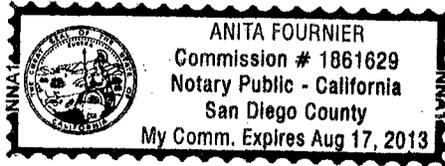
PRESIDENT

SUBSCRIBED AND SWORN TO BEFORE ME, THIS 27 DAY OF June, 2012.

Notary Public in and for the County of San Diego, State of California



(NOTARIAL SEAL)



CALIFORNIA ALL-PURPOSE CERTIFICATE OF ACKNOWLEDGMENT

State of California

County of San Diego

On 6/27/12 before me, Anita Fournier/Notary Public
(Here insert name and title of the officer)

personally appeared Eric Scarbrough

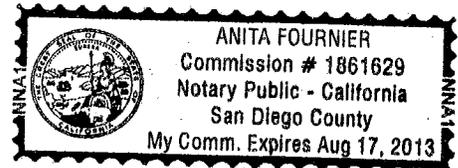
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal

Anita Fournier
 Signature of Notary Public

(Notary Seal)



ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

Bidders General Information
(Title or description of attached document)

A-12-5264-DBB-3
(Title or description of attached document continued)

Number of Pages 3 Document Date 6/27/12

(Additional information)

CAPACITY CLAIMED BY THE SIGNER

- Individual (s)
- Corporate Officer

(Title)

- Partner(s)
- Attorney-in-Fact
- Trustee(s)
- Other _____

INSTRUCTIONS FOR COMPLETING THIS FORM

Any acknowledgment completed in California must contain verbiage exactly as appears above in the notary section or a separate acknowledgment form must be properly completed and attached to that document. The only exception is if a document is to be recorded outside of California. In such instances, any alternative acknowledgment verbiage as may be printed on such a document so long as the verbiage does not require the notary to do something that is illegal for a notary in California (i.e. certifying the authorized capacity of the signer). Please check the document carefully for proper notarial wording and attach this form if required.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. he/she/they- is /are) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
 - ❖ Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
 - ❖ Indicate title or type of attached document, number of pages and date.
 - ❖ Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document

BIDDING DOCUMENTS

BID BOND

KNOW ALL MEN BY THESE PRESENTS.

That APR Construction, Inc. as Principal, and
The Gray Insurance Company as Surety, are
held and firmly bound unto The City of San Diego hereinafter called "OWNER," in the sum of
10% OF THE TOTAL BID AMOUNT for the payment of which sum, well and truly to be made,
we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally,
firmly by these presents.

WHEREAS, said Principal has submitted a Bid to said OWNER to perform the WORK required
under the bidding schedule(s) of the OWNER's Contract Documents entitled

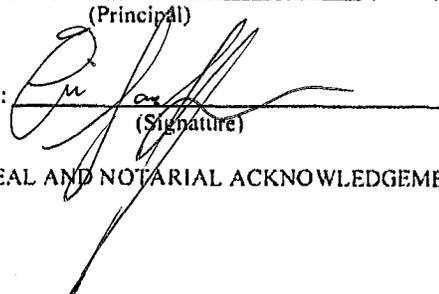
Vista Terrace Pool Accessibility Improvements

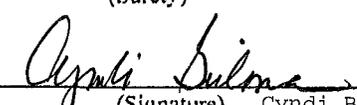
NOW THEREFORE, if said Principal is awarded a contract by said OWNER and, within the time
and in the manner required in the "Invitation to Bids" enters into a written Agreement on the form of
agreement bound with said Contract Documents, furnishes the required certificates of insurance, and
furnishes the required Performance Bond and Payment Bond, then this obligation shall be null and
void, otherwise it shall remain in full force and effect. In the event suit is brought upon this bond by
said OWNER and OWNER prevails, said Surety shall pay all costs incurred by said OWNER in such
suit, including a reasonable attorney's fee to be fixed by the court.

SIGNED AND SEALED, this 20th day of June, 2012

APR Construction, Inc. (SEAL)
(Principal)

The Gray Insurance Company (SEAL)
(Surety)

By: 
(Signature)

By: 
(Signature) Cyndi Beilman
Attorney-in-Fact

(SEAL AND NOTARIAL ACKNOWLEDGEMENT OF SURETY)

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

STATE OF CALIFORNIA

County of San Diego

On June 20, 2012 before me, Pam Davis, Notary Public,
Date Here Insert Name and Title of the Officer

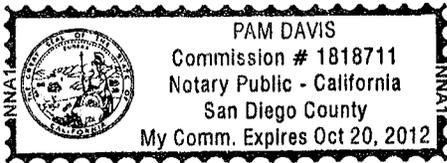
personally appeared Cyndi Beilman
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

Witness my hand and official seal.

Signature *Pam Davis*
Signature of Notary Public Pam Davis



Place Notary Seal Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____

- Individual
- Corporate Officer — Title(s): _____
- Partner — Limited General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: _____

RIGHT THUMBPRINT OF SIGNER

Top of thumb here

Signer Is Representing:

Signer's Name: _____

- Individual
- Corporate Officer — Title(s): _____
- Partner — Limited General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: _____

RIGHT THUMBPRINT OF SIGNER

Top of thumb here

Signer Is Representing:

THE GRAY INSURANCE COMPANY
THE GRAY CASUALTY & SURETY COMPANY

155694

GENERAL POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, THAT The Gray Insurance Company and The Gray Casualty & Surety Company, corporations duly organized and existing under the laws of Louisiana, and having their principal offices in Metairie, Louisiana, do hereby make, constitute, and appoint **Anne Wright, Cyndi Beilman and Dana Michaelis of LaMesa, California jointly or severally** on behalf of each of the Companies named above its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its deed, bonds, or other writings obligatory in the nature of a bond, as surety, contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed the amount of \$10,000,000.

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both The Gray Insurance Company and The Gray Casualty & Surety Company at meetings duly called and held on the 26th day of June, 2003.

“RESOLVED, that the President, Executive Vice President, any Vice President, or the Secretary be and each or any of them hereby is authorized to execute a power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of The Company bonds, undertakings, and all contracts of surety, and that each or any of them is hereby authorized to attest to the execution of such Power of Attorney, and to attach the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be binding upon the Company now and in the future when so affixed with regard to any bond, undertaking or contract of surety to which it is attached.

IN WITNESS WHEREOF, The Gray Insurance Company and The Gray Casualty & Surety Company have caused their official seals to be hereinto affixed, and these presents to be signed by their authorized officers this September 12, 2011.



By:

Michael T. Gray

Michael T. Gray
President, The Gray Insurance Company
and
Vice President,
The Gray Casualty & Surety Company

Attest:

Mark S. Manguno

Mark S. Manguno
Secretary,
The Gray Insurance Company,
The Gray Casualty & Surety Company



State of Louisiana

ss:

Parish of Jefferson

On this September 12, 2011, before me, a Notary Public, personally appeared Michael T. Gray, President of The Gray Insurance Company and Vice President of The Gray Casualty & Surety Company, and Mark S. Manguno, Secretary of The Gray Insurance Company and The Gray Casualty & Surety Company, personally known to me, being duly sworn, acknowledged that they signed the above Power of Attorney and affixed the seals of the companies as officers of, and acknowledged said instrument to be the voluntary act and deed, of their companies.



Lisa S. Millar

Lisa S. Millar, Notary Public, Parish of Orleans
State of Louisiana
My Commission is for Life

I, Mark S. Manguno, Secretary of The Gray Insurance Company and The Gray Casualty & Surety Company, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney given by the companies, which is still in full force and effect.

IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this 20th day of June, 2012



Mark S. Manguno

Mark S. Manguno, Secretary
The Gray Insurance Company
The Gray Casualty & Surety Company

CALIFORNIA ALL-PURPOSE CERTIFICATE OF ACKNOWLEDGMENT

State of California

County of San Diego

On 6/27/12 before me, Anita Fournier/Notary Public
(Here insert name and title of the officer)

personally appeared Eric Scarbrough

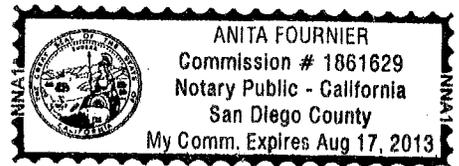
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Anita Fournier
Signature of Notary Public

(Notary Seal)



ADDITIONAL OPTIONAL INFORMATION

INSTRUCTIONS FOR COMPLETING THIS FORM

Any acknowledgment completed in California must contain verbiage exactly as appears above in the notary section or a separate acknowledgment form must be properly completed and attached to that document. The only exception is if a document is to be recorded outside of California. In such instances, any alternative acknowledgment verbiage as may be printed on such a document so long as the verbiage does not require the notary to do something that is illegal for a notary in California (i.e. certifying the authorized capacity of the signer). Please check the document carefully for proper notarial wording and attach this form if required.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. he/she/they- is /are) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
 - ❖ Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
 - ❖ Indicate title or type of attached document, number of pages and date.
 - ❖ Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document

DESCRIPTION OF THE ATTACHED DOCUMENT

Bid Bond K-12-5264-DBB-3
(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages 1 Document Date 6/27/12

(Additional information)

CAPACITY CLAIMED BY THE SIGNER

- Individual (s)
 Corporate Officer

(Title)

- Partner(s)
 Attorney-in-Fact
 Trustee(s)
 Other _____

BIDDING DOCUMENTS

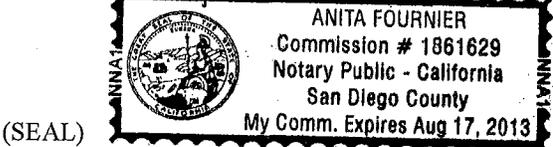
NON-COLLUSION AFFIDAVIT TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID UNDER 23 USC 112 AND PCC 7106

State of California)
County of SAN DIEGO) ss.

ERIC SCARBROUGH, being first duly sworn, deposes and says that he or she is PRESIDENT of the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Signed: [Signature]
Title: PRESIDENT

Subscribed and sworn to before me this 27 day of June, 2012
Anita Fournier / [Signature]
Notary Public



CALIFORNIA ALL-PURPOSE CERTIFICATE OF ACKNOWLEDGMENT

State of California

County of San Diego

On 6/27/12 before me, Anita Fournier/Notary Public
(Here insert name and title of the officer)

personally appeared Eric Scarbrough

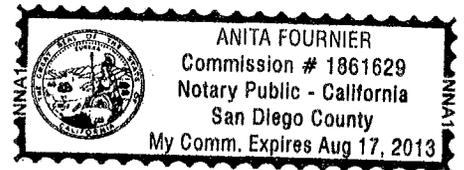
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Anita Fournier
Signature of Notary Public

(Notary Seal)



ADDITIONAL OPTIONAL INFORMATION

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 - ❖ Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document

DESCRIPTION OF THE ATTACHED DOCUMENT

Non-Collusion Affidavit
(Title or description of attached document)

K-12-5264-DBB-3
(Title or description of attached document continued)

Number of Pages 1 Document Date 6/27/12

(Additional information)

CAPACITY CLAIMED BY THE SIGNER

- Individual (s)
 Corporate Officer

(Title)

- Partner(s)
 Attorney-in-Fact
 Trustee(s)
 Other _____

CONTRACTORS CERTIFICATION OF PENDING ACTIONS

As part of its bid or proposal (Non-Price Proposal in the case of Design-Build contracts), the Bidder shall provide to the City a list of all instances within the past ten years where a complaint was filed or pending against the Bidder in a legal or administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers, and a description of the status or resolution of that complaint, including any remedial action taken.

CHECK ONE BOX ONLY.



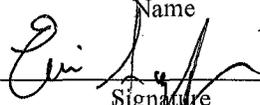
The undersigned certifies that within the past 10 years the Bidder has NOT been the subject of a complaint or pending action in a legal administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers.

The undersigned certifies that within the past ten years the Bidder has been the subject of a complaint or pending action in a legal administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers. A description of the status or resolution of that complaint, including any remedial action taken and the applicable dates is as follows:

N/A

Contractor Name APR CONSTRUCTION, INC.

Certified By ERIC SCARBROUGH Title PRESIDENT

 Name ERIC SCARBROUGH
Signature Date 6/27/12

BIDDING DOCUMENTS

**EQUAL BENEFITS ORDINANCE
CERTIFICATION OF COMPLIANCE**



For additional information, contact:

CITY OF SAN DIEGO
EQUAL BENEFITS PROGRAM
202 C Street, MS 9A, San Diego, CA 92101
Phone (619) 533-3948 Fax (619) 533-3220

COMPANY INFORMATION

Company Name: <u>APR CONSTRUCTION, INC.</u>	Contact Name: <u>ERIC SCARBROUGH</u>
Company Address: <u>3916 MURRAY HILL RD., LA MESA CA 91941</u>	Contact Phone: <u>(619) 247-7327</u>
	Contact Email: <u>ERICLEY68@AOL.COM</u>

CONTRACT INFORMATION

Contract Title: <u>VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS</u>	Start Date: <u>9/10/12</u> ESTIMATE
Contract Number (if no number, state location): <u>K-12-5264-DBB-3</u>	End Date: <u>12/31/12</u> ESTIMATE

SUMMARY OF EQUAL BENEFITS ORDINANCE REQUIREMENTS

The Equal Benefits Ordinance [EBO] requires the City to enter into contracts only with contractors who certify they will provide and maintain equal benefits as defined in San Diego Municipal Code §22.4302 for the duration of the contract. To comply:

- Contractor shall offer equal benefits to employees with spouses and employees with domestic partners.
 - Benefits include health, dental, vision insurance; pension/401(k) plans; bereavement, family, parental leave; discounts, child care; travel/relocation expenses; employee assistance programs; credit union membership; or any other benefit.
 - Any benefit not offered to an employee with a spouse, is not required to be offered to an employee with a domestic partner.
- Contractor shall post notice of firm's equal benefits policy in the workplace and notify employees at time of hire and during open enrollment periods.
- Contractor shall allow City access to records, when requested, to confirm compliance with EBO requirements.
- Contractor shall submit *EBO Certification of Compliance*, signed under penalty of perjury, prior to award of contract.

NOTE: This summary is provided for convenience. Full text of the EBO and its Rules are posted at www.sandiego.gov/administration.

CONTRACTOR EQUAL BENEFITS ORDINANCE CERTIFICATION

Please indicate your firm's compliance status with the EBO. The City may request supporting documentation.

- I affirm **compliance** with the EBO because my firm (*contractor must select one reason*):
- Provides equal benefits to spouses and domestic partners.
 - Provides no benefits to spouses or domestic partners.
 - Has no employees.
 - Has collective bargaining agreement(s) in place prior to January 1, 2011, that has not been renewed or expired.
- I request the City's approval to pay affected employees a **cash equivalent** in lieu of equal benefits and verify my firm made a reasonable effort but is not able to provide equal benefits upon contract award. I agree to notify employees of the availability of a cash equivalent for benefits available to spouses but not domestic partners and to continue to make every reasonable effort to extend all available benefits to domestic partners.

It is unlawful for any contractor to knowingly submit any false information to the City regarding equal benefits or cash equivalent associated with the execution, award, amendment, or administration of any contract. [San Diego Municipal Code §22.4307(a)]

Under penalty of perjury under laws of the State of California, I certify the above information is true and correct. I further certify that my firm understands the requirements of the Equal Benefits Ordinance and will provide and maintain equal benefits for the duration of the contract or pay a cash equivalent if authorized by the City.

<u>ERIC SCARBROUGH/PRESIDENT</u> Name/Title of Signatory	<u><i>Eric Scarbrough</i></u> Signature	<u>6/27/12</u> Date
---	--	------------------------

FOR OFFICIAL CITY USE ONLY

Receipt Date:	EBO Analyst:	<input type="checkbox"/> Approved	<input type="checkbox"/> Not Approved – Reason:
---------------	--------------	-----------------------------------	---

rev 02/15/2011

BIDDING DOCUMENTS

PROPOSAL (BID)

The Bidder agrees to the construction of **VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS**, for the City of San Diego, in accordance with these contract documents for the prices listed below. The Bidder guarantees the Contract Price for a period of 120 days (90 days for federally funded contracts and contracts valued at \$500,000 or less) from the date of Bid opening to Award of the Contract. The duration of the Contract Price guarantee shall be extended by the number of days required for the City to obtain all items necessary to fulfill all conditions precedent e.g., bond and insurance.

Item	Quantity	Unit	NAICS	Payment Reference	Description	Unit Price	Extension
BASE BID							
1.	1	LS	236220	2-4.1	Bond (Payment and Performance)	 	\$ 6,505.00
2.	1	AL		7-5.3	Permit Fees	 	\$3,000.00
3.	1	LS	236220	9-3.1	Field Construction	 	\$ 338,745.00
4.	1	AL		9-3.5	Field Orders	 	\$15,000.00
5.	1	LS	541330	801-9.4	Water Pollution Control Program Development	 	\$ 1,250.00
6.	1	LS	237990	801-9.4	Water Pollution Control Program Implementation	 	\$ 2,500.00
Estimated Total Base Bid							\$367,000.00

TOTAL BID PRICE FOR BID Items 1 through 6 inclusive) amount written in words:

THREE HUNDRED SIXTY SEVEN THOUSAND DOLLARS AND NO CENTS

The Bid shall contain an acknowledgment of receipt of all addenda, the numbers of which shall be filled in on this Bid form.

List the Addenda received and being acknowledged: ADDENDUM "A"

If an addendum or addenda has been issued by the City and not noted as being received by the Bidder, the Bid shall be rejected as being **non-responsive**.

The names of all persons interested in the foregoing proposal as principals are as follows:

ERIC SCARBROUGH

BIDDING DOCUMENTS

IMPORTANT NOTICE: If Bidder or other interested person is a corporation, state secretary, treasurer, and manager thereof; if a co-partnership, state true name of firm, also names of all individual co-partners composing firm; if Bidder or other interested person is an individual, state first and last names in full.

Bidder: APR CONSTRUCTION, INC

Title: PRESIDENT, VP, SECRETARY, TREASURER

Business Address: 3916 MURRAY HILL ROAD, LA MESA, CA 91941

Place of Business: SAME AS ABOVE

Place of Residence: SAME AS ABOVE

Signature: 

NOTES:

- A. The City shall determine the low Bid based on the Base Bid alone.
- B. Prices and notations shall be in ink or typewritten. All corrections (which have been initiated by the Bidder using erasures, strike out, line out, or "white-out") shall be typed or written in with ink adjacent thereto, and shall be initialed in ink by the person signing the bid proposal.
- C. Failure to initial all corrections made in the bidding documents shall cause the Bid to be rejected as **non-responsive** and ineligible for further consideration.
- D. Blank spaces must be filled in, using figures. Bidder's failure to submit a price for any Bid item that requires the Bidder to submit a price shall render the Bid **non-responsive** and shall be cause for its rejection.
- E. Unit prices shall be entered for all unit price items. Unit prices shall not exceed two (2) decimal places. If the Unit prices entered exceed two (2) decimal places, the City will only use the first two digits after the decimal points without rounding up or down.
- F. All extensions of the unit prices bid will be subject to verification by the City. In the case of inconsistency or conflict between the product of the Quantity x Unit Price and the Extension, the product shall govern.
- G. In the case of inconsistency or conflict, between the sums of the Extensions with the estimated total Bid, the sum of the Extensions shall govern.
- H. Bids shall not contain any recapitulation of the Work. Conditional Bids will be rejected as being **non-responsive**. Alternative proposals will not be considered unless called for.

BIDDING DOCUMENTS

LIST OF SUBCONTRACTORS

In accordance with the requirements provided in the "Subletting and Subcontracting Fair Practices Act", Division 2, Part 1, Chapter 4 of the Public Contract Code, the Bidder shall list below the name and address of each Subcontractor who will perform work, labor, render services or specially fabricates and installs a portion [type] of the work or improvement, in an amount in excess of 0.5% of the Contractor's total Bid. The Bidder shall also list below the portion of the work which will be done by each subcontractor under this Contract. The Contractor shall list only one Subcontractor for each portion of the Work. The **DOLLAR VALUE** of the total Bid to be performed shall be stated for all subcontractors listed. Failure to comply with this requirement shall result in the Bid being rejected as non-responsive and ineligible for award. The Bidder's attention is directed to the Special Provisions - General; Paragraph 2-3 Subcontracts, which stipulates the percent of the Work to be performed with the Bidders' own forces. The Bidder shall list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, SDB, WoSB, HUBZone, and SDVOSB Subcontractors that Bidders are seeking recognition towards achieving any mandatory, voluntary, or both subcontracting participation percentages.

NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SEBE, SDB, WoSB, HUBZone, OR SDVOSB ①	WHERE CERTIFIED ②	CHECK IF JOINT VENTURE PARTNERSHIP
(S) Name: SCOTT'S DRAIN & PLUMBING Address: PO. BOX 13187 City: S.D. State: CA Zip: 92113 Phone: (619) 226-4161	SUB-CONTRACTOR	PLUMBING	\$ 9,325.00	N/A	N/A	N/A
Name: AKKAN CONSTRUCTION & DESIGNS Address: 1727 32ND ST. City: S.D. State: CA Zip: 92102 Phone: (619) 316-4716	SUB-CONTRACTOR	ELECTRICAL	\$ 7,550.00	N/A	N/A	N/A
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____						

B Lic.

- ① As appropriate, Bidder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):
- | | | | |
|---|--------|--|---------|
| Certified Minority Business Enterprise | MBE | Certified Woman Business Enterprise | WBE |
| Certified Disadvantaged Business Enterprise | DBE | Certified Disabled Veteran Business Enterprise | DVBE |
| Other Business Enterprise | OBE | Certified Emerging Local Business Enterprise | ELBE |
| Certified Small Local Business Enterprise | SLBE | Small Disadvantaged Business | SDB |
| Woman-Owned Small Business | WoSB | HUBZone Business | HUBZone |
| Service-Disabled Veteran Owned Small Business | SDVOSB | | |
- ② As appropriate, Bidder shall indicate if Subcontractor is certified by:
- | | | | |
|--|--------|--|----------|
| City of San Diego | CITY | State of California Department of Transportation | CALTRANS |
| California Public Utilities Commission | CPUC | San Diego Regional Minority Supplier Diversity Council | SRMSDC |
| State of California's Department of General Services | CADoGS | City of Los Angeles | LA |
| State of California | CA | U.S. Small Business Administration | SBA |

The Bidder will not receive any subcontracting participation percentages if the Bidder fails to submit the required proof of certification (except for OBE, SLBE and ELBE).

BIDDING DOCUMENTS

NAMED EQUIPMENT/MATERIAL SUPPLIER LIST

The Bidder seeking the recognition of equipment, materials, or supplies obtained from Suppliers towards achieving any mandatory, voluntary, or both subcontracting participation percentages shall submit with the Bid the Named Equipment/Material Supplier List. The Named Equipment/Material Supplier List, at a minimum, shall have the name, locations (City) and the **DOLLAR VALUE** of the Suppliers. The Bidder will be credited up to 60% of the amount to be paid to the Suppliers for such materials and supplies unless vendor manufactures or substantially alters materials and supplies in which case 100% will be credited. The Bidder is to indicate (Yes/No) whether listed firm is a supplier or manufacturer. In calculating the subcontractor participation percentages, vendors/suppliers will receive 60% credit of the listed **DOLLAR VALUE**, whereas manufacturers will receive 100% credit. If no indication provided, listed firm will be credited at 60% of the listed dollar value for purposes of calculating the Subcontractor Participation Percentage, Suppliers will receive 60% credit of the listed **DOLLAR VALUE**, whereas manufacturers will receive 100% credit. If no indication provided, listed firm will be credited at 60% of the listed **DOLLAR VALUE** for purposes of calculating the subcontractor participation percentages.

NAME, ADDRESS AND TELEPHONE NUMBER OF VENDOR/SUPPLIER	MATERIALS OR SUPPLIES	DOLLAR VALUE OF MATERIAL OR SUPPLIES	SUPPLIER (Yes/No)	MANUFACTURER (Yes/No)	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSE ①	WHERE CERTIFIED ②
Name: <u>FERGUSON PLUMBING</u> Address: <u>4109 MERCURY ST.</u> City: <u>S.D.</u> State: <u>CA</u> Zip: <u>92111</u> Phone: <u>958 974-5100</u>	PLUMBING MATERIALS AND SUPPLIES	\$ 11,000.00	YES	NO	N/A	N/A
Name: <u>GRAH SAFE & LOCK</u> Address: <u>939 UNIVERSITY AVE. STE 100</u> City: <u>S.D.</u> State: <u>CA</u> Zip: <u>92103</u> Phone: <u>619 234-4829</u>	DOOR HARDWARE & SUPPLIES	\$ 5,000.00	YES	NO	N/A	N/A
Name: <u>SHERWIN WILLIAMS</u> Address: <u>2231 MORENA BLVD</u> City: <u>S.D.</u> State: <u>CA</u> Zip: <u>92110</u> Phone: <u>619 275-1643</u>	PAINT & PAINT SUPPLIES	\$ 750.00	YES	NO	N/A	N/A

- ① As appropriate, Bidder shall identify Vendor/Supplier as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):
- | | | | |
|---|--------|--|---------|
| Certified Minority Business Enterprise | MBE | Certified Woman Business Enterprise | WBE |
| Certified Disadvantaged Business Enterprise | DBE | Certified Disabled Veteran Business Enterprise | DVBE |
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| Woman-Owned Small Business | WoSB | HUBZone Business | HUBZone |
| Service-Disabled Veteran Owned Small Business | SDVOSE | | |
- ② As appropriate, Bidder shall indicate if Vendor/Supplier is certified by:
- | | | | |
|--|--------|--|----------|
| City of San Diego | CITY | State of California Department of Transportation | CALTRANS |
| California Public Utilities Commission | CPUC | San Diego Regional Minority Supplier Diversity Council | SRMSDC |
| State of California's Department of General Services | CADoGS | City of Los Angeles | LA |
| State of California | CA | U.S. Small Business Administration | SBA |

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NAME, ADDRESS AND TELEPHONE NUMBER OF VENDOR/SUPPLIER	MATERIALS OR SUPPLIES	DOLLAR VALUE OF MATERIAL OR SUPPLIES	SUPPLIER (Yes/No)	MANUFACTURER (Yes/No)	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB ①	WHERE CERTIFIED ②
Name: <u>RCP BLOCK & BRICK</u> Address: <u>75 NORTH 4TH AVE</u> City: <u>CHULA VISTA</u> State: <u>CA</u> Zip: <u>91910</u> Phone: <u>(619) 474-1516</u>	BLOCKS + BRICKS + SUPPLIES	\$ 800.00	YES	NO	N/A	N/A
Name: <u>SUPERIOR READY MIX CONCRETE</u> Address: <u>1500 W. MISSION RD.</u> City: <u>ESCONDIDO</u> State: <u>CA</u> Zip: <u>92029</u> Phone: <u>(760) 745-0556</u>	CONCRETE MIX & SUPPLIES	\$ 5,325.00	YES	YES	N/A	N/A
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____						

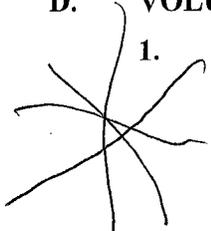
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| Service-Disabled Veteran Owned Small Business | SDVOSB | | |
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| State of California's Department of General Services | CADoGS | City of Los Angeles | LA |
| State of California | CA | U.S. Small Business Administration | SBA |

The Bidder will not receive any subcontracting participation percentages if the Bidder fails to submit the required proof of certification (except for OBE, SLBE and ELBE).

C. BIDDER's QUESTIONS

- Q1. Existing column to be repaired in the equipment room – confirm column material.
- A1. Column material is a standard 3”dia. steel pipe column.
- Q2. Is fence/gate at Family Toilet Rooms to be removed?
- A2. Yes, remove the 8’ tall sections of fence and gate and return to Owner – do not re-install. See A-SK-01.
- Q3. Civil drawings call for existing asphalt paving to be milled and resurfaced. Can paving be removed and replaced?
- A3. Asphalt paving should be installed as indicated on the plans.
- Q4. At the pre-bid meeting you verbally indicated that Alternate #1, and Alternate #2 are part of the base bid. This information has not been published on E-BIDBOARD. Please clarify.
- A4. The information is indicated in the Contract Document Volume 1, Page 14, INVITATIONS TO BIDS, Item 2. DESCRIPTION OF WORK, last paragraph.

D. VOLUME 1



1. To SSP, **ADD** the following:

ADD: 803-1.1 Lead Containing Ceramic Tiles.

1. The City of San Diego’s Asbestos and Lead Management Program (ALMP) has performed an asbestos and lead inspection for Vista Terrace Pool ADA Upgrades involved with this contract. There are lead containing ceramic tiles in the shower walls and possibly asbestos elbows inside the wall cavities on hot water piping. The Contractor shall not include any costs associated with mitigation of the asbestos and lead materials as it will be performed by others after NTP.
2. The inspection and sampling performed by the ALMP was conducted without using destructive methods. Therefore, it is possible for the Contractor to encounter additional suspected hazardous materials as the walls are opened during demolition. The Contractor and his staff shall continue looking for suspected materials throughout this process.
3. If additional suspected asbestos materials or loose and flaky lead paint are identified, stop work in that area and immediately notify the Engineer.
4. The City will undertake confirmation of the materials and determine if abatement is required. If abatement is required, the City will conduct such abatement at no cost to the Contractor.
5. The Contractor shall remain out of that work area if abatement is required. There will be no additional financial compensation to the Contractor during the removal of this ACM or loose and flaky lead paint.

6. Coatings that have lead content below the 5000 parts per million (ppm) thresholds for lead based paint:
 1. If the Contractor salvages components or building materials that have intact lead containing coatings on them, the Contractor shall ensure the lead is disclosed to all persons accepting their salvaged material. Submit to the City a letter of evidence from the person accepting the lead coated salvaged material.
 2. Where the paint or component contains lead above 600 ppm but below the 5000 ppm the Contractor shall use "lead safe work practices" to protect their employees.
 3. After demolition is complete, all loose paint chips present shall be collected by the Contractor, have a waste characterization performed, and then properly disposed of.
 4. Debris generated from demolition that will be salvaged via crushing shall be segregated into separate piles for lead containing and non-lead containing debris. The Contractor shall perform testing for lead on all crushed concrete and other aggregate materials they may be reusing or selling.

2. To Technical Specifications, SECTION 102113 – TOILET COMPARTMENTS, PART 2 – PRODUCTS, 2.1 MANUFACTURERS, page 172, item A. Manufacturers, **ADD** the following:
 5. Scranton Products as acceptable Manufacturer. 800 445-5148
800 551-6993

3. To Technical Specifications, SECTION 105113 – LOCKERS, PART 2 – PRODUCTS, pages 181 through 182, **DELETE** in its entirety and **SUBSTITUTE** with the following:

PART 2 – PRODUCTS

 1. MANUFACTURERS
 - A. Manufacturer: Subject to compliance with requirements, provide products by one of the following:
 1. American Locker Security Systems, Inc.
 2. Lyon.
 3. Penco.
 4. Republic Storage Systems Co., Inc.
 2. MATERIALS
 1. Cold-Rolled Steel Sheet: ASTM A 366/A 366M, matte finish, suitable for exposed applications, and stretcher leveled or roller leveled to stretcher-leveled flatness.
 2. Expanded Metal: ASTM F 1267, Type II (flattened), 3/4-inch mesh, minimum 0.0747 inch thick, with at least 70 percent open area.

3. Electrolytic Zinc-Coated Steel Sheet: ASTM A 591/A 591M, commercial quality, coating Class C; mill phosphatized; suitable for exposed applications; and stretcher leveled or roller leveled to stretcher-leveled flatness.
4. Fasteners: Zinc- or nickel-plated steel, slotless-type exposed bolt heads, and self-locking nuts or lock washers for nuts on moving parts.

3. LOCKERS

1. Body: Form tops and bottoms from minimum 0.0598-inch- thick steel sheet.
 - A. Sides and Intermediate Partitions: Either perforated or expanded metal as follows:
 1. Expanded-Metal: Form from minimum 0.0897-inch- thick expanded metal; welded to minimum 0.1046-inch- thick steel angle or minimum 0.0598-inch- thick, steel channel frame.
 2. Perforated Metal: Form from minimum 0.0598-inch- thick steel sheet, with manufacturer's standard perforations, square or diamond shaped.
 - B. Backs: Form from minimum 0.0598-inch- thick steel sheet where exposed. For back-to-back lockers, form from expanded or perforated metal as specified for sides and partitions.
 - C. Frames: Form welded frames from minimum 0.0598-inch-thick, steel sheet channels or minimum 0.1046-inch- thick steel angles.
 1. Latch Hooks: Form from minimum 0.1046-inch-thick steel; welded or riveted to door frames.
 2. Cross Frames: Form intermediate channel cross frames between tiers from minimum 0.0598-inch-thick steel sheet. Weld to vertical frame members.
 - D. Doors: Either perforated or expanded metal as follows:
 1. Perforated Steel Doors: Form doors from one-piece perforated steel sheet with flanged edges, complying with the following:
 2. Sheet Thickness: 0.0747 inch minimum.
 3. Perforations: Provide manufacturer's standard perforations, either square or diamond shape.

- E. Hinges: Heavy-duty, minimum 0.0500-inch- thick steel, full loop, five or seven knuckle; tight pin; minimum 2 inches high. Weld to inside of door frame and attach to door with at least two factory-installed fasteners that are completely concealed and tamper resistant when door is closed.
 - 1. Provide at least three hinges for each door more than 42 inches high and at least two hinges for each door 42 inches high or less.
- F. Recessed Handle and Latch: Manufacturer's standard housing, formed from 0.0359-inch- thick nickel-plated steel or stainless steel, with integral door pull, recessed for latch lifter and locking devices; nonprotruding latch lifter; and automatic, prelocking, pry-resistant latch, as follows:
 - 1. Provide minimum three-point latching for each door more than 42 inches high; minimum two-point latching for each door 42 inches high or less.
 - a. Provide strike and eye for padlock.
 - 2. Provide single-point gravity or spring-actuated latch with padlock lug for multiple tier lockers.

4. LOCKS

- A. Fabricate lockers to receive padlocks which are not in contract.

E. PLANS

- 1. To Drawing number 35609-13-D (A-100), **REVISE** partial floor plans with Page 6 of 8 of this Addendum.
- 2. To Drawing number 35609-14-D (A-101), **REVISE** partial floor plans with Page 7 of 8 of this Addendum and **ADD** the following note:

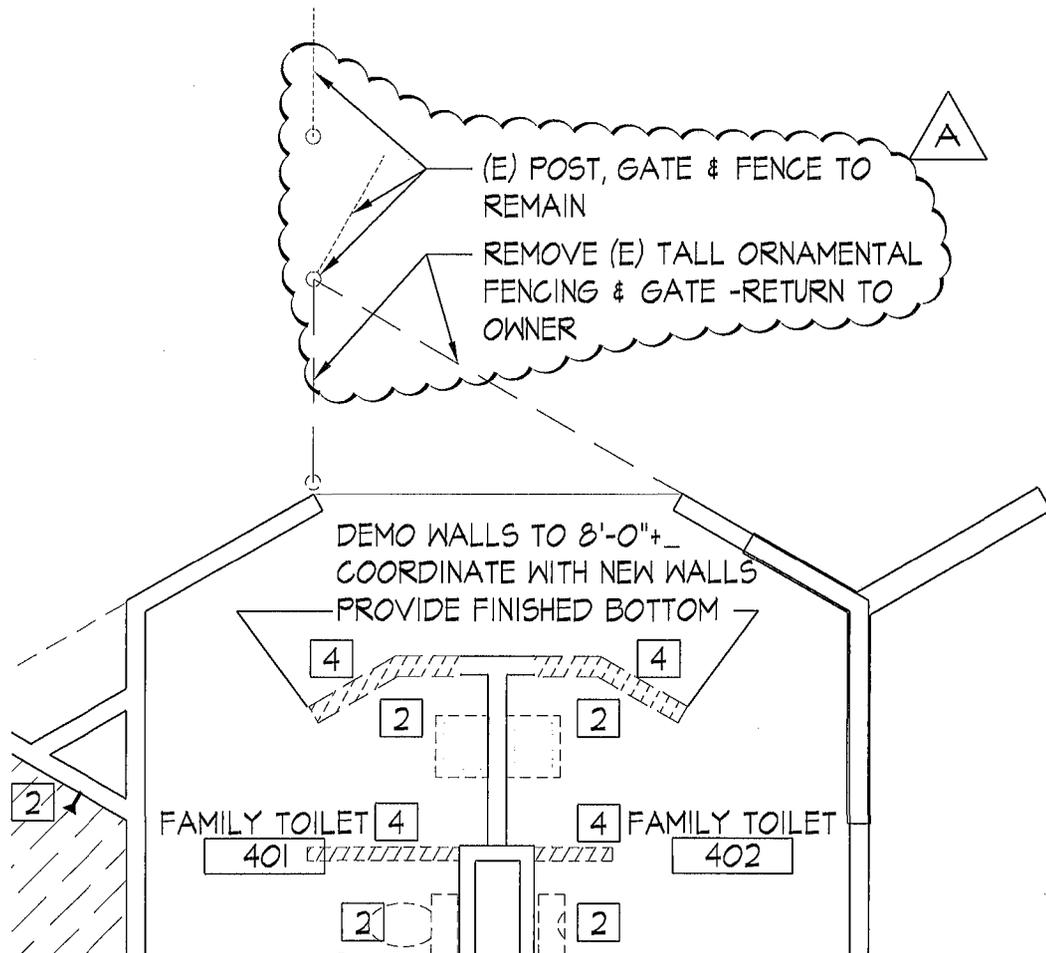
Furnish and install new battery operated pool lift, Spectrum Products model "Traveller II XRC 500" or EQ with cart, cover, and battery.
- 3. To Drawing number 35609-19-D (A-203), **REVISE** KEY NOTE 19 and partial floor plans with Page 8 of 8 of this Addendum.

Tony Heinrichs, Director
Public Works Department

Dated: *June 26, 2012*
San Diego, California

TH/AR/eg

J:\0842 Vista Terrace\03-Drawings\Vista Terrace\Sheets\A-SK-01 Addendum #.dwg : 6/20/2012 9:00 AM

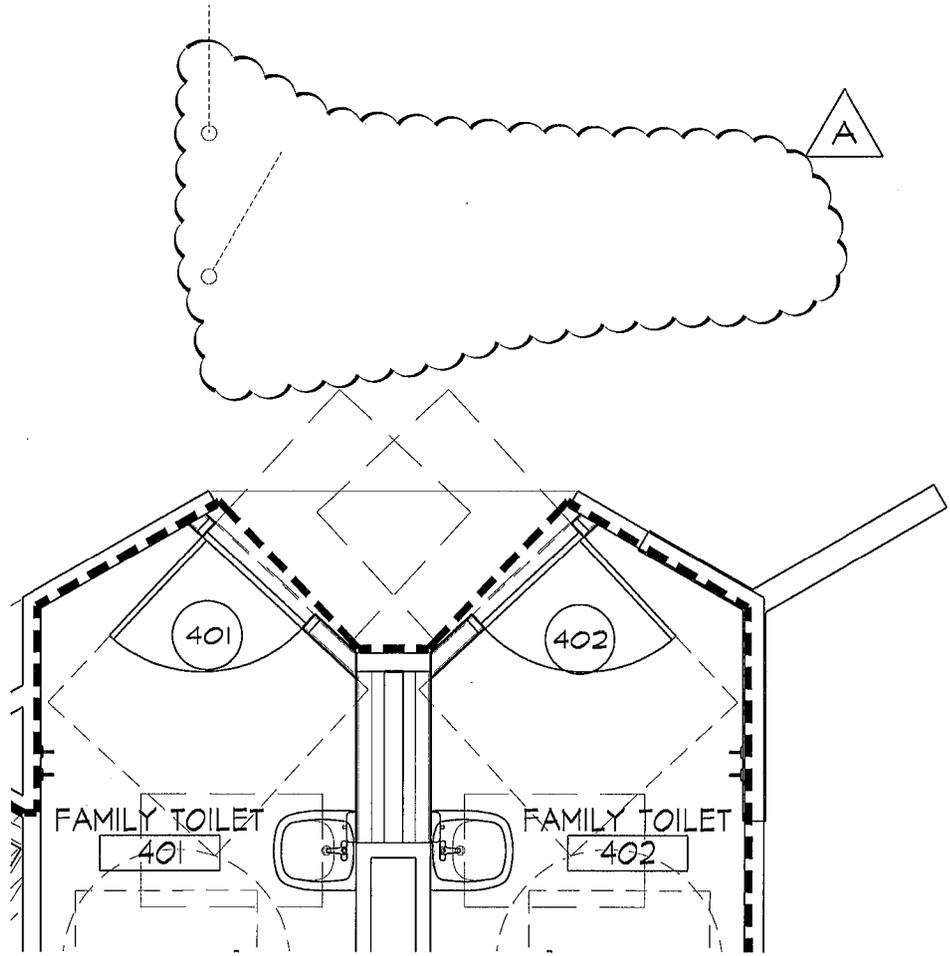


1 PARTIAL DEMOLITION PLAN 2
1/4" = 1'-0"

△ ADDENDUM 'A'

ARCHITECT:  PLATT/WHITELAW ARCHITECTS, INC. 4034 30TH STREET SAN DIEGO, CA 92104 PH: (619) 546-4326 FAX: (619) 546-4350	DRAWING DESCRIPTION: (E) FENCING TO BE REMOVED	REFERENCE: SHEET A-100 35609-13-D
	FOR: CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT	PROJECT: VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS
		DRAWING: ADDENDUM A A-SK-01

J:\0342 Vista Terrace\03-Drawings\Vista Terrace\Sheets\A-SK-01 Addendum #1.dwg : 6/20/2012 9:00 AM

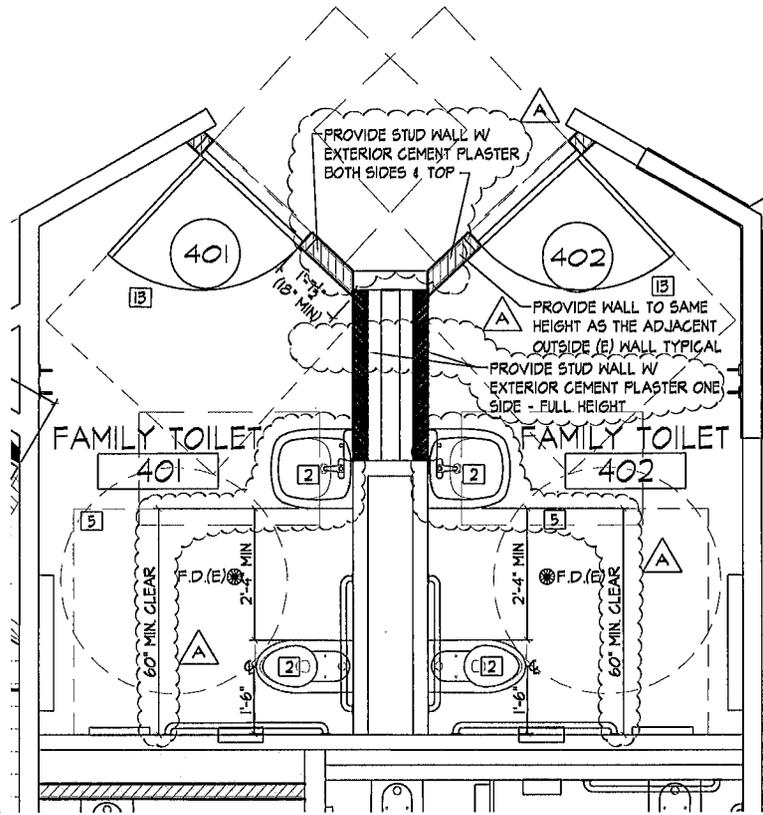


1 PARTIAL FLOOR PLAN
 1/4" = 1'-0" N

△ ADDENDUM 'A'

ARCHITECT:  PLATT/WHITELAW ARCHITECTS, INC. 4034 30TH STREET SAN DIEGO, CA 92104 PH: (619) 546-4326 FAX: (619) 546-4350	DRAWING DESCRIPTION: REMOVE RELOCATED FENCE FROM PROJECT SCOPE	REFERENCE: SHEET A-101 35609-14-D DATE: 6/20/2012 BY: J/S
FOR: CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT	PROJECT: VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS	DRAWING: ADDENDUM A A-SK-02

J:\0342 Vista Terrace\03-Drawings\Vista Terrace\Sheets\A-SK-01 Addendum #1.dwg : 6/20/2012 9:01 AM



PARTIAL FLOOR PLAN

1/4" = 1'-0"

19 PROVIDE TILED LID O/ WATERPROOF MEMBRANE O/ WATER RESISTANT PLYWOOD AT 8'-0"± BETWEEN THE WALLS, SLOPE TO DRAIN 1/4"/FT.

△ ADDENDUM 'A'

<p>ARCHITECT:  PLATT/WHITELAW ARCHITECTS, INC. 4034 30TH STREET SAN DIEGO, CA 92104 PH: (619) 546-4326 FAX: (619) 546-4350</p>	<p>DRAWING DESCRIPTION: ADD WALL FINISH NOTES - ADD DIMENSION - REVISE KEYNOTE #19</p>	<p>REFERENCE: SHEET A-203 35609-19-D DATE: 6/20/2012 BY: JS/SS</p>
<p>FOR: CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT</p>	<p>PROJECT: VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS</p>	<p>DRAWING: ADDENDUM A A-SK-03</p>

INSPECTION STAGES AND INSPECTION TEAM:

PARK INSPECTION TEAM

- A. SITE SUPERINTENDENT (CONTRACTOR/DEVELOPER'S REPRESENTATIVE)
- B. CONTRACTOR(S)
- C. RESIDENT ENGINEER FROM FIELD ENGINEERING DEPARTMENT
- D. CITY PROJECT MANAGER
- E. DESIGN CONSULTANT
- F. PARK AND RECREATION DISTRICT MANAGER
- G. PARK AND RECREATION ASSET MANAGER

PARK CONSTRUCTION INSPECTION STAGES: (MINIMUM DEPENDING ON PROJECT)

1. PRE-CONSTRUCTION MEETING.
2. ROUGH GRADING AND DRAINAGE.
3. IRRIGATION MAINLINE PRESSURE TEST.
4. IRRIGATION LATERAL LINE PRESSURE TESTS.
5. WIRING PRIOR TO BACKFILLING TRENCHES.
6. HARDSCAPE AT TIME OF FINISHED STAKING AND LAYOUT.
7. FINISH GRADING AND SOIL PREPARATION.
8. IRRIGATION COVERAGE TEST.
9. PLANT MATERIAL (WHEN DELIVERED) AND PLACEMENT APPROVAL.
10. PLAY GROUND INSPECTION, IF APPLICABLE.
11. PROJECT CONSTRUCTION 90 PERCENT COMPLETE (DEVELOP PUNCH LIST AND SUBMIT RED-LINE AS-BUILTS).
12. 90-DAY PLANT MAINTENANCE PERIOD (THIS INSPECTION IS TO BE HELD WHEN THE PUNCH LIST ITEMS ARE COMPLETE. IF TURF AREA IS PLANTED FROM SEED OR STOLONS THE PLANT MAINTENANCE PERIOD SHALL BE 120-DAYS).
13. FINAL WALK-THROUGH, ACCEPTANCE BY THE CITY. CONTRACTOR TO SUBMIT FINAL APPROVED AS-BUILT DRAWINGS TO THE CITY.

VISTA TERRACE POOL

ACCESSIBILITY IMPROVEMENTS

301 ATHEY AVENUE, SAN DIEGO, CA 92173

DRAWING INDEX

- GENERAL**
1. T-100 TITLE SHEET, INDEX, DIRECTORY & LEGAL
 2. T-101 ARCH. NOTES, LEGENDS, STANDARDS AND ABBREY.
- SITE**
3. AS-101 SITE PLAN - OVERALL
- CIVIL**
4. C-10 EXISTING CONDITIONS PLAN
 5. C-11 OVERALL DEMOLITION PLAN
 6. C-20 OVERALL GRADING AND UTILITY PLAN
 7. C-30 OVERALL HORIZONTAL CONTROL PLAN
 8. C-40 OVERALL EROSION CONTROL PLAN
- LANDSCAPE**
9. LP-1 LANDSCAPE PLANTING PLAN
 10. LP-2 LANDSCAPE PLANTING LEGEND, DETAILS & NOTES
 11. LI-1 LANDSCAPE IRRIGATION PLAN, LEGEND & NOTES
 12. LI-2 LANDSCAPE IRRIGATION DETAILS
- ARCHITECTURAL**
13. A-100 DEMOLITION PLAN
 14. A-101 FLOOR PLAN - OVERALL
 15. A-102 CEILING PLAN - OVERALL
 16. A-103 SIGNAGE PLAN - OVERALL
 17. A-201 NORTH RAMP 1 PLAN
 18. A-202 ENTRY RAMP 2 PLAN
 19. A-203 BASE BID AREA FLOOR PLAN
 20. A-204 MENS & STAFF FLOOR PLAN ALT-1
 21. A-205 WOMENS AREA FLOOR PLAN ALT-2
 22. A-500 RAMP AND RAILING DETAILS
 23. A-501 NORTH RAMP 1 SECTIONS
 24. A-502 DETAILS
 25. A-503 TILE INSTALLATION DETAILS
 26. A-601 SCHEDULES
 27. A-100 FAMILY TOILETS FINISH PLAN & INT. ELEV.
 28. A-101 MENS & STAFF ALT-1 FINISH PLAN & ELEV.
 29. A-102 WOMENS ALT-2 FINISH PLAN & INT. ELEV.
 30. A-103 STAFF LOUNGE ALT-1 FINISH PLAN & ELEV.
- STRUCTURAL**
31. S-10 GENERAL NOTES
 32. S-11 GENERAL NOTES
 33. S-12 TYPICAL DETAILS
 34. S-20 FOUNDATION AND FRAMING DETAILS
 35. S-30 FOUNDATION PLAN
 36. S-31 SITE PLAN
 37. S-32 RAMPS FOUNDATION PLAN
- PLUMBING**
38. MP-001 LEGEND, SCHEDULES AND NOTES
 39. MP-100 DEMOLITION FLOOR PLAN
 40. MP-101 NEW PLUMBING FLOOR PLAN
 41. MP-102 NEW MECHANICAL FLOOR PLAN
 42. MP-103 DIAGRAMS
- ELECTRICAL**
43. E-001 SYMBOLS, ABBR., NOTES & SCHEDULE
 44. E-100 FLOOR PLAN - DEMOLITION
 45. E-101 FLOOR PLAN - LIGHTING
 46. E-102 FLOOR PLAN - POWER
 47. E-601 SINGLE LINE, PANEL SCH., & DETAILS

DESCRIPTION OF WORK

THIS PROJECTS SCOPE OF WORK SHALL CONSIST OF A VOLUNTARY BARRIER REMOVAL TO THE EXISTING RECREATION CENTER. CONSISTING OF A BASE BID AND ALTERNATES AS LISTED BELOW AND AS SHOWN ON CONSTRUCTION DOCUMENTS.

- THE BASE BID SHALL CONSIST OF PROVIDING THE FOLLOWING: INTERIOR RENOVATIONS = APPROX. 710 S.F.
1. PATH OF TRAVEL FROM PUBLIC RIGHT OF WAY TO MAIN ENTRANCE ACCESSIBLE WITH 2003 SF OF RET. WALK
 2. PATH OF TRAVEL IMPROVEMENTS THRU THE RECEPTION AREA, HALLWAYS AND GROUP SHOWERS
 3. 2 ACCESSIBLE FAMILY-UNISEX TOILETS ON EAST SIDE OF POOL DECK AREA
 4. 2 ACCESSIBLE GROUP SHOWER FACILITIES, WITH ALL NEW PLUMBING AND TILE
 5. PROVIDE SIGNAGE PROGRAM THROUGHOUT FACILITY, INCLUDING ALTERNATE AREAS
 6. REPAIR ROOF SUPPORT BASE LOCATED IN EQUIPMENT ROOM
 7. ACCESSIBLE HEIGHT COUNTERS AND CASEWORK IN ADMINISTRATION CONTROL ROOM
 8. NEW AND MODIFIED ACCESSIBLE DOORS, FRAMES AND HARDWARE IN P.O.T.
 9. ACCESSIBLE DUAL HEIGHT DRINKING FOUNTAIN AT POOL DECK
 10. ADDITIONAL ACCESSIBLE POOL LIFT MOUNTING SLEEVE
 11. ADDITIONAL LANDSCAPE AND IRRIGATION PER DRAWINGS

THE FOLLOWING ALTERNATES SHALL CONSIST OF PROVIDING THE FOLLOWING AND BE BID INDEPENDENTLY

- ALTERNATE 1 - NORTH SIDE - SHALL CONSIST OF THE FOLLOWING RENOVATIONS = APPROX. 570 S.F.:
1. STAFF LOUNGE WITH REMODELED ENTRANCE AND WINDOWS
 2. ACCESSIBLE TOILET AND SHOWER ROOM
 3. ACCESSIBLE MENS LOCKER AND TOILET ROOM RENOVATION
- ALTERNATE 2 - SOUTH SIDE - SHALL CONSIST OF THE FOLLOWING RENOVATIONS = APPROX. 450 S.F.:
1. WOMENS LOCKER AND TOILET ROOM RENOVATION

PROJECT DIRECTORY

CLIENT/LEGAL OWNER
CITY OF SAN DIEGO
ENGINEERING & CAPITOL PROJECTS
600 B STREET 8TH FLOOR,
SAN DIEGO, CA 92101
SIVASH HAGHKHAHPH:
(619) 533-5186

STRUCTURAL ENGINEER
FLORES LUND CONSULTANTS
7220 TRADE STREET, SUITE 120
SAN DIEGO, CA 92121
PH: (858) 566-0626
FAX: (858) 566-0627
CRAIG VOSS

ARCHITECT
PLATT/WHITELAW ARCHITECTS INC.
4034 30TH STREET
SAN DIEGO, CA 92104
PH: (619) 546-4326
FAX: (619) 546-4350
RANDY BIEGENZAHN

MECHANICAL/PLUMBING
BENDER DEAN ENGINEERING
438 CAM. DEL RIO S. SUITE 217
SAN DIEGO, CA 92108
PH: (619) 704-1900
FAX: (858) 427-1608
HEATHER SCHLOPPEIN

ELECTRICAL ENGINEER
TURPIN & RATTAN
4719 PALM AVE
LA MESA, CA 91941-5221
PH: (619) 466-6224
FAX: (619) 466-6233
KARL PORTS

CIVIL ENGINEER
FLORES LUND CONSULTANTS
7220 TRADE STREET, SUITE 120
SAN DIEGO, CA 92121
PH: (858) 566-0626
FAX: (858) 566-0627
AHMAD KHAN

LANDSCAPE ARCHITECT
KTU+A
3916 NORMAL STREET
SAN DIEGO, CA 92103
PH: (619) 294-4477
FAX: (619) 294-9965
CHERI BLATNER

UNDERGROUND UTILITIES

BEFORE EXCAVATING, VERIFY THE LOCATION OF UNDERGROUND UTILITIES. AT LEAST THREE (3) WORKING DAYS PRIOR TO EXCAVATION, THE CONTRACTOR SHALL REQUEST A MARKOUT OF UNDERGROUND UTILITIES BY CALLING THE BELOW LISTED REGIONAL NOTIFICATION CENTER FOR AN INQUIRY IDENTIFICATION NUMBER:

UNDERGROUND SERVICE ALERT 800-422.4133
(GAS, ELECTRIC, TELEPHONE, WATER, SEWER, LIGHTING & T.V.)

CITY IRRIGATION SYSTEMS & WIRING 619-533.5783

CITY FACILITIES MAINTENANCE DIVISION 619-525-8500

CITY OF SAN DIEGO POLICY COMPLIANCE

1. BACKFLOW DEVICE IS EXISTING AND SHALL BE PROTECTED AS PART OF THIS PROJECT
2. COMPLY WITH HAZARDOUS MATERIALS PER CITY OF SAN DIEGO BULLETIN 116
3. COMPLY WITH CONSTRUCTION AND DEMOLITION DEBRIS PER CITY BULLETIN 119
4. COMPLY WITH STORM WATER REQUIREMENTS PER CITY OF SAN DIEGO STORM WATER MANAGEMENT PLAN AS DETERMINED BY FORM DS-560. PROJECT DOES NOT DISTURB MORE THAN 1 ACRE AND CREATES LESS THAN 5000 S.F. OF IMPERVIOUS SURFACE. PROJECT DOES NOT REQUIRE A NPDES PERMIT. PROJECT WILL REQUIRE CONSTRUCTION B.M.P. PER SECTION IV OF THE CITY OF SAN DIEGO'S STORM WATER STANDARDS MANUAL.

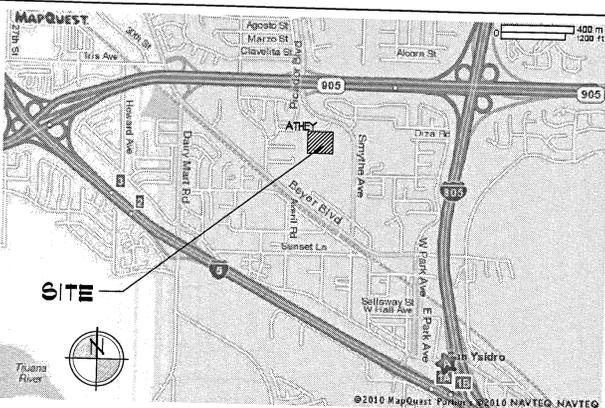
RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ARCHITECT OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED REASONABLE CARE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME AS ARCHITECT OR ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

Alison M. Whitelaw 9/29/11
ALISON M. WHITELAW C-10375 DATE
PLATT/WHITELAW ARCHITECTS INC.

VICINITY MAP



CODES, STANDARDS AND SPECIFICATIONS

- APPLICABLE BUILDING CODES:
- 2001 CA. BUILDING STANDARDS ADMIN. CODE
 - 2001 CALIFORNIA BUILDING CODE
 - 2001 CALIFORNIA ELECTRICAL CODE
 - 2001 CALIFORNIA MECHANICAL CODE
 - 2001 CALIFORNIA PLUMBING CODE
 - 2001 CALIFORNIA ENERGY CODE
 - 2001 CALIFORNIA FIRE CODE
- TITLE 24 OF CALIFORNIA CCR PART 1
TITLE 24 OF CALIFORNIA CCR PART 2
TITLE 24 OF CALIFORNIA CCR PART 3
TITLE 24 OF CALIFORNIA CCR PART 4
TITLE 24 OF CALIFORNIA CCR PART 5
TITLE 24 OF CALIFORNIA CCR PART 6
TITLE 24 OF CALIFORNIA CCR PART 9
- DISABLED ACCESS REGULATIONS, TITLE 24, (MARCH 1993) AND CALIFORNIA STATE ACCESSIBILITY STANDARDS INTERPRETIVE MANUAL (JULY 1984)
 - AMERICANS WITH DISABILITIES ACT REGULATION: ADAAG DESIGN GUIDELINES
 - ADDITIONAL APPLICABLE STANDARDS AND SPECIFICATIONS:
STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, (WHITEBOOK) 2010 - INCLUDES -THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK) 2009, DOCUMENT NO. FITS05040901, FILED MAY 4, 2009, AND THE -EQUAL OPPORTUNITY CONTRACTING PROGRAM REQUIREMENTS
 - CITY OF SAN DIEGO STANDARD DRAWINGS, INCLUDING ALL REGIONAL STANDARD DRAWINGS, DOCUMENT NO. AEC1291063, FILED DECEMBER 31, 2006.

BUILDING CODES ANALYSIS

CODE CLASSIFICATIONS:

- OCCUPANCY TYPE B
- TYPE OF CONSTRUCTION V-B
- ALLOWABLE AREA / STORIES 9,000 / 2
- (E) BUILDING AREA / STORIES 5,164 SF. / 1
- OCCUPANT LOAD # / 100 58

SPECIAL CODE REQUIREMENTS:
MAINTAIN A 1 HOUR SEPARATION BETWEEN EQUIPMENT ROOM AND OTHER AREAS.

SWIMMING POOL AND POOL EQUIPMENT:
EXISTING SWIMMING POOL AND POOL EQUIPMENT SHALL REMAIN AS IS.
ONLY THE ADDITION OF A SECOND DISABLED LIFT SLEEVE IN THE DECK WILL BE DONE.

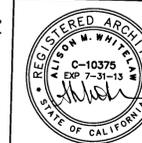
FIRE ALARM AND EXTINGUISHING SYSTEM ARE NOT REQUIRED PER 9032 & 9012 SINCE THIS IS AN EXISTING STRUCTURE. THERE IS NO EXISTING NOR PROPOSED FIRE ALARM OR EXTINGUISHING SYSTEM

NO MANUAL FIRE ALARM SYSTEM REQUIRED OL. = 58 & 1 STORY, CBC 2001 9012.2

LEGAL DESCRIPTION

ASSESSORS PARCEL NUMBER: 638-010-38-00

Platt/Whitelaw Architects, Inc.
4034 30th Street, SAN DIEGO CA 92104
(619) 546-4326 FAX (619) 546-4350



PROJECT VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

SHEET TITLE: TITLE SHEET, CODES, INDEX NOTES, DIRECTORY & LEGAL

SHEET NUMBER: T-100 SHEET 1 OF 47

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT

WBS: B-00933

DATE: 3/9/12

PROJECT MANAGER: *Alison M. Whitelaw*

DESCRIPTION	BY	APPROVED	DATE	SCANNED
PERMIT SUBMIT	RBZAHN		09.27.11	

CONTRACTOR: _____ DATE STARTED: _____

INSPECTOR: _____ DATE COMPLETED: _____

146-1753
CCS27 COORDINATE
1787-6312
CCS83 COORDINATE
35600 01

CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.

WARNING

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

CITY OF SAN DIEGO PUBLIC WORKS PROJECT



VISTA TERRACE POOL

GENERAL NOTES

- ALL WORK SHALL CONFORM TO THE CALIFORNIA BUILDING CODE. SEE TITLE SHEET FOR CURRENT ADOPTED CODES AND STANDARDS. THE CURRENT ADOPTED VERSIONS OF THE CALIFORNIA PLUMBING CODE, CALIFORNIA MECHANICAL CODE, CALIFORNIA FIRE CODE, CALIFORNIA ELECTRICAL CODE, NFPA LIFE SAFETY CODE, AMERICANS WITH DISABILITIES ACT REGULATIONS, AND ALL ICC, NFPA, UL, ANSI, ASTM AND OTHER APPLICABLE CODES AND STANDARDS. COPIES SHALL BE PROVIDED BY CONTRACTOR.
- THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT ALL THE WORK OF THE ALTERATION IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. NOTIFY THE ARCHITECT OF ANY EXISTING CONDITIONS DISCOVERED, WHICH WILL RESULT IN NON-COMPLIANT CONSTRUCTION, AND WHICH ARE NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. A CHANGE ORDER DETAILED AND SPECIFYING THE REQUIRED WORK, SHALL BE SUBMITTED TO AND APPROVED BY RESIDENT ENGINEER BEFORE PROCEEDING WITH THE WORK.
- THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS TO INCLUDE ALL LABOR, MATERIALS AND SERVICES NECESSARY FOR THE COMPLETION OF ALL WORK SHOWN, PRESCRIBED OR REASONABLY IMPLIED, BUT NOT LIMITED TO THAT EXPLICITLY INDICATED IN THE CONTRACT DOCUMENTS. ALL CONTRACTORS ARE RESPONSIBLE FOR FOLLOWING THE CONTRACT SPECIFICATIONS AND DRAWINGS, IF ANY QUESTIONS ARISE FROM CONFLICTS OR NEED FOR ADDITIONAL INFORMATION, THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER IMMEDIATELY.
- UNDER NO CIRCUMSTANCES SHALL DIMENSIONS BE SCALED DIRECTLY FROM DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER OF ANY DISCREPANCIES OR CONFLICTS.
- ORIGINAL CONSTRUCTION DRAWINGS ARE AVAILABLE FOR CONTRACTOR INFORMATION. THE ARCHITECT HAS NOT VERIFIED AND DOES NOT WARRANT ACCURACY OF DRAWINGS.
- THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL VERIFY ALL DIMENSIONS AND CONDITIONS ON THE JOB SITE PRIOR TO START OF WORK. ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS WHICH ARE NECESSITATED BY FIELD CONDITIONS SHALL BE REPORTED TO THE ARCHITECT. IT IS CONSIDERED ESSENTIAL THAT THE CONTRACTOR EXAMINE THE SITE & PORTIONS THEREOF WHICH AFFECT THE CONTRACTOR'S WORK. NO ADDITIONAL EXPENSE SHALL BE AWARDED RESULTING FROM THE FAILURE TO PERFORM THIS EXAMINATION. THE ARCHITECT SHALL BE NOTIFIED OF ANY CONFLICTS, ERRORS OR OMISSIONS. VERIFY ALL DIMENSIONS & EXISTING CONDITIONS INCLUDING, BUT NOT LIMITED TO: WALLS, FLOORS, MECHANICAL CONSTRUCTION, EXISTING CONSTRUCTION TO REMAIN & EXISTING CONSTRUCTION TO BE DEMOLISHED.
- CAUTION! TOXIC SUBSTANCES MAY BE ENCOUNTERED. ASBESTOS AND LEAD ABATEMENT TO BE COORDINATED WITH CITIES AS-NEEDED ABATEMENT CONTRACTOR.
-NOTE- ALL PERMITS AND APPROVALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- INFORMATION SHOWN BY CONSULTANTS OR DISCIPLINE DOCUMENTS IS NOT MEANT TO DEFINE SCOPE OF WORK OF SUBCONTRACTOR RESPONSIBILITY. IT SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY TO DETERMINE SCOPE OF WORK BETWEEN THE SUBCONTRACTORS DURING THE BIDDING PROCESS.
- ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF THE CONTRACTOR HAS QUESTIONS REGARDING ABBREVIATIONS OR THEIR EXACT MEANING, THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.
- ALL PENETRATIONS THROUGH STRUCTURAL MEMBERS, FIRE-RATED ASSEMBLIES, CEILING & FLOOR SLABS SHALL REQUIRE THE ARCHITECT'S APPROVAL PRIOR TO START OF ANY WORK.
- REROUTE ALL SERVICES OR PORTIONS OF SERVICES IN THE PATH OF DEMOLITION OR NEW WORK AND PROVIDE FOR COMPATIBILITY WITH NEW WORK AS REQUIRED, EXAMPLE: RELOCATE EXISTING LIGHT SWITCHES AND RECEPTACLES IF REQUIRED AT APPROPRIATE ACCESSIBLE HEIGHT.
- ALL EXISTING LIFE-SAFETY FEATURES OF THE EXISTING FACILITY MUST BE PROTECTED AND MAINTAINED AT CONTRACTOR'S EXPENSE THROUGHOUT THE CONSTRUCTION PERIOD. ALL EXIT PATHS MUST BE KEPT UNOBSTRUCTED. ALL FIRE-RATED WALLS AND FLOORS SHALL BE KEPT INTACT AND ALL FIRE ALARM SYSTEMS SHALL BE KEPT IN WORKING ORDER.

ADDITIONAL CODE COMPLIANCE NOTES

- SEE OTHER DRAWINGS FOR ADDITIONAL COMPLIANCE REQUIREMENTS. NOT ALL NOTES ARE APPLICABLE.
- EXIT SIGNS MUST BE INTERNALLY ILLUMINATED. (CFC SECTION 1211, 1212, 2501.15, 3213, AND CBC 1011.4)
- INTERIOR FINISH SHALL COMPLY WITH CBC, CFC & TITLE 19 CCR.
- ALL DECORATIVE MATERIALS SHALL BE MAINTAINED IN A FLAME-RETARDANT CONDITION. (C.C.R. T-19, SEC. 114, 3.08, 3.21 AND CFC SEC. 1103.3.3).
- THE CONSTRUCTION, REMODEL OR DEMOLITION OF A BUILDING SHALL COMPLY WITH 2007 CFC ARTICLE 87. CONTRACTOR SHALL PREPARE FOR OR: PATCH, INFILL, SAND, TRIM, PRIME OR OTHERWISE PROVIDE THE PREPARATION NEEDED TO INSTALL OR REMOVE NOTED ITEMS.
- SEE OTHER DRAWINGS FOR COORDINATION AND ADDITIONAL COMPLIANCE REQUIREMENTS.
- PROVIDE A MINIMUM OF ONE FIRE EXTINGUISHER WITH A MINIMUM RATINGS OF 2-A-10-BC WITHIN 75 FEET MAXIMUM TRAVEL DISTANCE FOR EACH 6,000 SQUARE FEET OR PORTION THEREOF ON EACH FLOOR. (CFC SECTION 906).
- BUILDINGS UNDERGOING CONSTRUCTION, ALTERATIONS OR DEMOLITION SHALL BE IN ACCORDANCE WITH CFC CHAPTER 14 (SECTION 1401.1).
- BUILDING ADDRESS SHALL BE PROVIDED IN ALL NEW AND EXISTING BUILDINGS IN A POSITION AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. (CFC 505.1), FHPS P-00-6)
- DECORATIVE MATERIALS SHALL BE MAINTAINED IN A FRAME-RETARDANT CONDITION. (TITLE 19, SECTION 3.08, 3.21: CFC 804)
- ALL VALVES CONTROLLING THE WATER SUPPLY FOR AUTOMATIC SPRINKLER SYSTEMS AND WATER FLOW SWITCHES ON ALL SPRINKLER SYSTEMS SHALL BE ELECTRONICALLY MONITORED WHERE THE NUMBER OF SPRINKLERS IS 20 OR MORE. (CFC 903.4)
- AN APPROVED AUTOMATIC SPRINKLER FLOW ALARM (BELL) SHALL BE PROVIDED ON THE EXTERIOR OF THE BUILDING IN AN APPROVED LOCATION. (CFC 903.4.2)
- ROOF ACCESS LADDER SHALL COMPLY WITH CMC SECTION 904.10
- PROVIDE SMOKE DETECTORS IN MAIN SUPPLY DUCTS OF AIR MOVING SYSTEMS EXCEEDING 2000 CFM (CMC SECTION 604.10)
- NEW INSULATION MATERIALS (IF PROVIDED) SHALL MEET THE CALIFORNIA QUALITY STANDARDS PER SECTION 118, ENERGY EFFICIENCY STANDARDS (E.E.S.)
- NEW DOORS AND WINDOWS SHALL MEET THE MINIMUM INFILTRATION REQUIREMENTS PER SECTION 116, OF THE E.E.S.
- CERTIFICATE OF ACCEPTANCE (MECH-I-A) AND ALL RELATED ACCEPTANCE DOCUMENTS SHALL BE SUBMITTED TO FIELD INSPECTOR DURING CONSTRUCTION. CERTIFICATION OF OCCUPANCY WILL NOT BE ISSUED UNTIL THESE FORMS ARE REVIEWED AND APPROVED, UNLESS NO NEW HVAC EQUIPMENT PROVIDED.
- ALL PIPING AND DUCTWORK SHALL BE INSULATED CONSISTENT WITH THE REQUIREMENTS OF SECTION 118, 123, 124 OF TITLE 24 ENERGY STANDARDS, AND TABLES 6-6A AND 6-6B OF THE CMC.
- ALL HVAC SYSTEMS SHALL MEET THE CONTROL REQUIREMENTS PER SECTION 112 AND 122 ENERGY EFFICIENCY STANDARDS, IF PROVIDED.
- ALL HVAC EQUIPMENT AND APPLIANCES SHALL MEET THE REQUIREMENTS PER SECTION 111-113, 115, 120-124 OF THE TITLE 24 ENERGY STANDARDS, IF PROVIDED.
- BUILDING DRAIN AND VENT PIPING MATERIAL SHALL COMPLY WITH SECTION 101.0 & 903.0 OF THE CFC
- ALL SANITARY SYSTEM MATERIALS SHALL BE LISTED BY AN APPROVED LISTING AGENCY.
- EACH FAUCET SHALL NOT EXCEED A WATER FLOW OF 2.2 GPM, OR BE FLOW MORE THAN 10 SECONDS
- ALL POTABLE WATER PIPING SHALL BE COPPER.

ABBREVIATIONS

• - AT	F/ - FROM	O/ - OVER
• - AND	F.B. - FIBERGLASS	O.C. - ON CENTER
AB. - ANCHOR BOLT	F.D. - FLOOR DRAIN	OCC - OCCUPANT/OCCUPANCY
ABS - ABSOLUTE	F.F. - FINISH FLOOR	O.H. - OVERALL HEIGHT OR
A.C. - ASPHALT CONCRETE	F.H. - FIRE HYDRANT	O.H. - OPPOSITE HAND
ACT - ACOUSTICAL CEILING TILE	F.E.G. - FIRE EXTINGUISHER CABINET	OPNG - OPENING
ADDL. - ADDITIONAL	FIN. - FINISH	OPP. - OPPOSITE
ADJ. - ADJACENT	FLSH - FLASHING	
A.F.F. - ABOVE FINISH FLOOR	FLUR. - FLUORESCENT	
A.F.S. - ABOVE FINISH SURFACE	FLR. - FLOOR	
ALT. - ALTERNATE	FLT. - FLOOR TILE	
ALUM. - ALUMINUM	F.O.B. - FACE OF BUILDING	
APPL. - APPLICATION	F.O.C. - FACE OF CONCRETE	
ARCH. - ARCHITECT,	F.O.F. - FACE OF FINISH	
ASPH. - ASPHALT	F.O.M. - FACE OF MASONRY	
	F.O.P. - FACE OF POST	
	F.O.S. - FACE OF STUD	
	F.S. - FINISH SURFACE	
	FT. - FOOT	
	FTG. - FOOTING FURRIG - FURRING	
	F.V. - FIELD VERIFY	
	G.A.F. - GALV. AFTER FABRICATION	
	GA. - GAUGE	
	GALV. - GALVANIZED	
	GO. - GRADE	
	GEN. - GENERAL	
	GYP. - GYPSUM	
	G.B. - GYPSUM BOARD	
	HARDR. - HARDENER	
	H.B. - HOSE BIB	
	HD. - HEAD DWR. - HARDWARE	
	HDSGALV. - HOT DIPPED GALVANIZATION	
	HI. - HIGH	
	HM. - HOLLOW METAL	
	H.H. - HORIZONTAL	
	HT. - HEIGHT	
	HW. - HARDWOOD	
	I.D. - INSIDE DIAMETER	
	INSUL. - INSULATION	
	INT. - INTERIOR	
	JAN. - JANITOR	
	LAM. - LAMINATE	
	LAV. - LAVATORY	
	LCS. - LUNCH COURT SHELTER	
	L.F. - LINEAR FEET	
	LLV. - LONG LEG VERTICAL	
	L.R.V. - LIGHT REFLECTANCE VALUE	
	LO. - LOW	
	LS. - LOW SLOPE	
	MACH. - MACHINE	
	MAS. - MASONRY	
	MAT. - MATERIAL	
	MAX. - MAXIMUM	
	M.B. - MACHINE BOLT	
	MECH. - MECHANICAL	
	MET. - METAL	
	M.H. - MANHOLE	
	MIN. - MINIMUM	
	MANF. - MANUFACTURER	
	MANF. - MANUFACTURER	
	MO. - MASONRY OPENING	
	MRB. - MARKER BOARD	
	M.R. - MOISTURE RESISTANT	
	MTD. - MOUNTED	
	N.I.C. - NOT IN CONTRACT	
	NO. # - NUMBER	
	NOM. - NOMINAL	
	N.T.S. - NOT TO SCALE	
	(N) - NEW	

ORGANIZATIONS AND STANDARDS ACRONYMS
 AIA = AMERICAN INSTITUTE OF ARCHITECTS
 ASTM = AMERICAN STANDARDS AND TESTING
 CSI = CONSTRUCTION SPECIFICATION INSTITUTE
 ICC = INTERNATIONAL CODE COUNCIL
 TCA = TILE COUNCIL OF AMERICA

CONTRACTOR'S NOTES

- IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO ENFORCE SAFETY MEASURES AND REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND BE HELD SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS LAWS AND REGULATIONS.
- THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT INCLUDING: SAFETY OF ALL PERSONS AND PROPERTY, AND THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THAT ALL DETAILS ARE BUILT IN ACCORDANCE WITH THESE PLANS. IF THERE IS ANY QUESTIONS OR DISCREPANCIES FOUND REGARDING THESE PLANS, THE CONTRACTOR SHALL REQUEST AND RECEIVE IN WRITING AN INTERPRETATION BEFORE DOING ANY WORK, BY CONTACTING THE CITY RESIDENT ENGINEER.
- THE CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY BECAUSE OF ACTUAL LOCATION OF EXISTING FACILITIES. PROVIDE SUCH MEASURES AS NEEDED TO CAREFULLY LOCATE EXISTING UTILITIES TO AVOID DAMAGE
- LOCATION AND ELEVATION OF IMPROVEMENTS TO BE MET BY WORK TO BE DONE SHALL BE CONFIRMED BY FIELD MEASUREMENTS PRIOR TO CONSTRUCTION OF NEW WORK.
- BEFORE EXCAVATING FOR THIS PROJECT, VERIFY LOCATION OF UNDERGROUND UTILITIES, THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS WERE DONE BY A SEARCH OF THE AVAILABLE RECORDS, TO THE BEST OF OUR KNOWLEDGE AND THERE ARE NO OTHER EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS.
- THE CONTRACTOR SHALL BE REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN HEREON AND ANY OTHER EXISTING LINES NOT OF RECORD OR NOT SHOWN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONUMENTATION AND/OR BENCH MARK SURVEY(S) (WITH A REGISTERED CIVIL ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING) WHICH WILL BE DISTURBED OR DESTROYED BY CONSTRUCTION. SUCH POINTS SHALL BE REFERENCED AND REPLACED WITH APPROPRIATE MONUMENTATION BY A LICENSED LAND CORNER RECORD, OR RECORD OF SURVEY AS APPROPRIATE. THE RECORD SHALL BE FILED BY THE LICENSED LAND SURVEYOR OR REGISTERED CIVIL ENGINEER AS REQUIRED BY THE LAND SURVEYOR'S ACT.
- THE CONTRACTOR SHALL NOTIFY THE CITY TRAFFIC ENGINEER AT LEAST FIVE (5) WORKING DAYS IN ADVANCE OF IMPLEMENTING ANY CONSTRUCTION DETOUR.
- IF CONSTRUCTION IS TO BE PERFORMED IN STAGES, ALL WORK SHALL BE COMPLETED IN EACH STAGE PRIOR TO BEGINNING WORK ON THE NEXT STAGE.
- THE CONTRACTOR SHALL ALSO TAKE THE NECESSARY STEPS TO PROTECT ADJACENT PROPERTY FROM ANY EROSION AND SILTATION THAT RESULTS FROM HIS OPERATIONS BY APPROPRIATE MEANS (GRAVEL BAG, DIKES, ETC) UNTIL SUCH TIME THAT THE PROJECT IS COMPLETE AND ACCEPTED FOR BY CITY. THE CONTRACTOR SHALL VERIFY STORM WATER POLLUTION MITIGATION AND BEST MANAGEMENT PRACTICES AS REQUIRED FOR THIS PROJECT
- SEE SHEET T-100 FOR ADDITIONAL NOTES AND CONTRACTOR REQUIREMENTS

CONTRACTOR NOTES

- AT KEY NOTES WHICH STATE THE PHRASE "PATCH OR PAINT", THE WORD "PATCH" OR "PAINT" REQUIRES THE CONTRACTOR TO PREPARE MATERIALS PER THE SPECIFICATIONS OR MANUFACTURES INSTRUCTIONS. IF ADDITIONAL WORK BEYOND THE SCOPE DESCRIBED IN CONTRACT DOCUMENTS IS REQUIRED, QUANTITIES OF DAMAGED MATERIALS TO REPAIR ITEMS NOT NOTED ON PLANS SHALL BE IDENTIFIED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL VERIFY ACCESS TO ALL AREAS WHERE NEW UTILITIES WILL BE INSTALLED. THE CONTRACTOR SHALL INCLUDE IN HIS BID, ANY COST ASSOCIATED WITH OBTAINING ACCESS, INSTALLATION OF ACCESS PANELS AND/OR REROUTING OF PIPES/CONDUIT OR REPLACING FINISHES AND FIXTURES TO MATCH ADJACENT.
- THE CONTRACTOR SHALL ARRANGE FOR THE PREMISES TO BE MAINTAINED IN AN ORDERLY MANNER THROUGHOUT THE COURSE OF WORK. PROVIDE AND MAINTAIN TEMPORARY BARRICADES AND FACILITIES AS REQUIRED TO PROTECT THE PUBLIC DURING THE PERIOD OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING STRUCTURES, SITE WORK OR EQUIPMENT. SUCH DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE ARCHITECT.
- THE CONTRACTOR SHALL COORDINATE WITH THE OWNERS REPRESENTATIVE AND SITE ADMINISTRATION REGARDING CONTRACTORS SITE USE AND ACCESS, AND MAINTAIN STAFF AND PUBLIC ACCESS AT ALL TIMES SITE IS OPEN FOR USE, AND ENSURE ALL CONSTRUCTION WORK IS INSIDE FENCED AREA.
- THE CONTRACTOR/SUBCONTRACTORS SHALL FURNISH AND SHALL BE FULLY RESPONSIBLE FOR ADEQUATE SHORING, BRACING, BARRICADES AND PROTECTIVE MEASURES, ETC., REQUIRED FOR SAFETY AND TO PROTECT THE CONSTRUCTION SITE AND PERIPHERY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING STRUCTURE, FINISHES OR EQUIPMENT. SUCH DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE RESIDENT ENGINEER.

FIRE CODE AND PROTECTION NOTES

- PROVIDE AT LEAST 1 FIRE EXTINGUISHER WITH A MINIMUM RATINGS OF 2-A-10-BC SHALL BE PROVIDED WITHIN 75 FEET MAXIMUM TRAVEL DISTANCE FOR EACH 6,000 SQ. FT. OR PORTION THEREOF ON EACH FLOOR
- BUILDINGS UNDERGOING CONSTRUCTION, ALTERATION OR DEMOLITION SHALL BE IN ACCORDANCE WITH CFC CHAPTER 14 (CFC 1401.1)
- ALL DECORATIVE MATERIALS SHALL BE MAINTAINED IN A FLAME-RETARDANT CONDITION. C.C.R. T-19, SEC. 3.08 & 3.21 AND CFC 804
- ADDRESSES SHALL BE PROVIDED FOR ALL NEW AND EXISTING BUILDINGS IN A POSITION TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY CFC 505.1, FHPS P-00-6
- EXIT SIGNS MUST BE INTERNALLY ILLUMINATED. (CFC SECTION 1211, 1212, 2501.15, 3213, AND CBC 1011.4)
- INTERIOR FINISH SHALL COMPLY WITH CBC, CFC & TITLE 19 CCR.
- THE CONSTRUCTION, REMODEL OR DEMOLITION OF A BUILDING SHALL COMPLY WITH 2007 CFC ARTICLE 87. CONTRACTOR SHALL PREPARE FOR OR: PATCH, INFILL, SAND, TRIM, PRIME OR OTHERWISE PROVIDE THE PREPARATION NEEDED TO INSTALL OR REMOVE NOTED ITEMS.
- ACOUSTICAL TILES PROVIDED SHALL HAVE A FLAME SPREAD AND SMOKE DEVELOPED RATINGS: 0-25 FLAME SPREAD AND 0-15 SMOKE DEVELOPED IN ACCORDANCE WITH ASTM E 84.

SYMBOLS LEGEND

	DETAIL NUMBER		PROVIDE WALL MOUNTED FIRE EXTINGUISHER 40" MAX. A.F.F. AND CLEAR OF DOOR SWING.
	SHEET NUMBER		(E) EXIT LIGHT TO REMAIN
	ELEVATION NUMBER		EXIT LIGHT
	SECTION NUMBER		WALL TYPE, SEE SHEET A-502
	GRID LETTER/NUMBER		WINDOW SYMBOL WINDOW LETTER (SEE SCHEDULE)
	ELEVATION HEIGHT LOCATION OF HEIGHT		DOOR SYMBOL DOOR NUMBER (SEE SCHEDULE) PANIC HARDWARE (SEE SCHEDULE)
	KEYNOTE REFERENCE		SIGNAGE SYMBOL SIGN NUMBER - PER PLAN

Platt/Whitelaw Architects, Inc.
 4034 30th Street, SAN DIEGO CA 92104
 (619) 546-4326 FAX (619) 546-4350

PROJECT
VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

SHEET TITLE
 GENERAL NOTES, LEGENDS STANDARDS AND ABBREY.

SHEET NUMBER
 T-101
 SHEET 02 OF 47

CITY OF SAN DIEGO, CALIFORNIA
 ENGINEERING AND CAPITAL PROJECTS DEPARTMENT

WBS B-00933

FOR CITY ENGINEER: [Signature] DATE: 3/9/12 PROJECT MANAGER: [Signature]

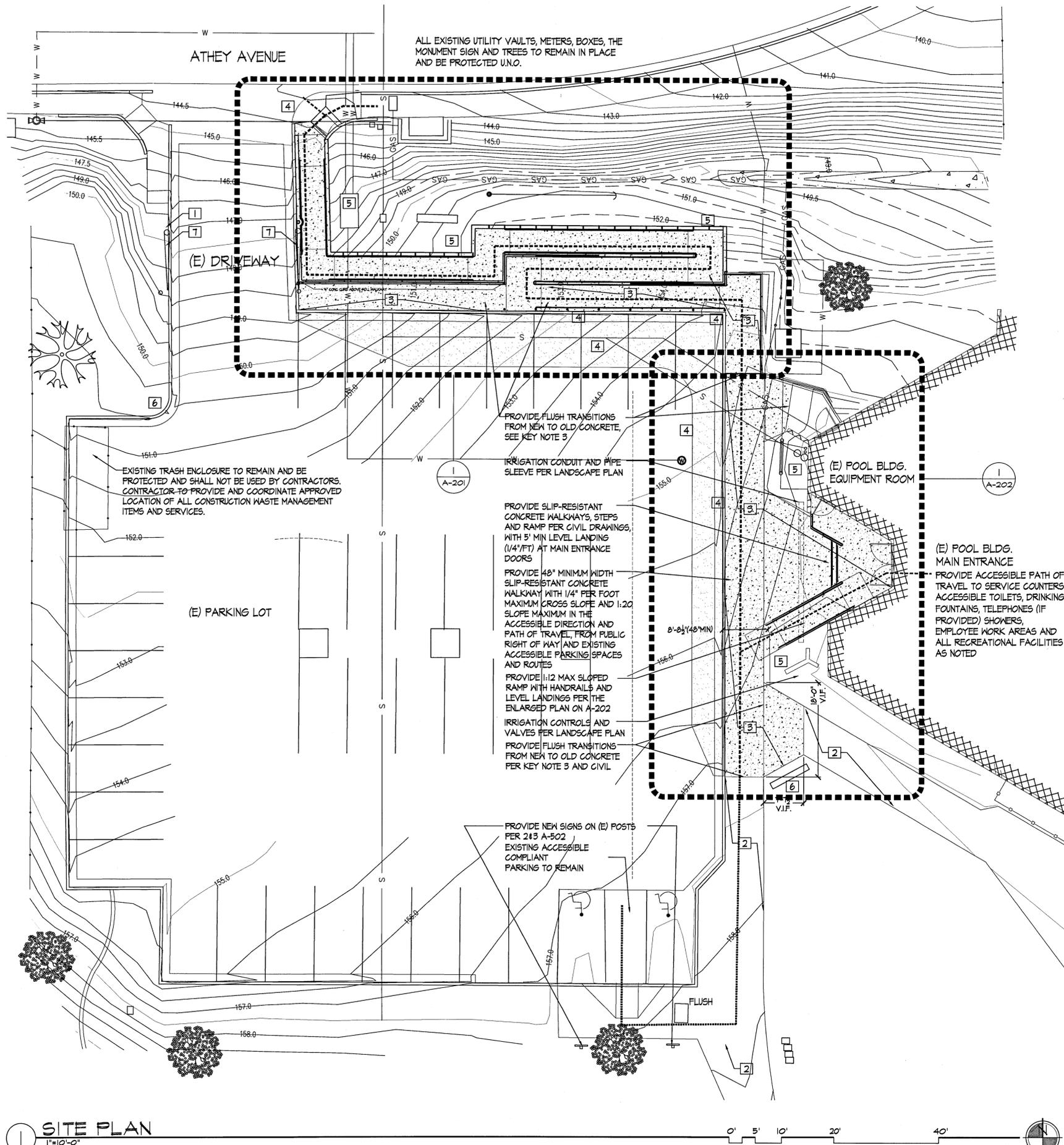
DESCRIPTION	BY	APPROVED	DATE	SCANNED
PERMIT SUBMIT	RBZAHN		09.27.11	

146-1753
 CCS27 COORDINATE
 1787-6312
 CCS83 COORDINATE

CONTRACTOR: _____ DATE STARTED: _____
 INSPECTOR: _____ DATE COMPLETED: _____

35609-02-D

VISTA TERRACE POOL



SITE ACCESSIBILITY

THE FOLLOWING STATEMENT IS PROVIDED FOR EXISTING ELEMENTS NOT BEING MODIFIED OR CONSTRUCTED AS PART OF THIS PROJECT.

I AM THE DESIGNER IN RESPONSIBLE CHARGE OF THIS TENANT IMPROVEMENT PROJECT; I HAVE INSPECTED THE SITE/PREMISES AND DETERMINED THAT EXISTING CONDITIONS ARE IN FULL COMPLIANCE WITH THE CURRENT SITE ACCESSIBILITY REQUIREMENTS TO THE EXTENT REQUIRED BY LAW.

IF THE BUILDING INSPECTOR DETERMINES NON-COMPLIANCE WITH ANY ACCESSIBILITY PROVISIONS, HE/SHE SHALL REQUIRE COMPLETE, DETAILED PLANS CLEARLY SHOWING ALL EXISTING NON-COMPLYING CONDITIONS AND THE PROPOSED MODIFICATIONS TO MEET CURRENT ACCESSIBILITY PROVISIONS AFFECTED BY THE REMODEL (INCLUDING SITE PLAN, FLOOR PLAN, DETAILS ETC.) THE PLANS MUST BE STAMPED BY THE FIELD INSPECTOR AND SUBMITTED TO THE BUILDING DEVELOPMENT REVIEW DIVISION.

SITE PLAN - KEY NOTES

- 1 PROVIDE SIGN AND POST (PER REGIONAL STANDARDS) REGARDING UNAUTHORIZED PARKING. PER DETAIL 1 ON SHEET A-502
- 2 EXISTING SIDEWALKS TO REMAIN REFER TO CIVIL DRAWINGS, PROTECT IN PLACE
- 3 EXISTING SIDEWALKS TO BE REMOVED AND REPLACED PER CIVIL DRAWINGS, SAW CUT AND PROVIDE THICKENED EDGE WITH 1/2" DIA. EPOXY DOWELS AT 18" O.C. MAXIMUM INTO EXISTING WORK, PROVIDE EXPANSION JOINTS FOR A FLUSH TRANSITIONS THAT DO NOT EXCEED 1/4" CHANGE IN ELEVATION.
- 4 REPLACE CURBS AND ASPHALT PER CIVIL DRAWINGS
- 5 COORDINATE IRRIGATION SYSTEM AND LINES WITH LANDSCAPE AND IRRIGATION DRAWINGS,
- 6 EXISTING BENCHES, RAILINGS AND FENCING TO REMAIN,
- 7 EXISTING GATE AND POST TO REMAIN, PROTECT IN PLACE, PAINT PER RESIDENT ENGINEER

ACCESSIBLE PARKING

THE CURRENT PARKING SERVING THE AREA OF REMODEL MEETS TITLE 24 PROVISIONS EXCEPT FOR SIGNAGE WHICH IS PART OF THIS PROJECT

PARKING COMPLIANCE

EXISTING AND PROPOSED PARKING = 38 TOTAL
INCLUDES ACCESSIBLE SPACES

REQUIRED ACCESSIBLE PARKING = 2 TOTAL
PROVIDE 1 VAN SPACE MIN.

PROVIDED ACCESSIBLE PARKING = 2 TOTAL
WITH 1 VAN SPACE

ACCESSIBILITY

THE ACCESSIBLE PATH OF TRAVEL FROM THE PUBLIC RIGHT OF WAY, AND THE ACCESSIBLE PARKING SPACES TO THE FRONT COUNTER, TOILETS, SHOWERS, DRINKING FOUNTAIN AND RECREATION DECK SHALL HAVE A SLOPE NOT TO EXCEED 1:20 UNLESS A RAMP IS PROVIDED THAT DOES NOT HAVE A SLOPE GREATER THAN 1:12 WITH HANDRAILS ON BOTH SIDES, WHEEL CURBS ETC. THIS WALKING SURFACE SHALL BE SLIP RESISTANT, AND THE CROSS SLOPE SHALL NOT EXCEED 1.5% (2% MAX). IF DRAINS ARE LOCATED IN THE PATH OF TRAVEL THE CONTRACTOR SHALL MODIFY OR REPLACE AS NEEDED SO NO OPENINGS ARE GREATER THAN 1/2" IN THE DIRECTION OF TRAVEL. THE PATH OF TRAVEL SHALL NOT HAVE A CHANGE IN ELEVATION GREATER THAN 1/4".

GENERAL NOTES

1. CONTRACTOR SHALL COORDINATE WITH CIVIL DRAWINGS - IF ANY DISCREPANCIES ARE EVIDENT THE RESIDENT ENGINEER WILL BE NOTIFIED IMMEDIATELY
2. CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS AND DEPTHS BY HAND EXCAVATIONS PRIOR TO MACHINE EXCAVATION.

LEGEND

- [Solid Line] = EXISTING CONCRETE SIDEWALK TO REMAIN
- [Dashed Line] = NEW CONCRETE SIDEWALK PER CIVIL DRAWINGS
- [Stippled Area] = NEW ASPHALT PER CIVIL DRAWINGS
- [Dotted Line] = EXISTING ACCESSIBLE PATH OF TRAVEL TO REMAIN
- [Dash-dot Line] = ACCESSIBLE PATH OF TRAVEL TO BE PROVIDED

APPROVED
FEB 23 2012
LAND DEVELOPMENT REVIEW
DRAINAGE & GRADES
[Signature]

San Diego Fire-Rescue
Fire Plan Review & Inspection
Mike Meade Date 2/23/12

Inspections Required
See these items on
Inspection Record Card
No Fire Inspector Required
Call (619) 448-5440 to
schedule inspection
New Stairland SF 2/23/12

DEVELOPMENT SERVICES
MARTIN MONTESSORO DATE 2-23-12

DEVELOPMENT SERVICES
MARTIN MONTESSORO DATE 2-23-12
ELECTRICAL PLAN REVIEW DIVISION
STAMP

STAMP
BUILDING DEVELOPMENT REVIEW
DIVISION-STRUCTURAL
Date 2/23/12

JOSE SALCEDO
MECHANICAL
DATE 2/23/12
STAMP

Platt/Whitelaw Architects, Inc.
4034 30th Street, SAN DIEGO CA 92104
(619) 546-4326 FAX (619) 546-4350



PROJECT VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

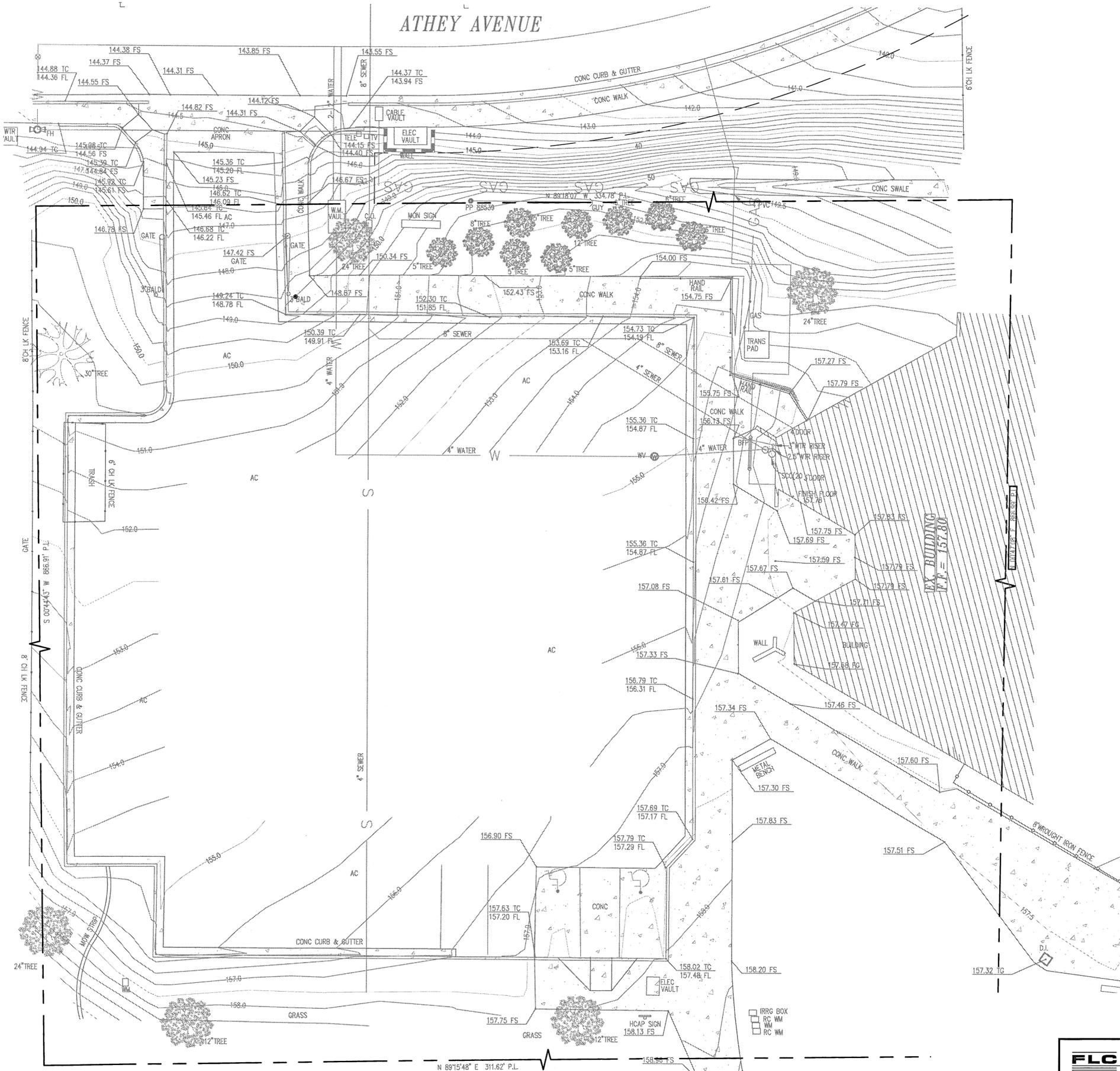
SHEET TITLE: **SITE PLAN - OVERALL** SHEET NUMBER: **AS-101**
SHEET 03 OF 41

CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT				WBS: B-00933
FOR CITY ENGINEER: <i>[Signature]</i> DATE: 3/9/12				PROJECT MANAGER: <i>[Signature]</i>
DESCRIPTION	BY	APPROVED	DATE	SCANNED
PERMIT SUBMIT	RBZAHN		09.27.11	
				146-1753 CCS27 COORDINATE 1787-6312 CCS83 COORDINATE
CONTRACTOR:	DATE STARTED:		DATE COMPLETED:	
INSPECTOR:			35609-03-D	

1 SITE PLAN
1"=10'-0"

VISTA TERRACE POOL

ATHEY AVENUE



DEMOLITION LEGEND	
ITEM	SYMBOL
PROPERTY LINE	---
EXISTING CONTOUR	--- 150 ---
EXISTING TREE	
EXISTING BRUSH	
EXISTING FENCE	
EXISTING BUILDING	
EXIST. CONCRETE	
EXISTING CURB AND GUTTER	
EXISTING CURB	
EXISTING PEDESTRIAN RAMP	
EXISTING SPOT ELEVATION	X 65.40
EXISTING SEWER LINE	S
EXISTING WATER MAIN	W
EXISTING FIRE HYDRANT	FH
EXISTING UTILITY BOX	
EXISTING ELECTRICAL LINE	E
EXISTING TELEPHONE LINE	T

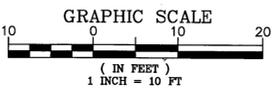
- GENERAL NOTES**
- THE CONTRACTOR SHALL NOTIFY DIGALERT (1-800-227-2600) AT LEAST TWO DAYS PRIOR TO STARTING WORK AND SHALL ARRANGE FOR AND COORDINATE SHUT DOWN, DISCONNECTION AND CAPPING OF EXISTING UTILITIES WITH THE APPROPRIATE UTILITY OWNERS PRIOR TO COMMENCING THE WORK.
 - PROTECT IN PLACE ALL EXISTING IMPROVEMENTS, STRUCTURES AND UNDERGROUND UTILITIES WHICH ARE TO REMAIN. MAINTAIN UTILITY SERVICES TO ALL EXISTING FACILITIES AT ALL TIMES, UNLESS OTHERWISE SPECIFIED.
 - THE LOCATION AND EXISTENCE OF EXISTING UNDERGROUND FACILITIES SHOWN ON THE DRAWINGS WERE OBTAINED FROM A SEARCH OF AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL POTHOLE EXISTING UTILITIES AT POINTS OF CONNECTIONS AND ALL UTILITY CROSSINGS TO DETERMINE EXACT LOCATION PRIOR TO STARTING ANY WORK.
 - COORDINATE LOCATION OF ALL UNDERGROUND UTILITIES AND STORM DRAINS WITH NEW TREE LOCATIONS, MECHANICAL/ELECTRICAL FACILITIES, AND OTHER INSTALLATIONS. REFER TO LANDSCAPE, PLUMBING, ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
 - ALL EXISTING "DRY" UTILITIES SHOWN HEREON ARE FOR INFORMATION PURPOSES ONLY. REFER TO ELECTRICAL PLANS AND APPROPRIATE UTILITY COMPANY PLANS FOR ANY WORK ON OR WITH THESE UTILITIES.
 - REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
 - WORK MAY OCCUR BEYOND THE LIMIT OF WORK LINE INDICATED ON THESE DRAWINGS. THIS ADDITIONAL WORK MAY INCLUDE, BUT IS NOT LIMITED TO, UTILITY INSTALLATION; FOOTING AND FOUNDATION CONSTRUCTION; TRENCH REPAIR; TRENCHING AND TRENCH RESURFACING; PCC/AC REPAIR; HARDSCAPE, LANDSCAPING AND/OR SHORING. IN ADDITION, REFER TO THE ARCHITECTURAL, STRUCTURAL, LANDSCAPING, MECHANICAL, PLUMBING AND ELECTRICAL SHEETS FOR ITEMS THAT MAY NOT BE SHOWN ON THIS SHEET.

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THE PROJECT, THAT I EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

WILLIAM RYAN LUND C36812 6/30/2012



FLC FLORES LUND CONSULTANTS
PROFESSIONAL ENGINEERS
7280 TRADE STREET, SUITE 120, SAN DIEGO, CALIFORNIA 92121
(619) 568-0888 FAX (619) 568-0827

DATE: 09/26/11
FLC PROJECT NO.: C1003
DESIGN BY: AKK, SLL
DRAWN BY: SLL
REVIEWED BY: MM/WRL

Platt/Whitelaw Architects, Inc.
4034 30th Street, SAN DIEGO CA 92104
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PROJECT
VISTA TERRACE POOL
ACCESSIBILITY IMPROVEMENTS

SHEET TITLE:
EXISTING CONDITIONS
PLAN

SHEET NUMBER:
C-1.0
SHEET 4 OF 47

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT

FOR CITY ENGINEER: *[Signature]* 3/3/12 DATE: 3/3/12
SUBMITTED BY: *[Signature]* PROJECT MANAGER

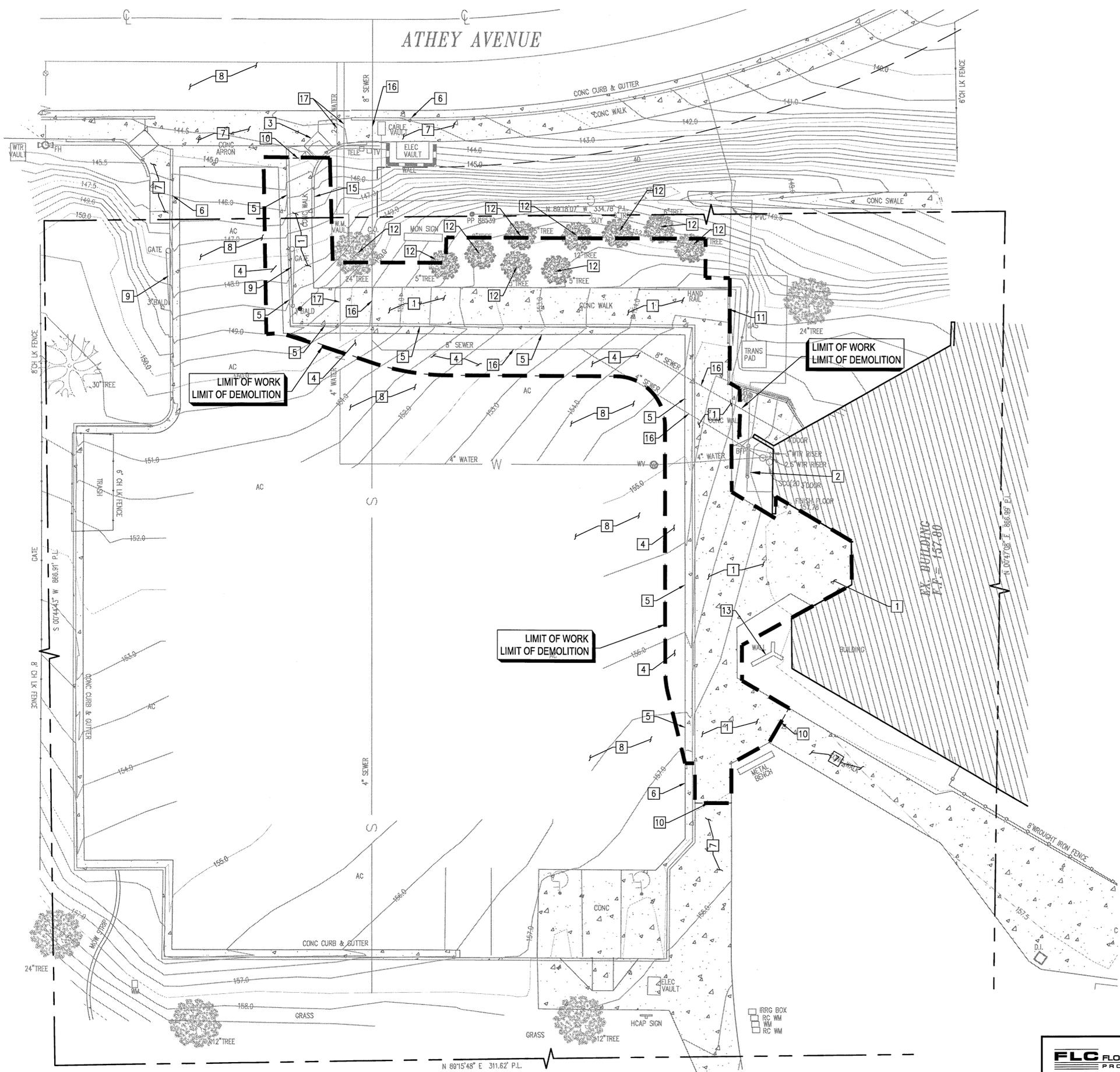
DESCRIPTION	BY	APPROVED	DATE	SCANNED
ORIGINAL PERMIT				

CONTRACTOR: _____ DATE STARTED: _____
INSPECTOR: _____ DATE COMPLETED: _____

146-1753
CCS27 COORDINATE
1787-6312
CCS83 COORDINATE

35609-04-D

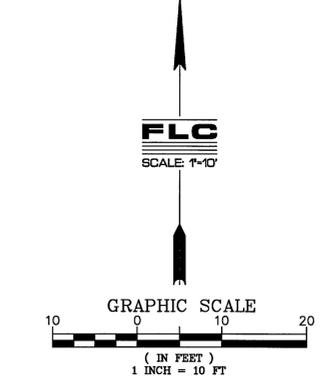
VISTA TERRACE POOL



DEMOLITION KEY NOTES	
1	SAWCUT, DEMOLISH AND REMOVE EXISTING CONCRETE PAVEMENT.
2	PROTECT IN PLACE EXISTING UTILITY CONNECTIONS. CONTRACTOR TO FIELD VERIFY LOCATION OF EACH UTILITY LINE AND COORDINATE WITH CITY OFFICIALS FOR ANY SHUT-OFF.
3	PROTECT IN-PLACE EXISTING PEDESTRIAN RAMP.
4	EXISTING AC PAVEMENT TO BE MILLED (3\"/>

DEMOLITION LEGEND	
ITEM	SYMBOL
PROPERTY LINE	---
EXISTING CONTOUR	~
EXISTING TREE	(Tree symbol)
EXISTING BRUSH	(Bush symbol)
EXISTING FENCE	--- ---
EXISTING BUILDING	(Hatched box)
EXIST. CONCRETE	(Dotted box)
EXISTING CURB AND GUTTER	(Double line)
EXISTING CURB	(Single line)
EXISTING PEDESTRIAN RAMP	(Trapezoid)
EXISTING SPOT ELEVATION	X 65.40
EXISTING SEWER LINE	---S---
EXISTING WATER MAIN	---W---
EXISTING FIRE HYDRANT	FH (Symbol)
EXISTING UTILITY BOX	(Box symbol)
EXISTING ELECTRICAL LINE	---E---
EXISTING TELEPHONE LINE	---T---
EXISTING GAS LINE	---G---

DEMOLITION NOTES	
1.	DEMOLISH AND REMOVE ALL EXISTING IMPROVEMENTS WITHIN LIMITS OF WORK UNLESS INDICATED OTHERWISE. KEYNOTES REFER TO TYPICAL ITEMS OF DEMOLITION AND ARE NOT ALL-INCLUSIVE.
2.	THE CONTRACTOR SHALL NOTIFY DIGALERT (1-800-227-2600) AT LEAST TWO DAYS PRIOR TO STARTING WORK AND SHALL ARRANGE FOR AND COORDINATE SHUT DOWN, DISCONNECTION AND CAPPING OF EXISTING UTILITIES WITH THE APPROPRIATE UTILITY OWNERS PRIOR TO COMMENCING THE WORK.
3.	PROTECT IN PLACE ALL EXISTING IMPROVEMENTS, STRUCTURES AND UNDERGROUND UTILITIES TO REMAIN.
4.	THE LOCATION AND EXISTENCE OF EXISTING UNDERGROUND FACILITIES SHOWN ON THE DRAWINGS WERE OBTAINED FROM A SEARCH OF AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL POTHOLE EXISTING UTILITIES AT POINTS OF CONNECTIONS AND ALL UTILITY CROSSINGS TO DETERMINE EXACT LOCATION PRIOR TO STARTING ANY WORK.
5.	COORDINATE LOCATION OF ALL UNDERGROUND UTILITIES AND STORM DRAINS WITH NEW TREE LOCATIONS, MECHANICAL/ELECTRICAL FACILITIES, AND OTHER INSTALLATIONS. REFER TO LANDSCAPE, PLUMBING, ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
6.	ALL EXISTING \"DRY\" UTILITIES SHOWN HEREON ARE FOR INFORMATION PURPOSES ONLY. REFER TO ELECTRICAL PLANS AND APPROPRIATE UTILITY COMPANY PLANS FOR ANY WORK ON OR WITH THESE UTILITIES.
7.	REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
8.	WORK MAY OCCUR BEYOND THE LIMIT OF WORK LINE INDICATED ON THESE DRAWINGS. THIS ADDITIONAL WORK MAY INCLUDE, BUT IS NOT LIMITED TO, UTILITY INSTALLATION; FOOTING AND FOUNDATION CONSTRUCTION; TRENCH REPAIR; TRENCHING AND TRENCH RESURFACING; PCC/AC REPAIR; HARDSCAPE; LANDSCAPING AND/OR SHORING. IN ADDITION, REFER TO THE ARCHITECTURAL, STRUCTURAL, LANDSCAPING, MECHANICAL, PLUMBING AND ELECTRICAL SHEETS FOR ITEMS THAT MAY NOT BE SHOWN ON THIS SHEET.



FLC FLORES LUND CONSULTANTS
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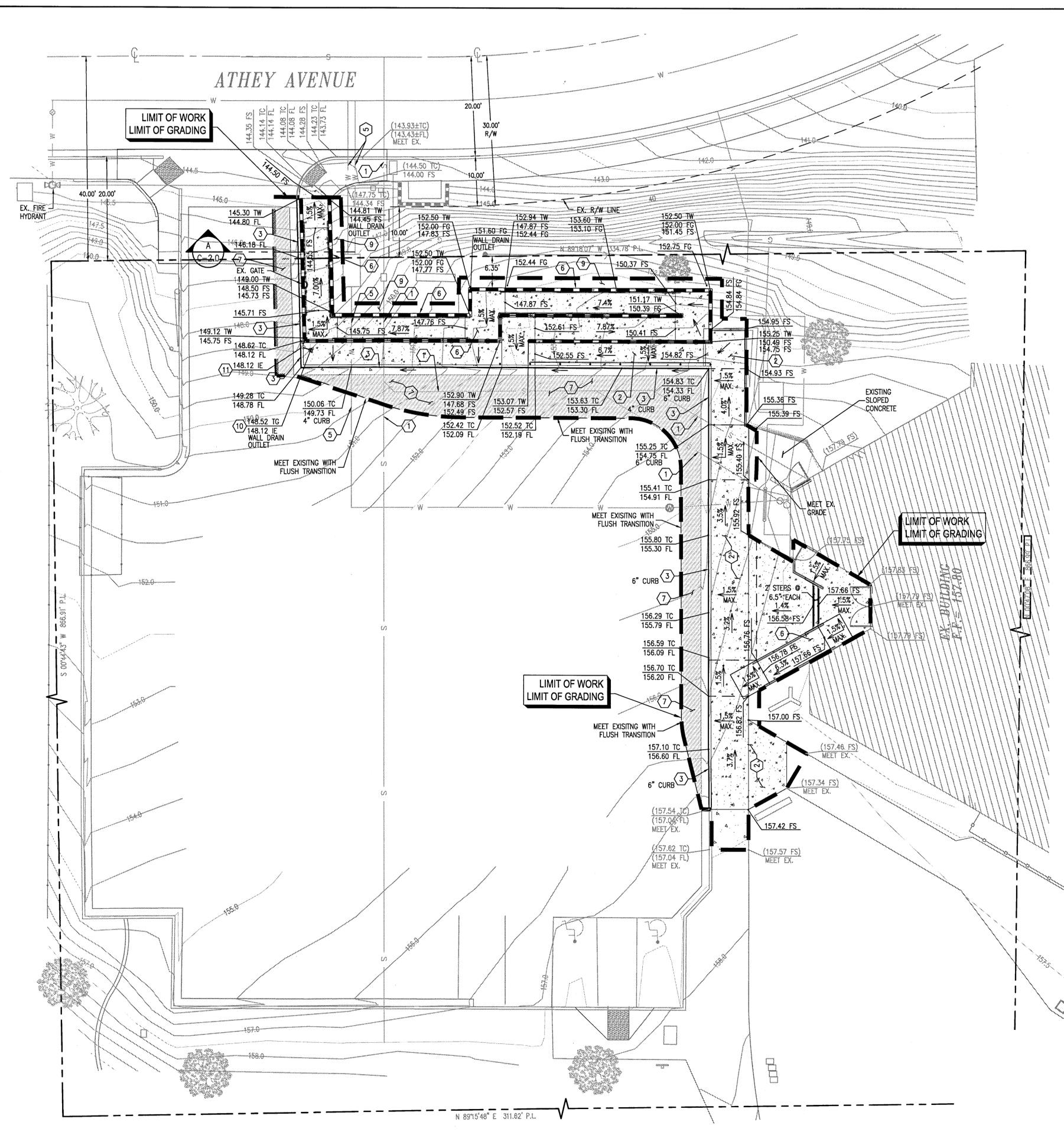
DATE: 09/26/11
FLC PROJECT NO. C1003
DESIGN BY: AKK, SLL
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REVIEWED BY: MM/WRL

Platt/Whitelaw Architects, Inc.
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PROJECT VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS	
SHEET TITLE OVERALL DEMOLITION PLAN	SHEET NUMBER C-1.1 SHEET 5 OF 47
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT	
FOR CITY ENGINEER: [Signature] 3/9/12	DATE: 3/9/12
SUBMITTED BY: [Signature]	
PROJECT MANAGER: [Signature]	
CONTRACTOR: 146-1753	
INSPECTOR: CCS27 COORDINATE	
1787-6312	
CCS83 COORDINATE	
35609-05-D	

VISTA TERRACE POOL



ACCESSIBILITY NOTES	
A.	COMPLY WITH THE REQUIREMENTS OF THE CALIFORNIA BUILDING CODE (2007 CBC) FOR ALL SITE IMPROVEMENTS.
B.	MAXIMUM CROSS SLOPE ON WALKWAYS SHALL BE 1.5%.
C.	NO CHANGES IN LEVEL GREATER THAN 1/2" SHALL BE ALLOWED WITHOUT A CURB RAMP. CHANGES IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN ONE UNIT VERTICAL IN 2 UNITS HORIZONTAL (50% SLOPE).
D.	CATCH BASIN AND DRAIN INLET GRATES SHALL HAVE SPACES NO GREATER THAN 1/2" WIDE IN ONE DIRECTION. IF GRATES HAVE ELONGATED OPENINGS, THEY SHALL BE PLACED SO THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.
E.	CURB RAMPS SHALL BE CONSTRUCTED AT EACH CORNER OF STREET INTERSECTIONS AND WHERE A PEDESTRIAN WAY CROSSES A CURB.
F.	ACCESSIBLE RAMPS AND HANDRAILS SHALL BE REQUIRED WHEREVER SLOPE EXCEEDS 5%. SLOPES OF RAMPS SHALL BE THE LEAST SLOPE POSSIBLE. MAXIMUM SLOPE SHALL BE 1:12. LEVEL LANDINGS SHALL BE INSTALLED AT TOP ON LESS THAN 60 INCHES WIDE AND SHALL HAVE A LENGTH NO LESS THAN 60 INCHES IN THE DIRECTION OF RAMP RUN. LANDINGS AT THE BOTTOM OF RAMPS SHALL HAVE A DIMENSION IN THE DIRECTION OF RAMP RUN OF NOT LESS THAN 72 INCHES. INTERMEDIATE LANDINGS AT INTERVALS NOT EXCEEDING 30" OF VERTICAL RISE. RAMPS AND LANDINGS WITH VERTICAL SIDE DROP-OFFS SHALL HAVE WALLS, RAILINGS, PROTECTIVE SURFACES OR MINIMUM 2" HIGH CURBS OR A WHEEL GUIDE RAIL 2 TO 4 INCHES HIGH ON EACH SIDE OF THE RAMP LANDING THAT HAS A VERTICAL DROP EXCEEDING 4 INCHES AND THAT IS NOT BOUNDED BY A WALL OR FENCE.
G.	ALL STAIRS SHALL HAVE A 2 INCHES WIDE TO A MAXIMUM OF 4 INCHES WIDE SLIP RESISTANT STRIPE PLACED PARALLEL TO, AND NOT MORE THAN 1 INCH FROM THE NOSE OF THE STEP OR UPPER APPROACH AND SHALL BE OF MATERIAL THAT IS AT LEAST AS SLIP RESISTANCE AS THE OTHER THREADS OF THE STAIR. A PAINTED STRIPE SHALL BE ACCEPTABLE.
H.	ALL PAVEMENT CROSS SLOPES (SLOPES PERPENDICULAR TO THE DIRECTION OF TRAVEL) SHALL BE A MAXIMUM OF 1.5%. SLOPES OF RAMPS SHALL BE THE LEAST SLOPE POSSIBLE ALL RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1:12. ALL LANDINGS AT STAIRS AND RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1.5% (ALL DIRECTIONS). ALL WALKWAYS SHALL HAVE A MAXIMUM SLOPE LESS THAN 5% IN THE DIRECTION OF TRAVEL. ALL MAXIMUM SLOPES ARE ABSOLUTE AND SUPERSIDE CONSTRUCTION TOLERANCES STATED IN THE PROJECT SPECIFICATION OR ELSEWHERE. THE CONTRACTOR HAS THE OPTION OF ADJUSTING GRADES TO ALLOW FOR CONSTRUCTION TOLERANCE BUT SHALL NOT ADJUST GRADES TO LESS THAN 1% SLOPE OR GREATER THAN 2% SLOPE. THE CONTRACTOR SHALL CONTACT THE ARCHITECT REGARDING ANY GRADE REVISIONS PRIOR TO CONSTRUCTION OF PAVEMENT AREAS. THE PAVEMENT SLOPES WILL BE REVIEWED AFTER CONSTRUCTION AND PAVEMENT OVER THE MAXIMUM SLOPES SPECIFIED ABOVE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

LEGEND	
ITEM	SYMBOL
PROPERTY LINE	---
APPROX. LIMIT OF WORK	---
PROPOSED CONTOUR	-----460
PROPOSED PCC PAVEMENT	-----
PROPOSED CURB AND GUTTER	-----
PROPOSED STORM DRAIN (PVT)	-----SD
PROPOSED CLEANOUT	-----CO
PROPOSED POINT OF CONNECTION	-----
PROPOSED TOP OF CURB ELEV.	77.00 TC
PROPOSED FINISHED SURFACE/ FLOW LINE	76.50 FS/FL
PROPOSED INVERT ELEV.	77.00 RM
PROPOSED RIM ELEV.	69.00 IE

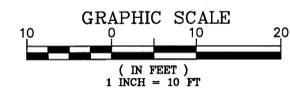
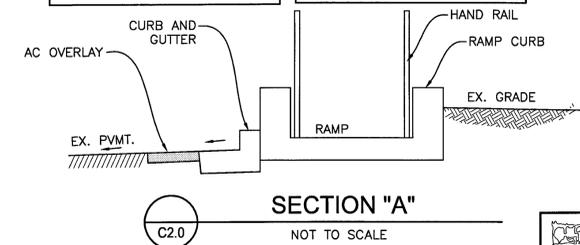
ABBREVIATIONS			
AC	ASPHALTIC CONCRETE	PCC	POINT OF CONNECTION
FG	FINISH GRADE	V	UTILITY VALVE
FS	FINISH SURFACE	MH	MANHOLE (SEWER, STORM DRAIN, UTILITY)
FL	FLOW LINE	PVC	POLYVINYL CHLORIDE (PIPE MATERIAL)
TC	TOP OF CURB	DWG	DRAWING
TW	TOP OF WALL	REC	RECORD/RECORDED
BFP	BACK FLOW PREVENTOR	ELEC	ELECTRIC/ELECTROCAL
PW	POST INDICATOR VALVE	SDRSD	SAN DIEGO REGIONAL STANDARD DRAWINGS
FDC	FIRE DEPARTMENT CONNECTION	P.C.C.	PORTLAND CEMENT CONCRETE
RM	RIM ELEVATION	SWR	SEWER
BW	BOTTOM OF WALL	EXIST	EXISTING
WTR	WATER	IE	INVERT ELEVATION
FW	FIRE WATER		

GENERAL NOTES	
1.	THE CONTRACTOR SHALL NOTIFY DIGALERT (1-800-227-2600) AT LEAST TWO DAYS PRIOR TO STARTING WORK AND SHALL ARRANGE FOR AND COORDINATE SHUT DOWN, DISCONNECTION AND CAPPING OF EXISTING UTILITIES WITH THE APPROPRIATE UTILITY OWNERS PRIOR TO COMMENCING THE WORK.
2.	PROTECT IN PLACE ALL EXISTING IMPROVEMENTS, STRUCTURES AND UNDERGROUND UTILITIES WHICH ARE TO REMAIN. MAINTAIN UTILITY SERVICES TO ALL EXISTING FACILITIES AT ALL TIMES, UNLESS OTHERWISE SPECIFIED.
3.	THE LOCATION AND EXISTENCE OF EXISTING UNDERGROUND FACILITIES SHOWN ON THE DRAWINGS WERE OBTAINED FROM A SEARCH OF AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL POTHOLE EXISTING UTILITIES AT POINTS OF CONNECTIONS AND ALL UTILITY CROSSINGS TO DETERMINE EXACT LOCATION PRIOR TO STARTING ANY WORK.
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KEY NOTES	
1	PROTECT IN-PLACE EXISTING SEWER MAIN. POTHOLE AN FIELD VERIFIED (EXACT VERTICAL AND HORIZONTAL LOCATION) PRIOR TO STARTING ANY WORK. REFER TO STRUCTURAL PLANS FOR ENCASEMENT AND SLEEVE DETAILS.
2	FURNISH AND INSTALL 4" THICK PCC CONCRETE HARDSCAPE.
3	FURNISH AND INSTALL CURB AND GUTTER PER SDRSD G-2.
5	PROTECT IN-PLACE EXISTING WATER MAIN. POTHOLE AN FIELD VERIFIED (EXACT VERTICAL AND HORIZONTAL LOCATION) PRIOR TO STARTING ANY WORK. REFER TO STRUCTURAL PLANS FOR SLEEVE DETAILS.
6	FURNISH AND INSTALL CONCRETE ADA COMPLIANT RAMP. SEE ARCHITECTURAL AND STRUCTURAL FOR DETAILS.
7	3"+ AC PAVEMENT TO BE OVERLAYED ON EXISTING PAVEMENT, MAKE SMOOTH TRANSITION.
9	REGRADE SURFACE TO LIMIT OF WORK LINE TO PROVIDE DRAINAGE AWAY FROM RAMP AND TO EXISTING DRAINAGE PATTERN.
10	6" DIA. GALVANIZED IRON AREA DRAIN.
11	3" DIA. CURB OUTLET PER SDRSD D-27.

NOTE:
CONTOURS ARE DRAWN AT 6 INCH INTERVALS

NOTE:
PROPERTY LINE AND R/W INFORMATION PER RECORD DRAWING #14333-D DATED: 06-04-71



FLC
SCALE: 1"=10'

FLC FLORES LUND CONSULTANTS
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DATE: 09/26/11
FLC PROJECT NO.: C1003
DESIGN BY: AKK, SLL
DRAWN BY: SLL
REVIEWED BY: MM/WRL

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PROJECT
VISTA TERRACE POOL
ACCESSIBILITY IMPROVEMENTS

SHEET TITLE
OVERALL GRADING AND
UTILITY PLAN

SHEET NUMBER
C-2.0
SHEET 6 OF 47

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT

WBS B-00933

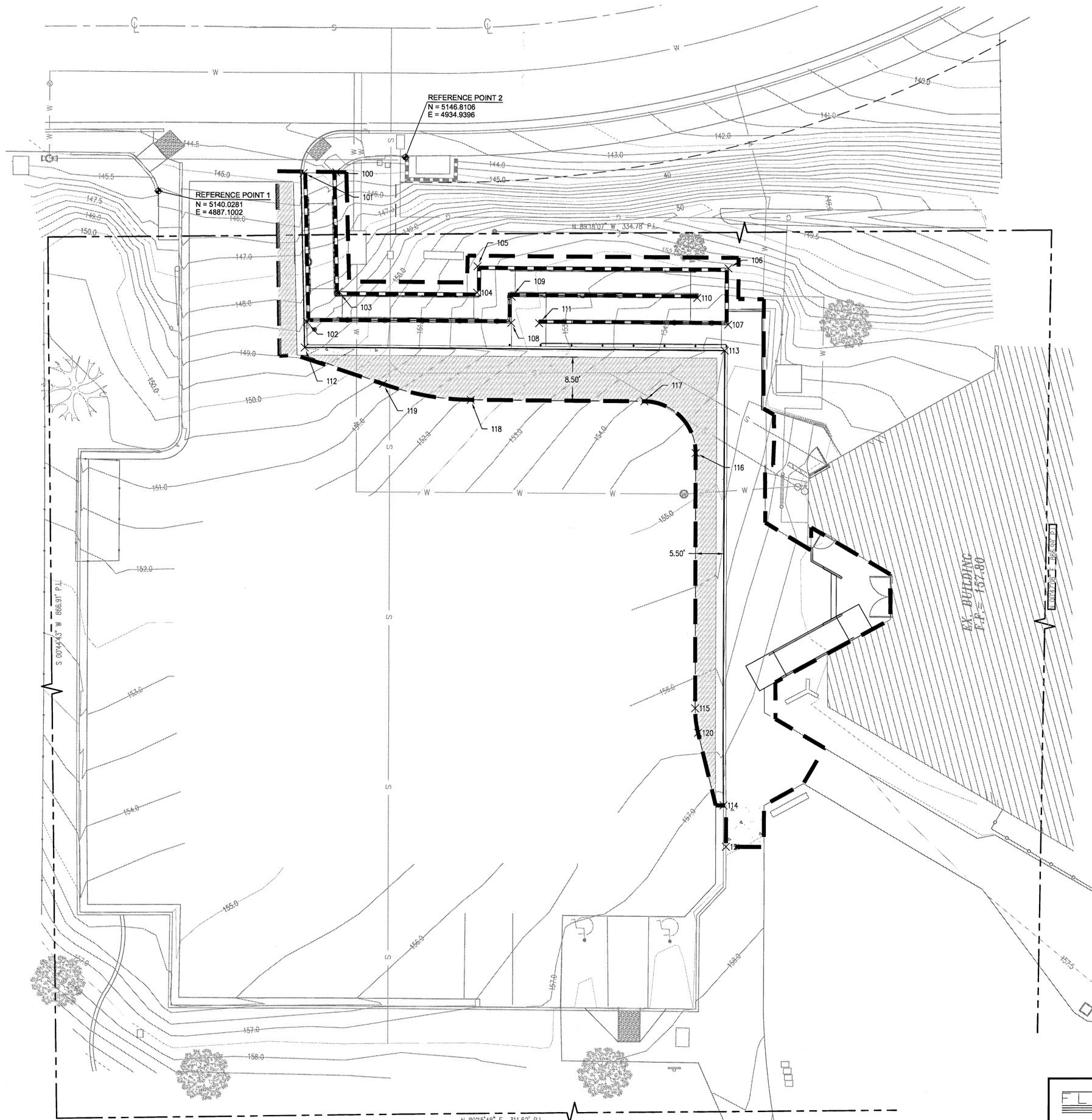
FOR CITY ENGINEER: *[Signature]* 3/12/12
DATE: 3/12/12
PROJECT MANAGER: *[Signature]*

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CONTRACTOR: _____ DATE STARTED: _____
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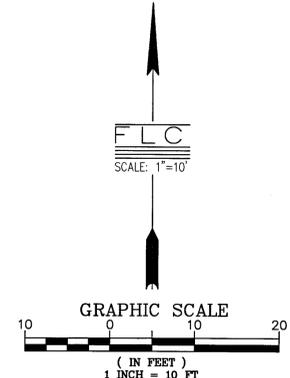
146-1753
CCS27 COORDINATE
1787-6312
CCS83 COORDINATE
35609-06-D

VISTA TERRACE POOL



REFERENCE POINTS	
REFERENCE POINT 1 =	SOUTHEAST CORNER OF BEGINNING OF CURB.
REFERENCE POINT 2 =	NORTHWEST CORNER OF BEGINNING OF WALL.

COORDINATE LIST			
PT. NO.	NORTHING	EASTING	DESCRIPTION
100	5143.8295	4921.5391	WALL
101	5143.6626	4915.2080	WALL
102	5114.8034	4915.9656	WALL
103	5120.6596	4922.1769	WALL
104	5120.6203	4948.9816	WALL
105	5125.7242	4949.0517	WALL
106	5125.6656	4997.6378	WALL
107	5114.7281	4997.6378	WALL
108	5114.7784	4955.6328	WALL
109	5119.8825	4955.7034	WALL
110	5119.9025	4981.6377	WALL
111	5114.7699	4961.0288	WALL
112	5109.8200	4915.6096	CURB AND GUTTER
113	5109.6880	4996.9930	CURB AND GUTTER
114	5021.3150	4997.0734	CURB AND GUTTER
115	5040.0947	4991.5316	PAVEMENT OVERLAY
116	5089.7291	4991.4524	PAVEMENT OVERLAY
117	5099.7132	4981.4686	PAVEMENT OVERLAY
118	5099.7676	4947.8386	PAVEMENT OVERLAY
119	5102.7829	4930.8185	PAVEMENT OVERLAY
120	5035.3353	4992.1140	PAVEMENT OVERLAY
121	5013.3190	4997.5752	PCC HARDSCAPE



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PROJECT: VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

SHEET TITLE: OVERALL HORIZONTAL CONROL PLAN
 SHEET NUMBER: C-3.0
 SHEET 7 OF 47

CITY OF SAN DIEGO, CALIFORNIA
 ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
 WBS: B-00933

FOR CITY ENGINEER: [Signature] 3/9/12
 PROJECT MANAGER: [Signature]

DESCRIPTION	BY	APPROVED	DATE	SCANNED
ORIGINAL PERMIT				

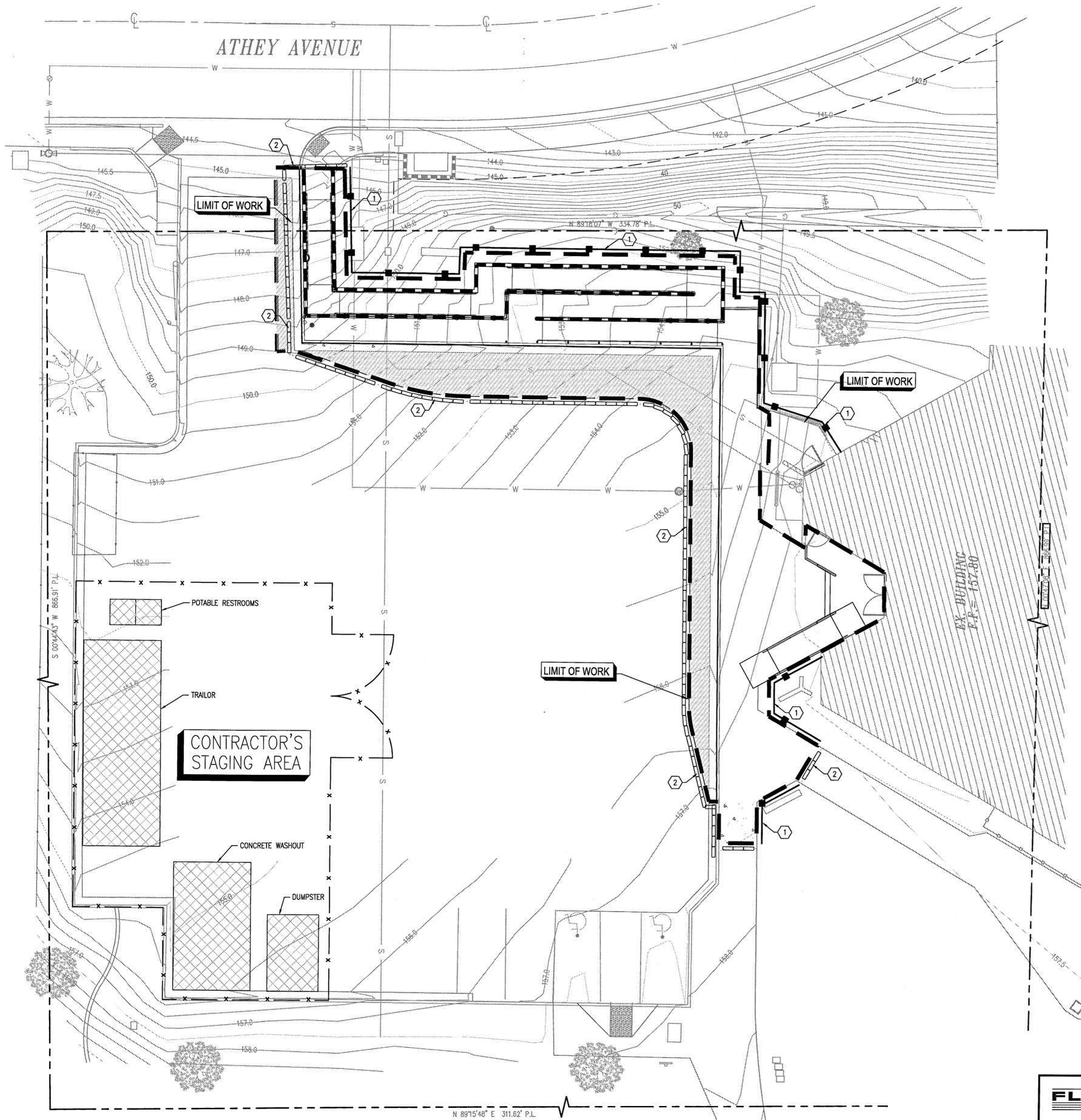
FLC FLORES LUND CONSULTANTS
 PROFESSIONAL ENGINEERS
 7220 TRADE STREET, SUITE 120, SAN DIEGO, CALIFORNIA 92121
 (858) 566-0626 FAX (858) 566-0627

DATE: 09/26/11
 FLC PROJECT NO.: C1003
 DESIGN BY: AKK, SLL
 DRAWN BY: SLL
 REVIEWED BY: MM/WRL

CONTRACTOR: _____ DATE STARTED: _____
 INSPECTOR: _____ DATE COMPLETED: _____

146-1753
 CCS27 COORDINATE
 1787-6312
 CCS83 COORDINATE

VISTA TERRACE POOL



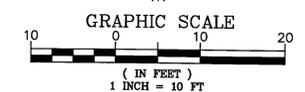
EROSION CONTROL NOTES

1. THE CONTRACTOR SHALL OBTAIN, READ, AND IMPLEMENT ALL PORTIONS OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) OR STORM WATER POLLUTION CONTROL PLAN (SWPCP).
2. THE CONTRACTOR IS RESPONSIBLE FOR DOING WEEKLY, PRE-STORM, MID-STORM, AND POST-STORM INSPECTIONS IN ACCORDANCE WITH THE SWPPP/SWPCP.
3. THE CONTRACTOR IS RESPONSIBLE FOR TRAINING SUBCONTRACTORS AT LEAST ONCE A MONTH OR AS NEW SUBCONTRACTORS MOBILIZE ONSITE. TRAINING SHALL BE RECORDED IN THE SWPPP/SWPCP.
4. PRIOR TO THE START OF DEMOLITION OR EARTHMOVING ACTIVITIES, THE CONTRACTOR SHALL INSTALL ALL PERIMETER CONTROLS AND THE CONSTRUCTION ENTRANCE PER THE PLANS.
5. THE CONTRACTOR SHALL INSTALL PROTECTION AROUND ANY EXISTING INLETS WITHIN THE PROJECT AREA AND PUBLIC RIGHT-OF-WAY.
6. DURING THE NON-RAINY SEASON, THE CONTRACTOR SHALL STORE ADEQUATE SEDIMENT CONTROL MATERIALS ONSITE TO CONTROL DISCHARGES AT THE DOWNGRADE PERIMETER AND OPERATIONAL INLETS IN THE EVENT OF A PREDICTED STORM.
7. EQUIPMENT AND WORKERS SHALL BE AVAILABLE FOR EMERGENCY WORK AT ALL TIMES DURING THE RAINY SEASON. ALL NECESSARY MATERIALS SHALL BE STOCKPILED ONSITE AT CONVENIENT LOCATIONS TO FACILITATE THE RAPID INSTALLATION/CONSTRUCTION OF TEMPORARY EROSION CONTROL MEASURES WHEN RAIN IS IMMINENT.
8. CLEARING AND GRUBBING SHALL BE DONE ONLY IN AREAS WHERE EARTHWORK WILL BE PERFORMED AND ONLY IN AREAS WHERE CONSTRUCTION IS PLANNED TO COMMENCE WITHIN 14 DAYS AFTER CLEARING AND GRUBBING OPERATIONS HAVE CEASED.
9. DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR MORE THAN 14 DAYS SHALL BE TEMPORARILY STABILIZED WITH HYDROSEEDING, HYDROMULCHING, OR WITH A BIODEGRADABLE FIBER MATRIX.
10. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL MEASURES AS NEEDED OR AS REQUESTED BY A CITY OFFICIAL, THE OWNER'S ENGINEER, AND/OR REGULATORY AGENCY INSPECTOR.
11. THE CONTRACTOR SHALL BE RESPONSIBLE AND TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS INTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.

LEGEND

SYMBOL	DESCRIPTION	BMP*	LOCATION
①	SILT FENCE	SC-1	AS INDICATED, AND AT TOES OF ALL SLOPES GREATER THAN 15 FT. HIGH
②	GRAVEL BAGS	SC-6	AS INDICATED, AND AT TOPS AND TOES OF ALL SLOPES, INCLUDING TEMPORARY SLOPES
③	FIBER ROLLS	SC-5	AS INDICATED, AND AS REQUIRED TO DIRECT RUNOFF TOWARDS STORM DRAIN
④	TOP AND TOE OF SLOPE DIVERSION DITCH	SS-9	AS INDICATED, AND AT ANY OTHER ACCESS POINTS FOR CONSTRUCTION VEHICLES
⑤	STABILIZED CONSTRUCTION ENTRANCE	TC-1 TYPE 2	AS INDICATED, AND AT ANY OTHER ACCESS POINTS FOR CONSTRUCTION VEHICLES
TYP.	STORM DRAIN INLET PROTECTION	SC-10	ALL STORM DRAIN INLETS

*REFERS TO CAL TRANS CONSTRUCTION SITE BEST MANAGEMENT PRACTICES MANUAL (MARCH 2003)



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PROJECT
VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

SHEET TITLE: OVERALL EROSION CONTROL PLAN
SHEET NUMBER: C-4.0
 SHEET 8 OF 47

CITY OF SAN DIEGO, CALIFORNIA
 ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
 WBS B-00933

FOR CITY ENGINEER: [Signature] 3/13/12 DATE: 3/13/12
 SUBMITTED BY: [Signature] PROJECT MANAGER: [Signature]

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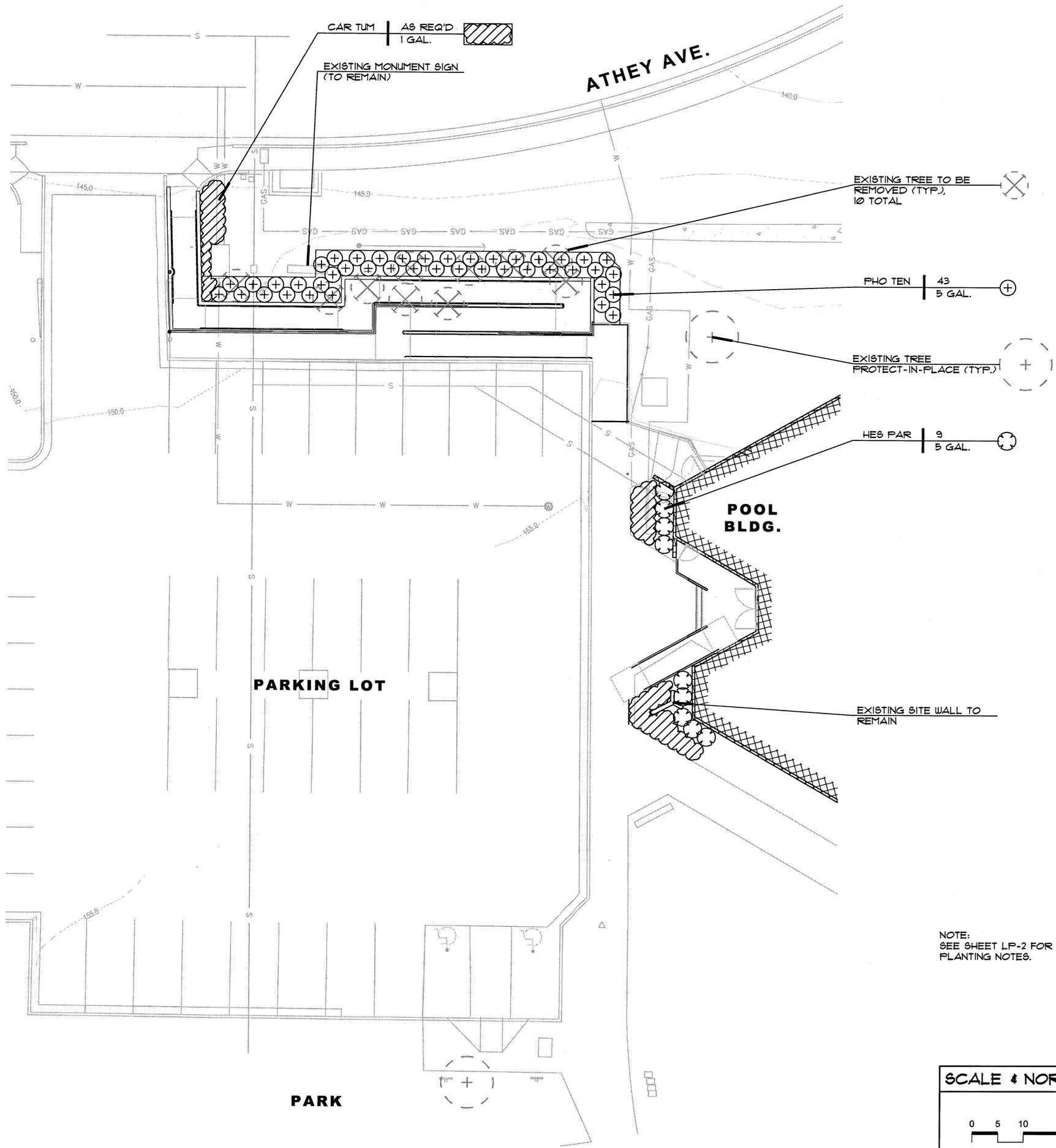
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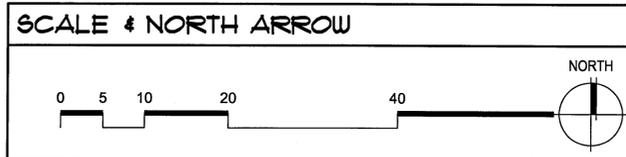
7220 TRADE STREET, SUITE 120, SAN DIEGO, CALIFORNIA 92121
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DATE: 09/26/11
 FLC PROJECT NO: C1003
 DESIGN BY: AKK, SLL
 DRAWN BY: SLL
 REVIEWED BY: MM/WRL

VISTA TERRACE POOL



NOTE:
SEE SHEET LP-2 FOR PLANT MATERIAL LEGEND AND
PLANTING NOTES.

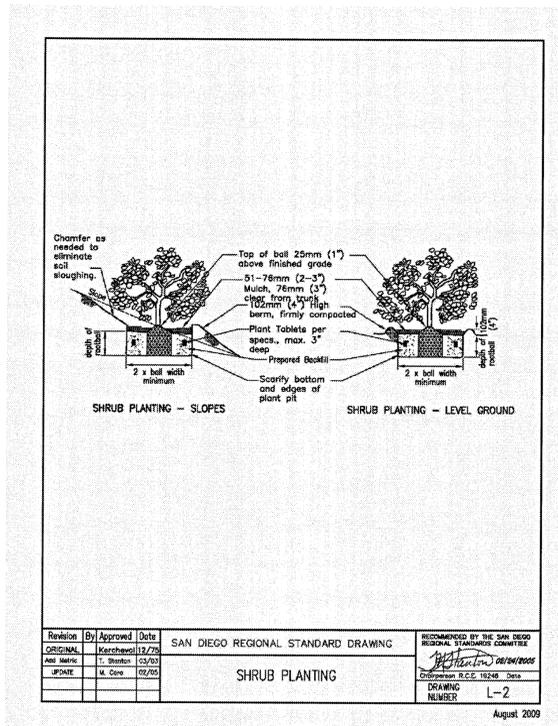


 <p>3916 Normal Street San Diego, CA 92103 619.294.4477 fax • 619.294.9965</p> <p>Planning + Landscape Architecture</p>		
PROJECT VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS		
SHEET TITLE PLANTING PLAN		SHEET NUMBER LP-1 SHEET 09 OF 41
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT		WBS B-00933
FOR CITY ENGINEER: <i>[Signature]</i> DATE: 3/9/12		SUBMITTED BY: <i>[Signature]</i> PROJECT MANAGER
ORIGINAL PERMIT	BY	APPROVED DATE BONDED
CONTRACTOR	DATE STARTED	DATE COMPLETED
		146-1753 CCS27 COORDINATE 1787-6312 CCS83 COORDINATE 35609-09-D

VISTA TERRACE POOL

PLANT MATERIAL LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	MIN. HEIGHT	MIN. SPREAD	REMARKS	SDRSD DETAIL	
SHRUBS								
	CAR TUM	CAREX TUMULICOLA	BERKELEY SEDGE	1 GAL	12"	15'	FULL CLUMPS, GOOD COLOR	L-2
	HE6 PAR	HESPERALOE PARVIFLORA	RED YUCCA	5 GAL	15'-18"	12'-15'	FULL AND BUSHY, GOOD COLOR	L-2
	PHO TEN	PHORMIUM TENAX 'BRONZE BABY'	NEW ZEALAND FLAX	5 GAL	9"	9'	FULL AND BUSHY, GOOD COLOR	L-2



PLANTING NOTES

- IF ANY EXISTING LANDSCAPE INDICATED ON PLANS IS DAMAGED OR REMOVED DURING DEMOLITION OR CONSTRUCTION, IT SHALL BE REPAIRED OR REPLACED IN KIND WITH EQUIVALENT SIZE PER THE APPROVED PLANS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION AND SURVIVAL OF EXISTING TREES TO REMAIN. DO NOT DISTURB ROOTS OR CANOPY DURING CONSTRUCTION. ALL EXISTING ROOT ZONE TO BE LEFT IN PLACE.
- CONTRACTOR TO INFORM RESIDENT ENGINEER IMMEDIATELY OF ANY CHANGED CONDITIONS WHICH OCCUR ON PROJECT SITE WHICH ARE NOT REFLECTED ON PLANS.
- SHRUBS SHALL BE LOCATED AND MAINTAINED TO PRESERVE A CLEAR ZONE OF AT LEAST TEN-FEET FROM FIRE HYDRANTS, UTILITY POLES, OVERHEAD UTILITY WIRES, STREET LIGHT LUMINARIES AND ABOVE GROUND UTILITY STRUCTURES, SUCH AS TRANSFORMER ENCLOSURES.
- ALL PLANTING AREAS WITH SLOPES LESS THAN 3:1, SHALL RECEIVE A MINIMUM 2' THICK LAYER OF BARK MULCH. SEE SPECS.
- CONTRACTOR SHALL SUBMIT PHOTOS OR ARRANGE PLANT SELECTION WITH RESIDENT ENGINEER OF ALL SHRUBS. SUPPLY NAME OF NURSERY/SUPPLIER TO RESIDENT ENGINEER.
- THE LANDSCAPE AREAS SHALL BE MAINTAINED FREE OF DEBRIS AND LITTER AND ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION. DISEASED OR DEAD PLANT MATERIAL SHALL BE SATISFACTORILY TREATED OR REPLACED PER THE CONDITIONS OF THE PERMIT.
- ALL LANDSCAPE AND IRRIGATION REQUIRED BY THIS PERMIT SHALL CONFORM TO THE CITY OF SAN DIEGO'S LANDSCAPE REQUIREMENTS SECTION 142.0400, THE LAND DEVELOPMENT MANUAL LANDSCAPE STANDARDS, AND ALL OTHER LANDSCAPE RELATED CITY AND REGIONAL STANDARDS.



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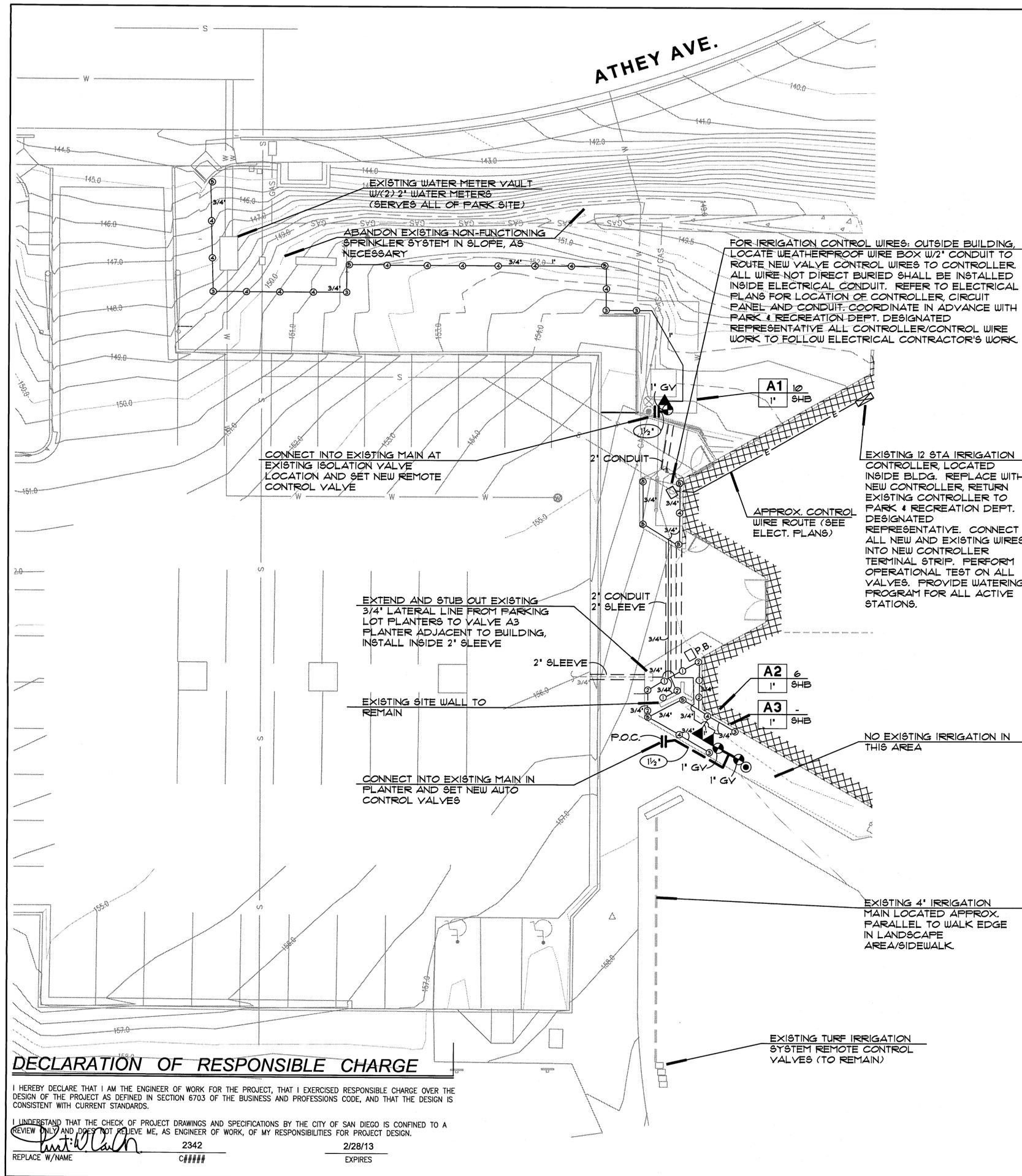


No. 2342
Exp. 2/28/13
STATE OF CALIFORNIA

PROJECT
VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

SHEET TITLE: PLANTING LEGEND, DETAILS & NOTES	SHEET NUMBER: LP-2 SHEET 10 OF 41
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT	WBS B-00933
FOR CITY ENGINEER	SUBMITTED BY
BY	DATE
APPROVED	DATE
REMARKS	PROJECT MANAGER
ORIGINAL PERMIT	
	146-1753
	CCS27 COORDINATE
	1787-6312
	CCS83 COORDINATE
CONTRACTOR	DATE STARTED
INSPECTOR	DATE COMPLETED
	35609-10 -D

VISTA TERRACE POOL



IRRIGATION NOTES

GENERAL IRRIGATION NOTES

- THE PROPOSED IRRIGATION SYSTEM IS DESIGNED TO REPLACE EXISTING IRRIGATION SYSTEMS WITHIN THE CONSTRUCTION AREA. COMPLETE DEMOLITION OF EXISTING SYSTEM SHALL OCCUR WITHIN CONSTRUCTION AREA AS IT PERTAINS TO LATERAL LINES, VALVES AND SPRINKLERS. THE EXACT LOCATION OF EXISTING EQUIPMENT MAY BE DIFFERENT FROM THAT SHOWN. PRIOR TO DEMOLITION, CONSTRUCTION OR EXCAVATION, FIELD VERIFY ALL EXISTING LOCATIONS OF IRRIGATION EQUIPMENT AND LINES.
- IRRIGATION MAINLINE, WIRE, VALVES AND CONTROLLERS WHICH SERVE PORTIONS OF THE CONSTRUCTION AREA OUTSIDE OF THE PROJECT SITE SHALL REMAIN OPERATIONAL. SOME PORTION OF WATER SUPPLY LINES AND ELECTRICAL WIRES MAY PASS THROUGH THE CONSTRUCTION SITE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT AND COORDINATE ALL WORK WITH THE CITY OF SAN DIEGO PARK AND RECREATION GROUNDSKEEPING PERSONNEL PRIOR TO, AND THROUGHOUT THE CONSTRUCTION PROCESS.
- PROTECT IRRIGATION SYSTEMS TO REMAIN AND MAKE ANY ADJUSTMENTS NECESSARY AND AS DIRECTED ON PLANS FOR COMPLETE IRRIGATION COVERAGE. ANY DAMAGE TO EXISTING LANDSCAPE OR IRRIGATION CAUSED BY OPERATIONS OF CONTRACTOR SHALL BE REPAIRED TO ORIGINAL CONDITION AT CONTRACTOR'S EXPENSE.
- EXERCISE CARE WHEN TRENCHING AROUND EXISTING LANDSCAPE AND PROTECT EXISTING LANDSCAPE DURING ALL PHASES OF WORK. WHEN ENCOUNTERED, HAND TRENCH AROUND EXISTING TREE ROOTS OVER 2" IN DIAMETER. ALL DISTURBED AREAS SHALL MATCH APPEARANCE OF ADJACENT AREAS AT END OF WORK.
- INSPECT THE PROJECT SITE PRIOR TO BEGINNING WORK, AND TO THE BEST OF ABILITIES, AND WITH THE ASSISTANCE OF CITY OF SAN DIEGO PARK AND RECREATION LANDSCAPE PERSONNEL, DETERMINE WHICH EXISTING IRRIGATION FACILITIES ARE AFFECTED BY DEMOLITION/CONSTRUCTION OF SITE IMPROVEMENTS.
- TAKE APPROPRIATE ACTION PRIOR TO DEMOLITION, TO ENSURE THAT EXISTING PRESSURIZED WATER LINES, VALVES, LATERAL LINES AND IRRIGATION CONTROL WIRES ARE PROPERLY DISCONNECTED, RELOCATED AND/OR CAPPED TO PREVENT WATER SPILLAGE OR POTENTIAL HAZARDS.
- HAVE A QUALIFIED PERSON ON SITE DURING DEMOLITION TO ENSURE THAT EXISTING IRRIGATION FACILITIES. A CITY OF SAN DIEGO PARK AND RECREATION RESIDENT ENGINEER OR OTHER DESIGNATED CITY REPRESENTATIVE SHALL ALSO BE PRESENT WHILE THIS WORK OCCURS.
- OBTAIN APPROVAL FROM THE DESIGNATED CITY REPRESENTATIVE FOR RELOCATION OF EXISTING FACILITIES PRIOR TO CONSTRUCTION.
- VERIFY EXACT LOCATIONS AND STAKE ALL DISCONNECTED, CAPPED OR RELOCATED FACILITIES IN THE FIELD AFTER DEMOLITION HAS BEEN COMPLETED.
- THE PROPOSED IRRIGATION SYSTEMS ARE TO BE DESIGNED ACCORDING TO AN EXISTING WATER PRESSURE OF 102 PSI (±10) AVAILABLE AT THE EXISTING BACKFLOW IRRIGATION PREVENTER (REFERENCE: CITY OF SAN DIEGO PARK AND RECREATION LANDSCAPE PERSONNEL). A MINIMUM OF 30 PSI IS REQUIRED AT THE SPRINKLER HEADS.

IRRIGATION LEGEND

SYMBOL	DESCRIPTION	MANUFACTURER/MODEL NUMBER	REMARKS	SDRS&D
---	EXISTING PRESSURE MAIN	--	VERIFY EXACT LOCATION & SIZE	-
----	EXISTING LATERAL LINE	--	VERIFY EXACT LOCATION & SIZE	-
⊗	EXISTING ISOLATION VALVE	--	VERIFY EXACT LOCATION & SIZE	-
⊙	EX. QUICK COUPLING VALVE	--	VERIFY EXACT LOCATION & SIZE	-
NO SYM.	LOCKING CAP	WEATHERMATIC 906L	GLOBE VALVE ACCESS SLEEVE CAP	1-13
NO SYM.	WIRE SPLICE CONN.	SPEARS #100 W/ #300 SEALANT	FOR ALL BELOW GRADE SPLICES	1-16
⊠	IRRIGATION CONTROLLER	IRRITROL MC-18E	REPLACE EXISTING UNIT	1-18
□ P.B.	FULL BOX	SAN DIEGO PRECAST 3HL	FOR LOW VOLTAGE WIRES	1-15
▲	REMOTE CONTROL VALVE	GRISWOLD DW-PRV	SIZE AS NOTED	1-14, 1-33
●	GLOBE VALVE	BUCKNER 22000	SIZE AS NOTED	1-13, 1-33
⊙	QUICK COUPLING VALVE	RAIN BIRD #44LRC	PER DETAIL	1-5, 1-33
---	PRESSURE SUPPLY LINE	JM EAGLE - PVC SCH 40	FOR PIPE 1/2" AND SMALLER	1-25
----	NON-PRESSURE LATERAL LINE	JM EAGLE - PVC SCH 40	FOR PIPE 3/4" (MIN.) AND LARGER	1-25
---	PVC SLEEVE (FOR WATER LINE)	PVC SCH 40 WHITE	FOR PIPE UNDER HARDSCAPE	1-16, 1-25
---	PVC CONDUIT (FOR WIRES)	PVC SCH 40 GREY	FOR WIRES UNDER HARDSCAPE	1-16, 1-25

SYMBOL	DESCRIPTION	MANUFACTURER/MODEL NO./ NOZZLE	RADIUS	PSI	GPM	SDRS&D
⊙	12" POP-UP SPRAY (IN SHRUB)	RAIN BIRD 1812 SAM-5H	3'-5"	30	20	1-3
⊙	12" POP-UP SPRAY (IN SHRUB)	RAIN BIRD 1812 SAM-6V	4'-6"	30	VAR	1-3
⊙	12" POP-UP SPRAY (IN SHRUB)	RAIN BIRD 1812 SAM-8Q	6'-8"	30	26	1-3
⊙	12" POP-UP SPRAY (IN SHRUB)	RAIN BIRD 1812 SAM-8H	6'-8"	30	52	1-3
⊙	12" POP-UP SPRAY (IN SHRUB)	RAIN BIRD 1812 SAM-8VAN	6'-8"	30	VAR	1-3

NOTE:
SDRS&D = SAN DIEGO REGIONAL STANDARD DRAWINGS, 2010 EDITION.
SEE SHEET LI-2 FOR DETAILS.

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THE PROJECT, THAT I EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

REPLACE W/NAME: *Paul W. Calkins* 2342 2/28/13 EXPIRES

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LANDSCAPE ARCHITECT
No. 2342
Exp. 2/28/13
STATE OF CALIFORNIA

PROJECT
VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

SHEET TITLE:
IRRIGATION PLAN, LEGEND & NOTES

SHEET NUMBER:
LI-1
SHEET 11 OF 47

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT

WBS: B-00933

FOR CITY ENGINEER: *[Signature]* 3/9/13 DATE: *[Signature]* PROJECT MANAGER

CONTRACTOR: DATE STARTED: 146-1753
INSPECTOR: DATE COMPLETED: CCS27 COORDINATE
1787-6312
CCS83 COORDINATE
35609-11-D

SCALE & NORTH ARROW



VISTA TERRACE POOL

CONTRACTOR SHALL PROVIDE WORK FOR NEW POOL LIFT, SEE DETAIL 5 ON A-502 FOR POOL LIFT DETAIL WORK

DRINKING FOUNTAIN
BASE BID

HAZARDOUS ABATEMENT

- HAZARDOUS MATERIAL SHALL BE CONSIDERED PRESENT
- HAZARDOUS ABATEMENT SHALL BE PROVIDED BY CITY CONTRACTOR,
- GENERAL CONTRACTOR TO COORDINATE WITH RESIDENT ENGINEER AND PROVIDE ALL REQUIRED PERMITS AND APPROVALS.

DEMO PLAN - KEY NOTES

- REMOVE DRINKING FOUNTAIN - COORDINATE REPLACEMENT FIXTURES WITH ARCHITECTURAL AND PLUMBING DRAWINGS
- REMOVE PLUMBING FIXTURES - COORDINATE REPLACEMENT FIXTURES WITH ARCHITECTURAL AND PLUMBING DRAWINGS
- REMOVE TOILET PARTITIONS, MOUNTINGS, BRACES AND ALL ACCESSORIES
- REMOVE WALLS, COORDINATE UTILITIES WITH ELECTRICAL, ARCHITECTURAL AND PLUMBING DRAWINGS
- REMOVE FLOOR TILE, ADHESIVE, COATINGS AND BASE TILE IN HATCHED AREAS, PREPARE FOR FLOOR COATING & NEW BASE
- REMOVE BENCHES AND BRACKETS, HANGER ROD AND MOUNTING, PATCH AND PAINT WALLS TO MATCH (E) ADJ. SURFACES
- REMOVE WALL HEATER - COORDINATE CIRCUIT REUSE WITH NEW HEATER PER ELECTRICAL DRAWINGS
- LOCKERS, REPLACE ALL LOCKERS AT LOCATIONS SHOWN, PROVIDE 2 ACCESSIBLE LOCKERS PER DETAIL 1 ON A-502
- REMOVE HAND DRYER(S), PATCH AND PAINT TO MATCH (E) ADJ. SURFACES, PROVIDE NEW HAND DRYERS PER ELECTRICAL DRAWINGS
- BENCHES, BRACKETS, POSTS, HANGER ROD AND MOUNTING DEVICES SHALL BE RELOCATED PER PLAN, PATCH FLOOR WITH CONCRETE, PROVIDE NEW BASES PER ELEVATION 3 SHEET A-101
- REMOVE FLOOR SAFE AND CONCRETE AND STEEL CASING, FLOOR AND WALL SHALL BE PREPARED TO MATCH (E) ADJ.
- REMOVE COUNTER TOP AND SUPPORTS, PATCH WALL COORDINATE WITH NEW WORK, AND SCHEDULE WITH STAFF
- REMOVE EXISTING GATES, HARDWARE AND POST. PATCH WALLS AND DECK TO MATCH EXISTING
- REMOVE GATE, HARDWARE AND POST. PATCH WALL TO MATCH EXISTING, RELOCATE PER PLAN WITH NEW POST AND HARDWARE
- REMOVE WOOD JAMBS ON WALLS TO MAKE FLUSH SURFACE, PATCH AND PAINT TO MATCH EXISTING ADJACENT CONDITIONS,
- REMOVE METAL SCREEN WALL & SUPPORTS
- (E) UNIT HEATERS AND THERMOSTATS TO REMAIN AND BE PROTECTED
- REMOVE EXISTING CONCRETE PER ENLARGED FLOOR PLANS, AND STRUCTURAL DRAWINGS, SHOWN HATCHED, PROTECT UTILITIES

DETAIL CALLOUTS SHOW PROPOSED WORK THAT MUST BE COORDINATED BY GENERAL CONTRACTOR DURING DEMOLITION PHASE

SHOWERS
BASE BID

SHOWERS - TYPICAL 2
-REMOVE ALL FLOOR AND WALL TILE INCLUDING ADHESIVE, PREPARE SUBSTRATE FOR NEW WATERPROOFING AND TILE SURFACE PER SCH. ON A-601
-REMOVE ALL SHOWER HEADS AND VALVES, COORDINATE WITH NEW VALVE AND HEAD FIXTURE LOCATIONS

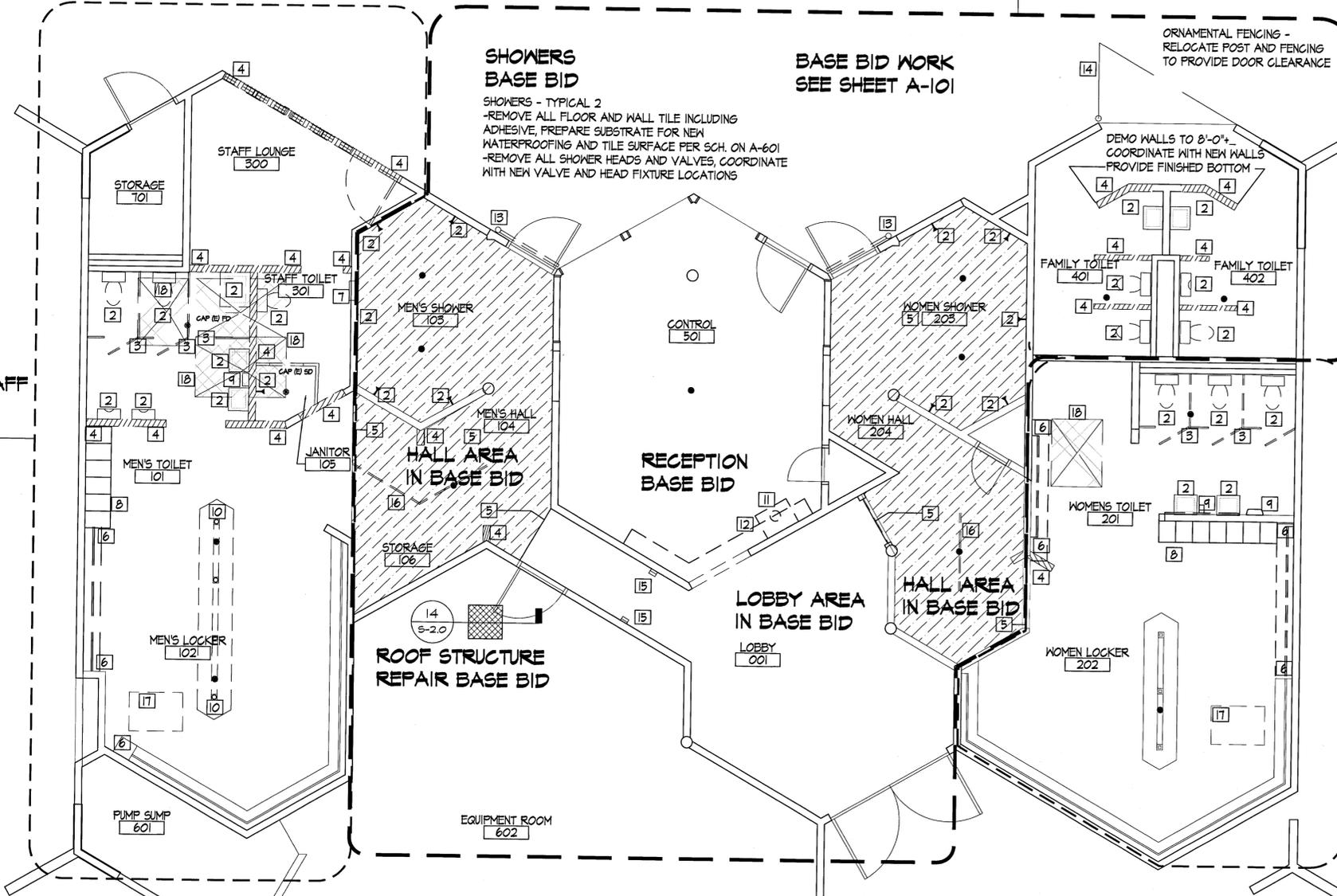
BASE BID WORK
SEE SHEET A-101

ORNAMENTAL FENCING -
RELOCATE POST AND FENCING
TO PROVIDE DOOR CLEARANCE

FAMILY TOILETS
BASE BID

WOMENS AREA
ALTERNATE BID 2

MENS AREA + STAFF
ALTERNATE BID 1



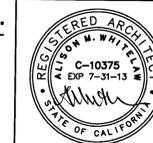
DEMOLITION GENERAL NOTES

- DISPOSE OF ALL CONSTRUCTION DEBRIS PER LEGAL REQUIREMENTS.
- ALL DEMOLITION ITEMS REMOVED BECOME THE PROPERTY OF THE CONTRACTOR UNLESS PREVIOUSLY NOTIFIED
- ALL DEMOLITION ACTIVITY SHALL BE THE RESPONSIBILITY OF CONTRACTOR INCLUDING UTILITY MODIFICATION AND SAFETY.
- CONTRACTOR SHALL BE FULLY KNOWLEDGEABLE OF PLANNED FIXTURE LOCATIONS AND COORDINATION WITH MFE DRAWINGS
- ALL WALLS TO BE PATCHED TO MATCH (E) ADJ. SURFACES WHERE ITEMS HAVE BEEN REMOVED AND TO REPAIR DAMAGE PRIOR TO PAINTING
- ALL DEMOLITION SHALL BE CLEARLY INDICATED AND MARKED AND BE VERIFIED BY RESIDENT ENGINEER BEFORE PROCEEDING WITH WORK

DEMOLITION LEGEND

- [Hatched Pattern] = DEMOLISH WOOD FRAMED WALLS, WINDOWS AND DOORS
- [Cross-hatched Pattern] = REMOVE CONCRETE PER STRUCTURAL DRAWINGS AT POST BASE REPAIR IN EQUIPMENT ROOM
- [Diagonal Hatched Pattern] = REMOVE TILE FLOOR AND BASE - SEE NOTE 5

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PROJECT VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

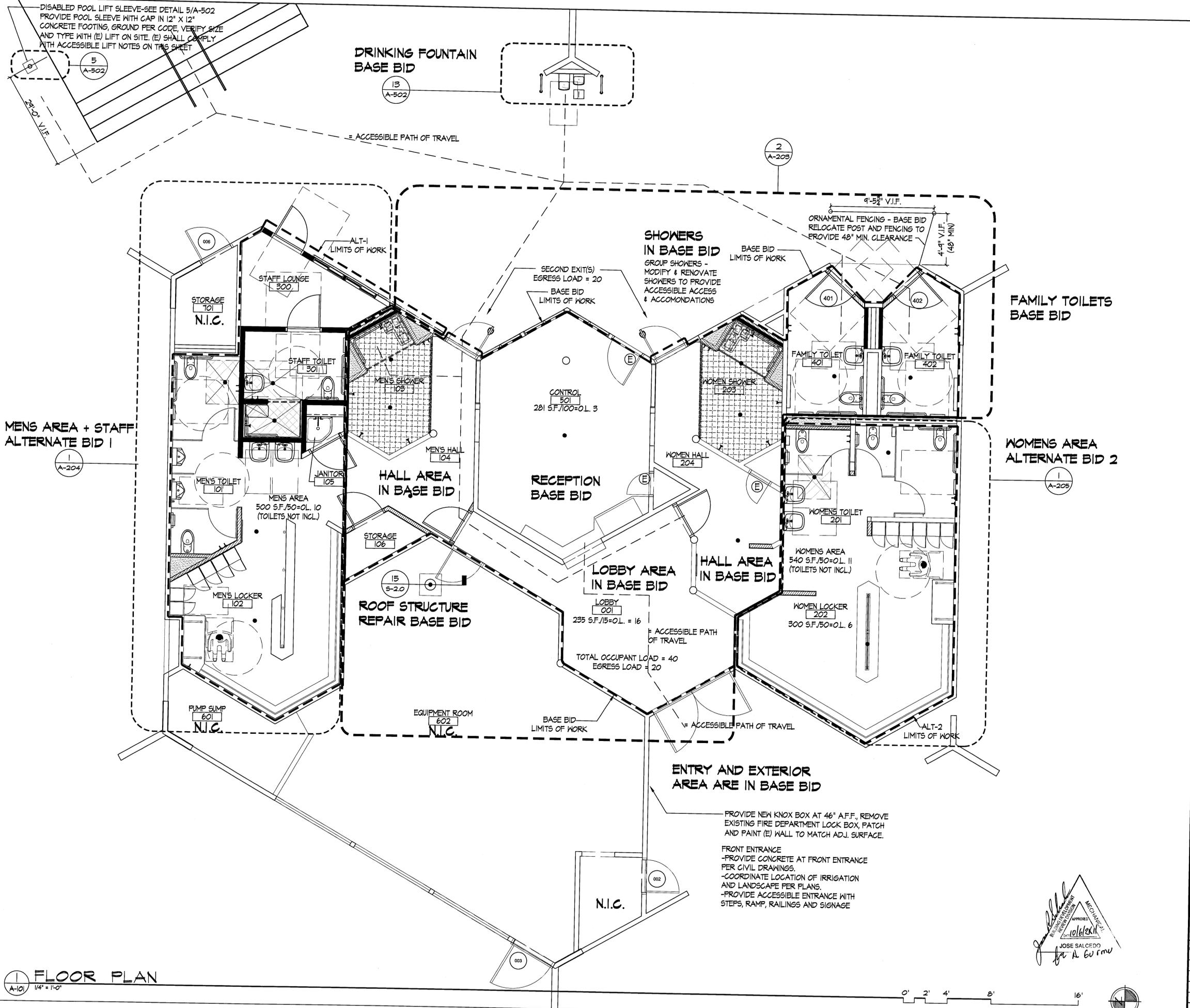
SHEET TITLE: DEMOLITION PLAN		SHEET NUMBER: A-100	
		SHEET 13 OF 41	
CITY OF SAN DIEGO, CALIFORNIA		WBS B-00933	
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT		SUBMITTED BY: [Signature]	
FOR CITY ENGINEER: [Signature] DATE: 3/3/12		PROJECT MANAGER: [Signature]	
DESCRIPTION	BY	APPROVED	DATE
PERMIT SUBMIT	RBR/DAW	[Signature]	09.27.11
CONTRACTOR:		DATE STARTED:	146-1753
INSPECTOR:		DATE COMPLETED:	CCS27 COORDINATE
			1787-6312
			CCS83 COORDINATE
			35609-13-D

FRONT ENTRANCE
-REMOVE CONCRETE AT FRONT ENTRANCE PER CIVIL DRAWINGS.
-COORDINATE LOCATION OF IRRIGATION LINES AND CONDUIT WITH LANDSCAPE PLANS.
-PROTECT BUILDING AND ADJACENT LANDSCAPING / IRRIGATION IN PLACE.

DEMOLITION PLAN - COMPLETE PROJECT



VISTA TERRACE POOL



- ### GENERAL NOTES
- CONTRACTOR SHALL COORDINATE ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS AND WORK REQUIRED FOR COMPLETE INSTALLATION PER PLANS AND SPECIFICATIONS.
 - GROUP SHOWERS - PROVIDE 36" X 60" MINIMUM SHOWER PER DETAILS WITH SEAT, GRAB BARS, SHOWER VALVES AND HEAD. PROVIDE NEW WATERPROOFING AND REPLACE ALL FLOOR AND WALL TILE PER SCHEDULE, MAX SLOPE OF ANY ACCESSIBLE SHOWER SHALL NOT EXCEED 1.5% SLOPES TO DRAIN TYPICAL. REPLACE ALL EXISTING SHOWER HEADS AND VALVES.
 - FLOOR SURFACE SHALL NOT EXCEED 1.5% GROSS SLOPE, MAINTAIN THIS IN ALL ACCESSIBLE AREAS OF ALL SHOWERS, AND PATH OF TRAVEL THROUGHOUT FACILITY.
 - ROOF COLUMN BASE REPLACEMENT IN EQUIPMENT ROOM PER STRUCTURAL DRAWINGS, COORDINATE WITH DEMOLITION WORK. PROVIDE PAINTING TO MATCH ADJACENT FINISHES

- ### ACCESSIBLE LIFT NOTES
- THE ACCESSIBLE POOL LIFT SHALL;
- HAVE A COMPLYING SEAT, THAT IS RIGID, BETWEEN 17 AND 19 INCHES (INCLUSIVE OF ANY CUSHIONED SURFACE) ABOVE THE POOL DECK
 - BE CAPABLE OF UNASSISTED OPERATION FROM BOTH THE DECK AND WATER LEVELS
 - BE STABLE AND NOT PERMIT UNINTENDED MOVEMENT WHEN A PERSON IS GETTING IN OR OUT OF THE SEAT.
 - BE DESIGNED WITH ALIVE LOAD OF 300 POUNDS.
 - BE POSITIONED SO THAT IT WILL PLACE THE OPERATOR INTO THE WATER AT LEAST 3 FEET DEEP, LOWERING THE OPERATOR AT LEAST 18" BELOW THE WATER SURFACE
- THE ACCESSIBLE COMPLYING SEAT SHALL;
- BE RIGID
 - BE BETWEEN 17 AND 19 INCHES (INCLUSIVE OF ANY CUSHIONED SURFACE) ABOVE THE POOL DECK
 - HAVE TWO ARMRESTS, ON THE SIDE OF THE SEAT BY WHICH ACCESS IS GAINED SHALL BE REMOVABLE OR FOLD CLEAR OF THE SEAT
 - HAVE A BACK SUPPORT AT LEAST 12" TALL
 - HAVE AN OCCUPANT RESTRAINT THAT MEETS THE STANDARD FOR OPERATING CONTROLS IN COMPLIANCE WITH SECTION 1117B.6 ITEMS 1 THRU 4.

- ### LEGEND
- [Solid black box] = NEW WOOD FRAMED WALLS, FULL HEIGHT
 - [Hatched box] = NEW WOOD FRAMED WALLS & 6" CURBS, TO 8'-0" PROVIDE PLYWOOD CAP BETWEEN G.B. WITH L-METAL
 - [Dotted box] = NEW 1/2" CDX PLYWOOD LID, PAINTED
 - [Dashed line] = ACCESSIBLE PATH OF TRAVEL

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PROJECT VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

SHEET TITLE: **FLOOR PLAN - OVERALL PROJECT SHOWN** SHEET NUMBER: **A-101**
SHEET 14 OF 47

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT WBS: B-00933

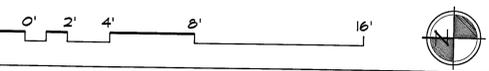
APPROVED FOR CITY ENGINEER: *[Signature]* DATE: 3/9/12 PROJECT MANAGER: *[Signature]*

DESCRIPTION	BY	APPROVED DATE	SCANNED
PERMIT SUBMIT	RB	09.27.11	

CONTRACTOR: DATE STARTED: INSPECTOR: DATE COMPLETED:

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FLOOR PLAN
A-101
1/4" = 1'-0"



VISTA TERRACE POOL

FLOOR PLAN - KEY NOTES

- 1 NEW CEILING MOUNTED FIXTURES PER ELECTRICAL DRAWINGS AND SCHEDULES - PROVIDE PER AREA IN BASE, OR ALTERNATE WORK
- 2 NEW RECESSED MOUNTED WET LOCATION LIGHT FIXTURES IN GYPSUM BOARD CEILING AT 8', CENTER IN SHOWER AND JANITORS CLOSET, AS PART OF ALT-1 WORK
- 3 NEW WALL MOUNTED LIGHT FIXTURE, AS PART OF ALT-1 WORK
- 4 AS PART OF ALT 1 & 2 WORK PROVIDE 42" HIGH X 102" WIDE ALUMINUM LOUVERS AT HIGH NON-BEARING WALLS, PROVIDE WOOD FRAMING, PATCH TO MATCH (E) INTERIOR AND EXTERIOR WALLS, WITH ALL PERIMETER TRIM.

GENERAL NOTES

- 1. ALL LIGHT FIXTURES TO REMAIN UNO.
- 2. PROVIDE LAMPS WITH 10%/1 MIN SPARES.
- 3. PROVIDE OCCUPANCY SENSOR IN STAFF TOILET
- 4. PROVIDE EXHAUST SYSTEM PER MECHANICAL DRAWINGS AND SPECIFICATION
- 5. PROVIDE LOUVERS PER MECHANICAL DRAWINGS AND SPECIFICATIONS

LEGEND

 = 5/8" GLAS-MAT GYPSUM BOARD OVER 2x4 AT 16" O.C. AT 8'-0" A.F.F., PRIME AND PAINT PER SCHEDULE

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PROJECT VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

SHEET TITLE: CEILING PLAN - FULL **SHEET NUMBER: A-102**
 SHEET 15 OF 47

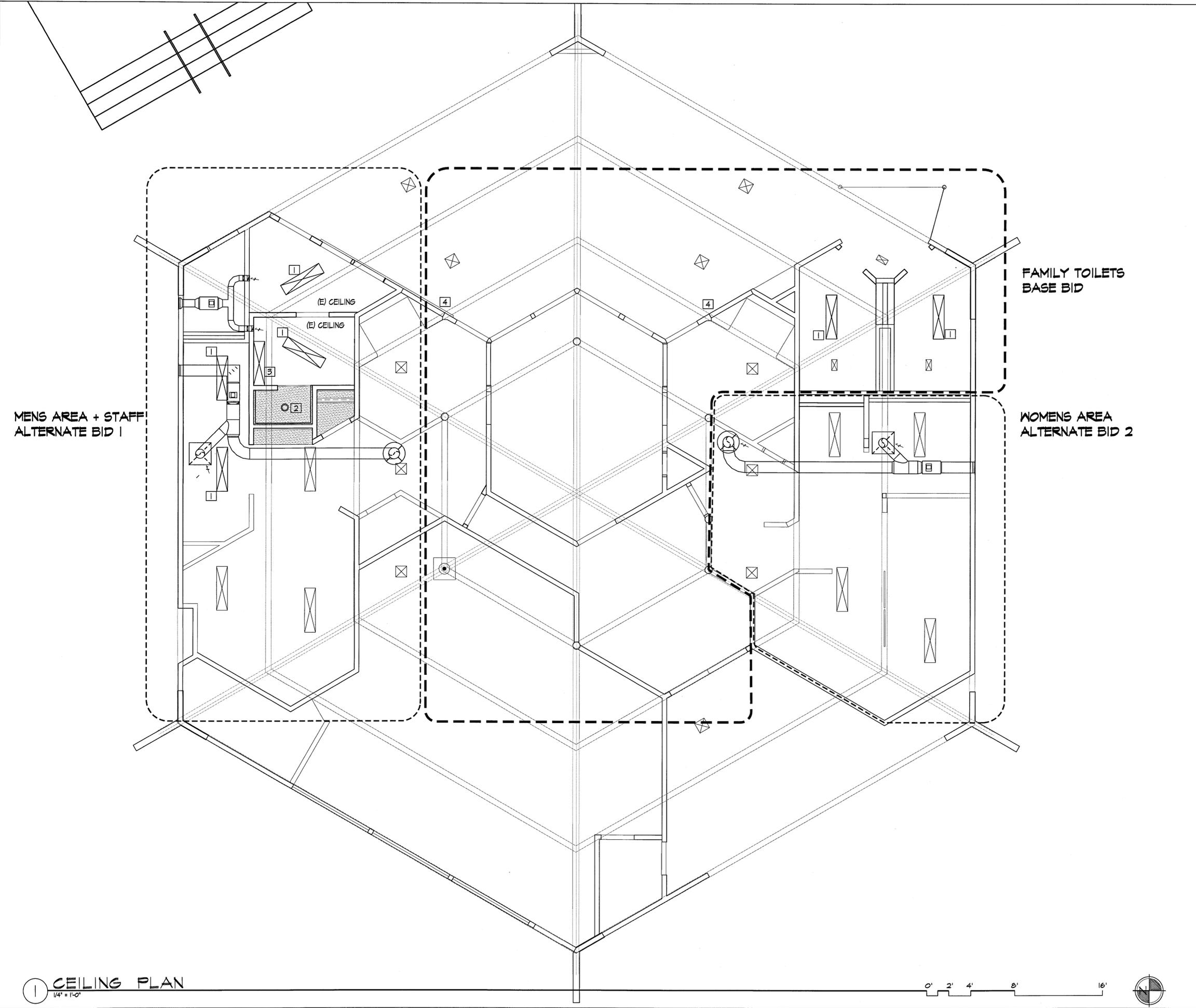
CITY OF SAN DIEGO, CALIFORNIA
 ENGINEERING AND CAPITAL PROJECTS DEPARTMENT WBS B-00933

FOR CITY ENGINEER: *[Signature]* DATE: 3/9/12
 SUBMITTED BY: *[Signature]* PROJECT MANAGER

DESCRIPTION	BY	APPROVED	DATE	SCANNED
PERMIT SUBMIT	RBR/DAH		09.27.11	

CONTRACTOR: _____ DATE STARTED: _____
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146-1753
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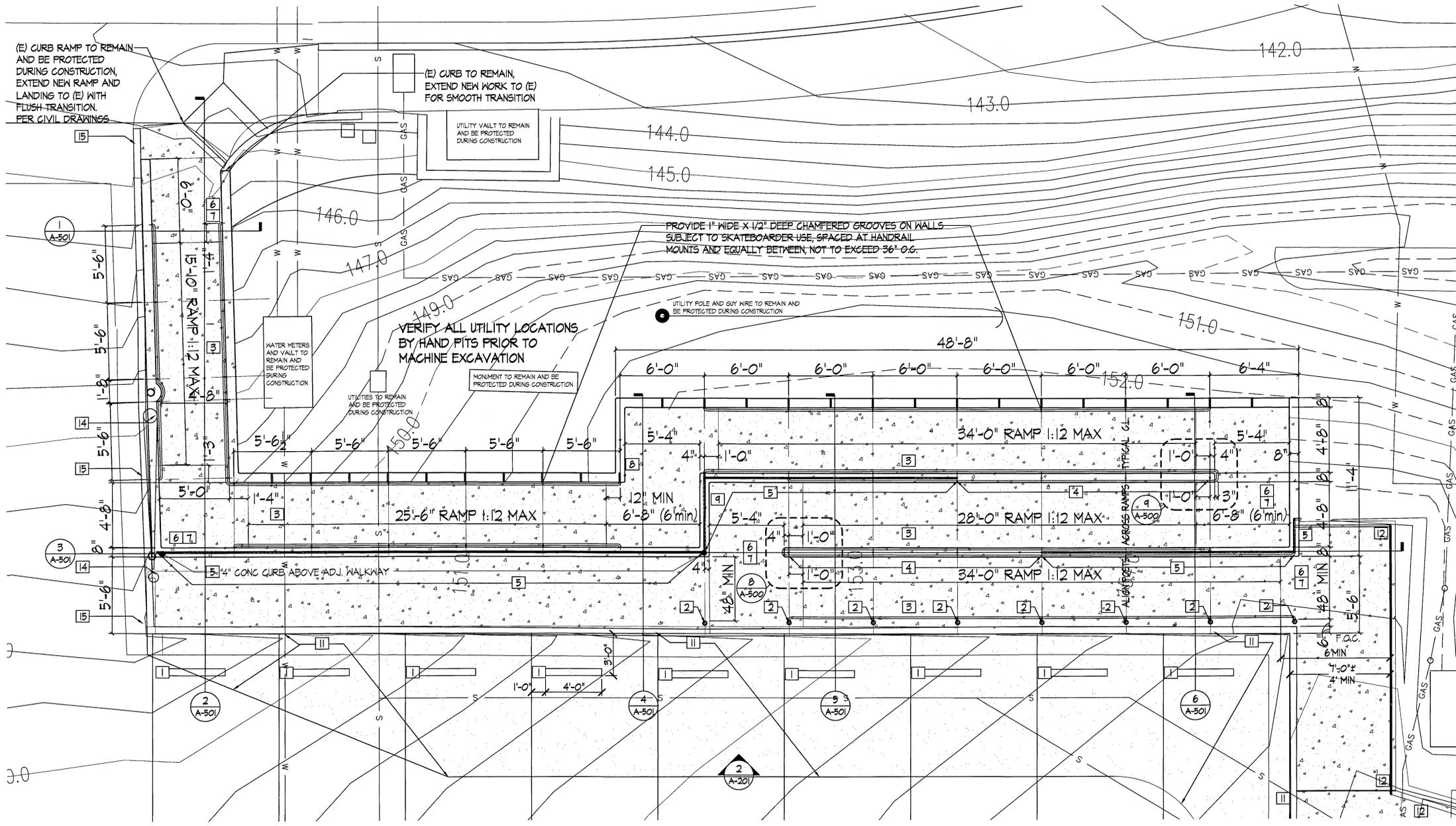
MENS AREA + STAFF
 ALTERNATE BID 1

FAMILY TOILETS
 BASE BID

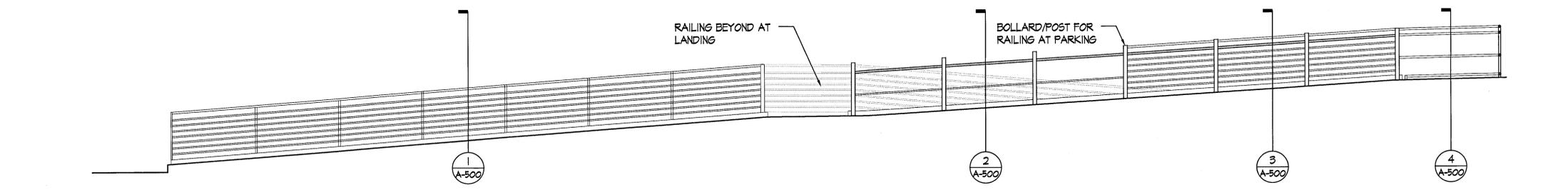
WOMENS AREA
 ALTERNATE BID 2

1 CEILING PLAN
 1/4" = 1'-0"

VISTA TERRACE POOL



1 NORTH RAMP # | PLAN
1/4"=1'-0"



2 NORTH RAMP # | ELEVATION
1/4"=1'-0"

RAMP PLANS - KEY NOTES

- 1 PROVIDE 48" X 6" CONCRETE WHEEL STOPS 3'-0" MAX FROM CURB, 12" FROM SIDE LINE AT PARKING SPACES AS SHOWN.
- 2 PROVIDE 3" DIA. GALVANIZED STEEL BOLLARDS WITH HANDRAILS PER SECTION WITH CONCRETE FILLED INTERIOR - DETAIL 6 / A-500
- 3 ACCESSIBLE PATH OF TRAVEL SHALL NOT EXCEED 1:12 SLOPE IN DIRECTION OF TRAVEL UNLESS DESIGNED AND CONSTRUCTED AS A RAMP, AND SHALL NOT EXCEED A 1.5% CROSS SLOPE TYPICAL
- 4 WHERE SURFACE IS LESS THAN 30" ABOVE ADJACENT GRADE WITHIN 12" HORIZONTAL- PROVIDE 1-1/2" DIA GALV. STEEL HANDRAIL MOUNTED 36" ABOVE WALKWAY WITH 1-1/2" DIA GALV. STEEL WHEEL GUARD CENTERED AT 3" ABOVE SURFACE OR 6" HIGH CONCRETE CURB, EXTEND TO (E) HANDRAILS DETAIL 2 ON / A-500
- 5 WHERE SURFACE IS GREATER THAN 30" ABOVE ADJACENT GRADE WITHIN 12" HORIZONTAL- PROVIDE 42" MIN HIGHT GUARD WITH MAX 4" OPENINGS, WITH 1-1/2" DIA GALV. STEEL HANDRAIL MOUNTED 36" ABOVE WALKWAYS AND 6" HIGH CONCRETE CURB, EXTEND TO (E) OR NEW HANDRAILS TYPICAL DETAIL 1, 3 OR 4 / A-500
- 6 RAMP LANDING LENGTH SHALL BE 6'-0" MIN AT BOTTOM AND INTERMEDIATES AND 5'-0" MIN AT TOP. THE HANDRAILS SHALL BE CONTINUOUS AT 36" AND SHALL EXTEND 12" MIN PAST END OF RAMP WHERE SLOPE EXCEEDS 1:20, WITH 1.5% MAX CROSS SLOPE
- 7 RAMP LANDINGS SHALL BE SLOPED FOR POSITIVE DRAINAGE AT 1.5% (1% MIN AND 2% MAX) ALL RAMP WALKING SURFACES WILL HAVE A SLIP RESISTANT FINISH.
- 8 ALL VERTICAL CONCRETE SHALL RECEIVE ANTI-GRAFFITI COATING.
- 9 ALL METAL SHALL BE HOT DIPPED GALVANIZED PRIOR TO FABRICATION REFER TO SPECIFICATIONS FOR TUBING SIZES, THICKNESS AND OTHER REQUIREMENTS.
- 10 NEW CURB RAMP AND TRANSITIONS TO EXISTING SIDEWALK AND NEW RAMP
- 11 NEW CURB, GUTTER AND ASPHALT PER CIVIL DRAWINGS, DETAILS AND SPECIFICATIONS.
- 12 PROVIDE NEW RAILING AT EDGE OF NEW CONCRETE WALKWAY -WHERE SURFACE IS LESS THAN 30" ABOVE ADJACENT GRADE WITHIN 12" HORIZONTAL, PROVIDE RAILING PER DETAIL 4A/A-500 -WHERE SURFACE IS MORE THAN 30" ABOVE ADJACENT GRADE WITHIN 12" HORIZONTAL, PROVIDE RAILING PER DETAIL 4B/A-500
- 13 PROVIDE INTEGRAL WATERPROOFING AND WALL DRAINS ON ALL SUB-GRADE RAMP WALLS
- 14 EXISTING GATE AND POST TO REMAIN, PROTECT IN PLACE, PAINT PER RESIDENT ENGINEER
- 15 EXISTING CURB TO REMAIN, PROTECT IN PLACE, PAINT "FIRE LANE" ON BOTH SIDES OF DRIVEWAY PER RESIDENT ENGINEER

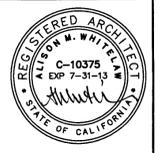
GENERAL NOTES

1. CONTRACTOR SHALL BE FULLY KNOWLEDGEABLE OF PLANNED UTILITY LOCATIONS AND COORDINATE WITH MPE DRAWINGS
2. CONTRACTOR SHALL VERIFY UTILITIES, GRADES AND DRAINAGE LOCATIONS AND COORDINATE WITH CIVIL DRAWINGS
3. CONTRACTOR SHALL VERIFY IRRIGATION AND LANDSCAPE LOCATIONS AND COORDINATE WITH LANDSCAPE DRAWINGS
4. TOP OF WALL ELEVATIONS SHALL BE 6" MIN ABOVE ADJACENT LANDSCAPE GRADES

LEGEND

- = NEW CONCRETE SIDEWALK PER CIVIL DRAWINGS
- = NEW ASPHALT PER CIVIL DRAWINGS

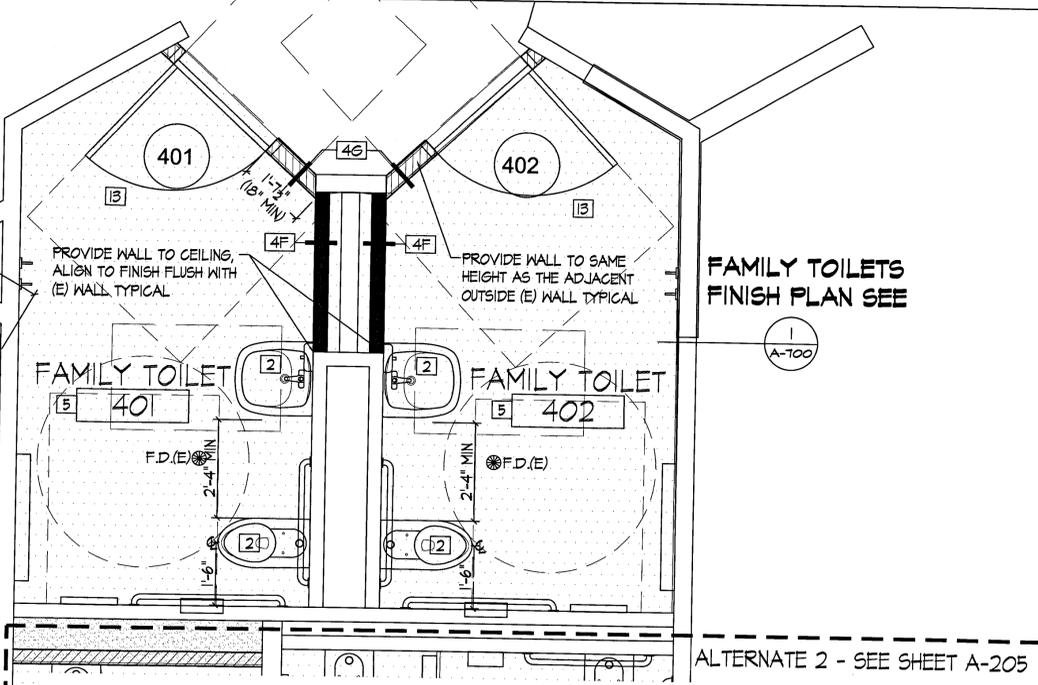
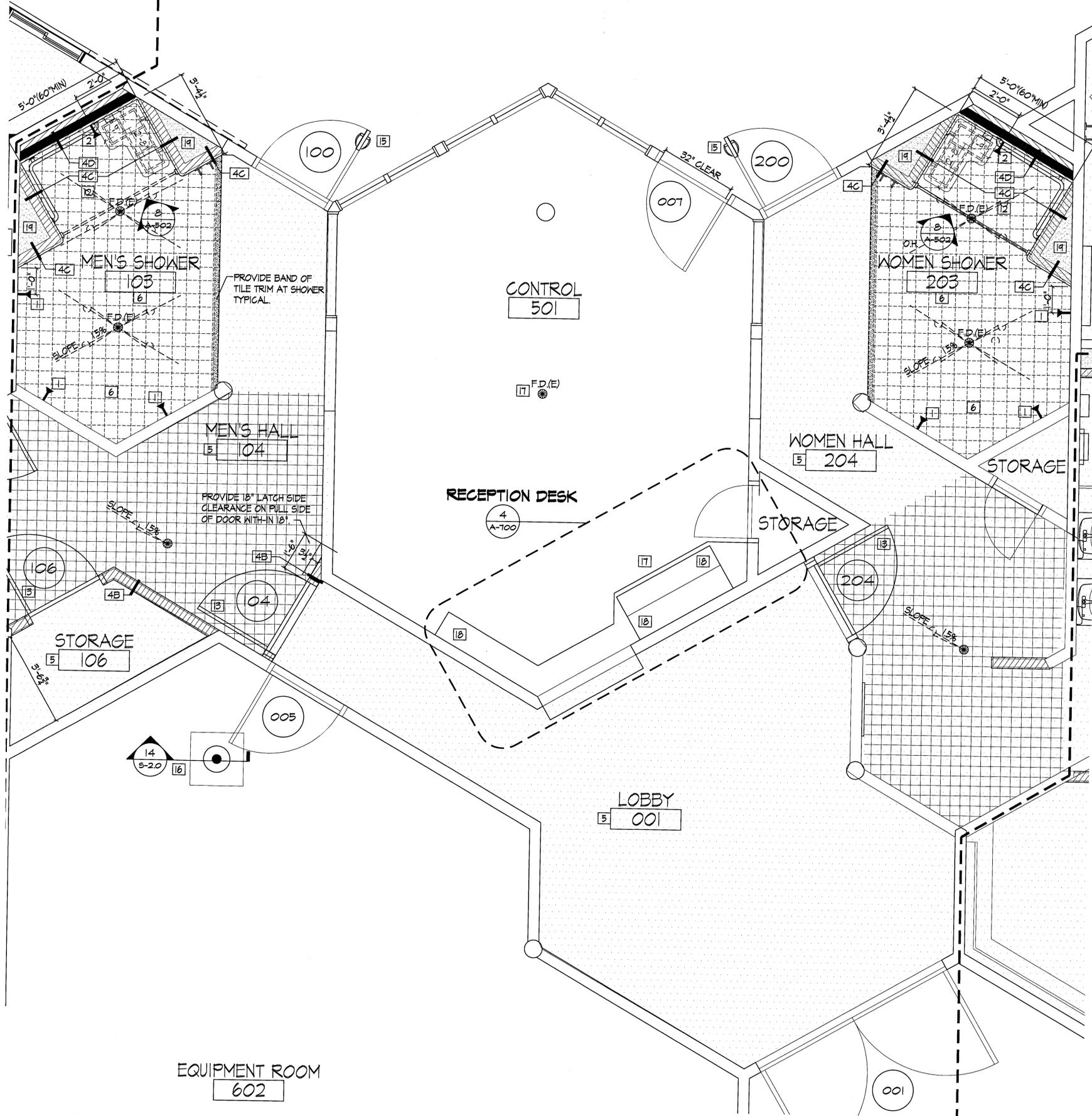
Platt/Whitelaw Architects, Inc.
4034 30th Street, SAN DIEGO CA 92104
(619) 546-4326 FAX (619) 546-4350



PROJECT		VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS	
SHEET TITLE		SHEET NUMBER	
NORTH RAMP PLAN		A-201	
		SHEET 17 OF 47	
CITY OF SAN DIEGO, CALIFORNIA		WBS B-00933	
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT		SUBMITTED BY: <i>[Signature]</i>	
FOR CITY ENGINEER		DATE: 2/9/12	
DESCRIPTION	BY	APPROVED	DATE
PERMIT SUBMIT	RBZAHN	[Signature]	09.27.11
CONTRACTOR		DATE STARTED	
INSPECTOR		DATE COMPLETED	
		146-1753	
		CCS27 COORDINATE	
		1787-6312	
		CCS83 COORDINATE	
		35609-17-D	

VISTA TERRACE POOL

ALTERNATE 1
SEE SHEET A-204



FLOOR PLAN - KEY NOTES

- 1 SHOWER HEADS AND VALVES SHALL BE REMOVED AND FIXTURES REPLACED IN SAME LOCATIONS U.O.N., SEE PLUMBING DRAWINGS
- 2 NEW PLUMBING FIXTURES IN (E) LOCATIONS U.O.N., PER PLUMBING SCHEDULE, SPECIFICATIONS AND DRAWINGS
- 3 NOT USED THIS SHEET
- 4A NEW 2x WOOD WALLS WITH GLASS MAT GYPSUM BOARD, SEE WALL LEGEND-DETAILS 4 ON A-502 - 4A = WALL TYPE 4A
- 5 NEW SLIM FOOT TILE BASE AND WATER BASED EPOXY FLOOR IN RESTROOMS, LOCKERS AND HALLWAYS PER SCHEDULE
- 6 FLOOR IN SHOWERS TO BE RESLOPED AT 1.5% TO FLOOR DRAINS, PROVIDE CEMENTITIOUS PRODUCT INTENDED FOR THIS USE.
- 7 NOT USED THIS SHEET
- 8 NOT USED THIS SHEET
- 9 NOT USED THIS SHEET
- 10 NOT USED THIS SHEET
- 11 NOT USED THIS SHEET
- 12 PROVIDE ACCESSIBLE SHOWERS, WITH ALL FIXTURES, SEAT, GRAB-BARS PER DETAIL 8 ON A-502 AND ELEVATIONS
- 13 PROVIDE NEW 36"x80" DOOR, FRAME AND HARDWARE PER DOOR SCHEDULE, SPECIFICATIONS AND DETAILS ON A-502
- 14 PROVIDE 18" LATCH SIDE CLEARANCE ON PULL SIDE OF DOOR WITHIN 18"
- 15 PROVIDE NEW ACCESSIBLE DOOR HARDWARE WITH SECURE LOCKING DEVICES ON EXISTING DOORS PER SCHEDULE
- 16 REPLACE PARTIAL POST IN EQUIPMENT ROOM PER STRUCTURAL DRAWINGS, PROVIDE TEMPORARY ROOF SUPPORT
- 17 PROVIDE FLOOR TILE REPLACEMENT IN CONTROL ROOM, AT (E) DRAIN AND AT (E) SAFE, A MIN 10 SF. TO MATCH (E) TILE
- 18 PROVIDE NEW CABINETS AND COUNTERS, PER PLAN AND SPECIFICATIONS
- 19 PROVIDE WATER RESISTANT PLYWOOD LID AT 8'-0" BETWEEN THE WALLS, SLOPE TO DRAIN 1/4"/FT. PAINTED FINISH.

LEGEND

- [Solid black] = NEW WOOD FRAMED WALLS, & 6" CONCRETE CURBS TO CEILING
- [Hatched] = NEW WOOD FRAMED WALLS & 6" CURBS, TO 8'-0" PROVIDE PLYWOOD GAP BETWEEN G.B. WITH L-METAL
- [Dotted] = NEW 1/2" CDX PLYWOOD LID, PAINTED
- [Stippled] = REPLACE TILE BASE AND PREPARE (E) FLOOR TO RECEIVE SLIP RESISTANT WATER BASED EPOXY FLOOR
- [Grid pattern] = RE-SLOPE FLOOR AT 1.5% (2% MAX) TO DRAINS PROVIDE NON-SLIP SURFACE PER FINISH SCHEDULE
- [Dashed line] = ACCESSIBLE PATH OF TRAVEL
- [Symbol 4D] = WALL TYPE 4D, DETAIL 4 ON SHEET A-502

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PROJECT
VISTA TERRACE POOL
ACCESSIBILITY IMPROVEMENTS

SHEET TITLE:
BASE BID AREA FLOOR PLAN

SHEET NUMBER:
A-203
 SHEET 19 OF 47

CITY OF SAN DIEGO, CALIFORNIA
 ENGINEERING AND CAPITAL PROJECTS DEPARTMENT

WBS B-00933

FOR CITY ENGINEER: [Signature] DATE: 3/9/12

BY: [Signature] DATE: 09.27.11

PERMIT SUBMIT

CONTRACTOR: _____ DATE STARTED: _____

INSPECTOR: _____ DATE COMPLETED: _____

146-1753
 CCS27 COORDINATE
 1787-6312
 CCS83 COORDINATE
 35609-19-D

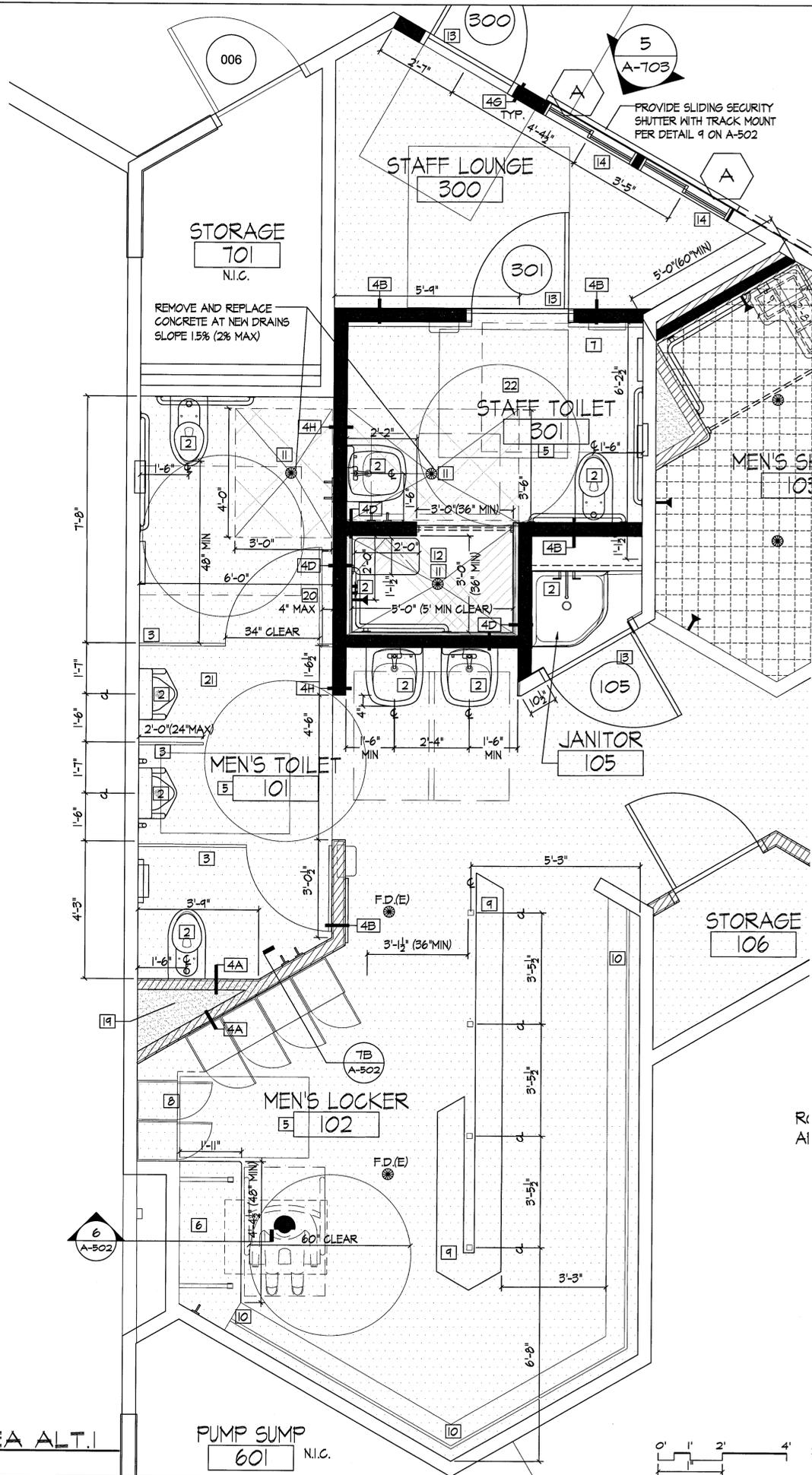
A-203
 1/2" = 1'-0"



VISTA TERRACE POOL

FLOOR PLAN COORDINATION

SEE SHEET A-100 FOR ACCESSIBLE MOUNTING DIAGRAMS
SEE SHEET A-101 FOR FINISH PLAN IN THIS AREA



FLOOR PLAN - KEY NOTES

- 1 NEW DRINKING FOUNTAIN, ACCESSIBLE DUAL HEIGHT, 14 GAUGE S.S. MOUNT PER DETAIL ON NEW WALL
- 2 NEW PLUMBING FIXTURES, PER PLUMBING SCHEDULE, SPECIFICATIONS AND DRAWINGS
- 3 NEW TOILET PARTITIONS PER PLAN, SPECIFICATION AND ELEVATIONS
- 4A NEW 2x WOOD WALLS WITH GLASS MAT GYPSUM BOARD, SEE WALL LEGEND-DETAILS 4 ON A-502 - 4A = WALL TYPE 4A
- 5 NEW SLIM FOOT TILE BASE AND WATER BASED EPOXY FLOOR IN RESTROOMS, LOCKER AREAS AND HALLWAYS PER SCHEDULE
- 6 WOOD ACCESSIBLE BENCH, TO MATCH EXISTING BENCH IN LOCKER ROOMS PER DETAIL 6 ON A-502
- 7 NEW WALL HEATER PER ELECTRICAL DRAWINGS
- 8 PROVIDE 2 ACCESSIBLE LOCKERS IN EACH SHOWER ROOM WITH BASE PER DETAIL 7 ON A-502
- 9 BENCHES TO BE RELOCATED WITH POSTS AND BRACKETS PER PLAN
- 10 REPAIR AND REFINISH ALL EXISTING WOOD BENCHES TO MATCH EXISTING. REPAIR POSTS & BRACKETS, PER SPECIFICATIONS
- 11 PROVIDE NEW FLOOR DRAINS PER PLUMBING DRAWINGS SLOPE 1/8" MIN & 2% MAX
- 12 PROVIDE ACCESSIBLE SHOWERS, WITH ALL FIXTURES, SEAT, GRAB-BARS PER DETAIL 8 ON A-502 AND ELEVATIONS
- 13 PROVIDE NEW 36"x80" DOOR, FRAME AND HARDWARE PER DOOR SCHEDULE, SPECIFICATIONS AND DETAILS ON A-502
- 14 PROVIDE NEW FIBERGLAS FRAMED WINDOWS WITH SLIDING SECURITY SHUTTERS ON EXTERIOR PER DETAIL 9 ON A-502
- 15 PROVIDE NEW ACCESSIBLE DOOR HARDWARE WITH SECURE LOCKING DEVICES ON EXISTING DOORS PER SCHEDULE
- 16 REPLACE POST IN EQUIPMENT ROOM DUE TO RUST DAMAGE PER STRUCTURAL DRAWINGS PER DETAIL 15 ON S-20
- 17 PROVIDE FLOOR TILE REPLACEMENT IN CONTROL ROOM, MIN 10 S.F. TO MATCH EXISTING TILE, PROVIDE SUBMITTAL
- 18 PROVIDE NEW CABINETS AND COUNTERS, PER PLAN ON A-100, DETAILS ON A-502 AND SPECIFICATIONS
- 19 PROVIDE WATER RESISTANT PAINTED PLYWOOD LID BETWEEN THE TOP OF WALLS TYPICAL. FINISH TO MATCH ADJ. SURFACE
- 20 PROVIDE AUTOMATIC CLOSING DOOR WITH ISA ACCESSIBLE SIGNAGE SYMBOL ON DOOR, WITH ACCESSIBLE LATCH AND 4"x2" U-SHAPED HANDLE IMMEDIATELY BELOW, THE LATCH SHALL BE FLIP-TYPE NOT REQUIRING USER TO GRASP OR TWIST
- 21 CONCRETE FLOOR WITHIN 24" OF DRAIN, SHALL SLOPE TO THE DRAIN AT 1/8" PER FOOT, MIN CONCRETE TO BE 3-1/2" THICK.
- 22 REMOVE CONCRETE FLOOR TO EXTENTS OF ROOM, SLOPE TO DRAIN AT 1/8" PER FOOT, MIN NEW CONCRETE TO BE 4" THICK. DOWEL INTO (E) SLAB WITH #3 REBAR AT 18" O.C. EPOXY SET WITH 6" MIN EMBED INTO (E) 12" INTO NEW 2500 PSI CONCRETE

LEGEND

- = NEW WOOD FRAMED WALLS & 6" CURBS, FULL HEIGHT
- = NEW WOOD FRAMED WALLS & 6" CURBS, TO 8'-0" PROVIDE PLYWOOD CAP BETWEEN @B. WITH L-METAL
- = NEW 1/2" CDX PLYWOOD LID, PAINTED
- = REPLACE TILE BASE AND PREPARE (E) FLOOR TO RECEIVE SLIP RESISTANT WATER BASED EPOXY FLOOR
- = REMOVE AND REPLACE CONCRETE FLOOR, SLOPE 1% TO 2% AT DRAINS TYP. AND RECESS 1" FOR TILE AT SHOWER
- = WALL TYPE 4D, DETAIL 4 ON SHEET A-502

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PROJECT
VISTA TERRACE POOL
ACCESSIBILITY IMPROVEMENTS

SHEET TITLE:
MENS & STAFF FLOOR PLAN
ALTERNATE 1

SHEET NUMBER:
A-204
SHEET 20 OF 47

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT

WBS B-00933

FOR CITY ENGINEER: *[Signature]* 3/9/12
DATE: 09.27.11

PROJECT MANAGER: *[Signature]*

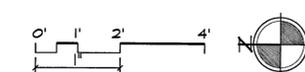
DESCRIPTION	BY	APPROVED	DATE	SCANNED
PERMIT SUBMIT	ROBERTA HAHN		09.27.11	

CONTRACTOR: _____ DATE STARTED: _____
INSPECTOR: _____ DATE COMPLETED: _____

146-1753
CCS27 COORDINATE
1787-6312
CCS83 COORDINATE
35609-20-D

1 A-204 1/2" = 1'-0" **MENS AREA ALT. 1**

PUMP SUMP 601 N.I.C.



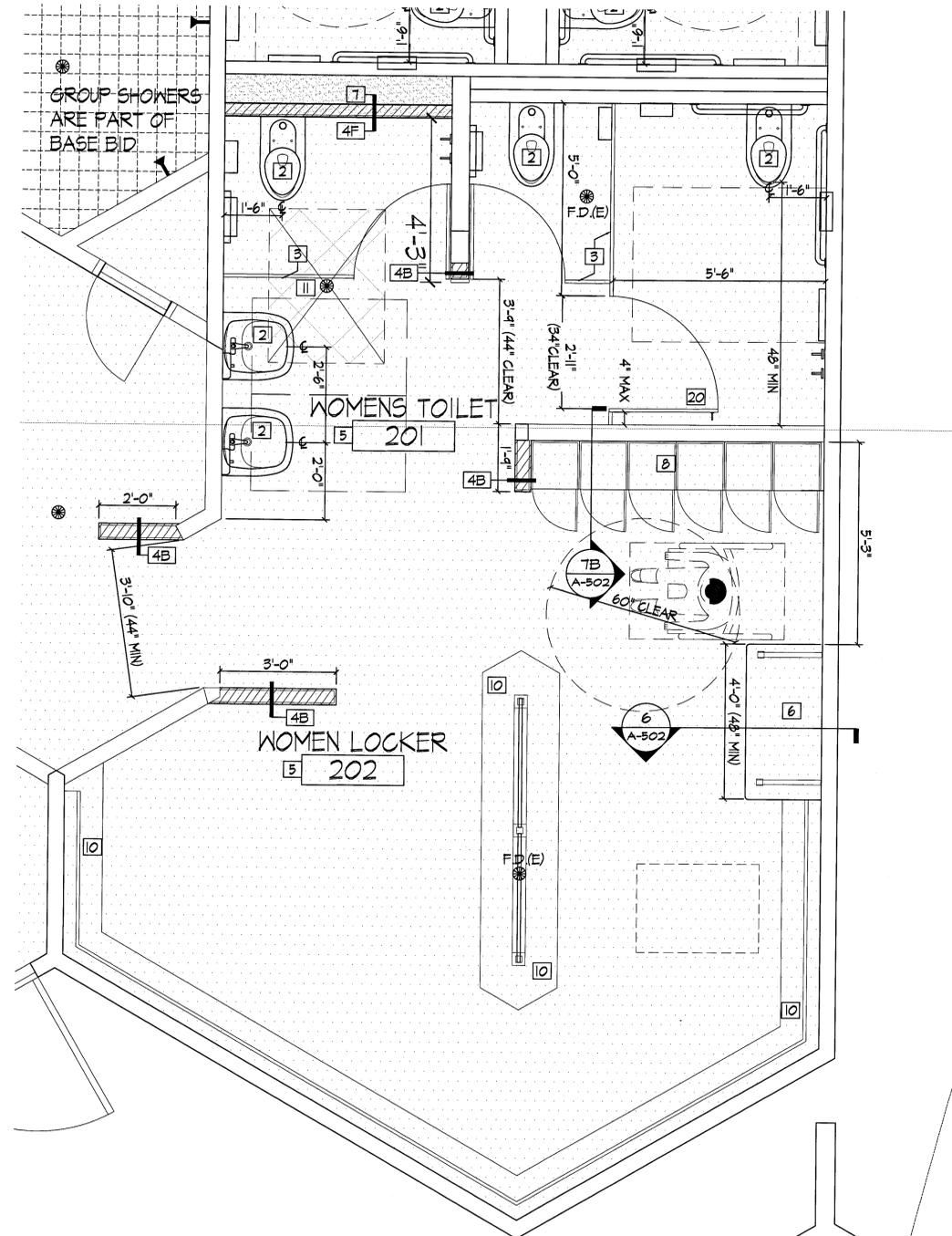
VISTA TERRACE POOL

FLOOR PLAN COORDINATION

SEE SHEET A-100 FOR ACCESSIBLE MOUNTING DIAGRAMS
SEE SHEET A-102 FOR FINISH PLAN IN THIS AREA

FLOOR PLAN - KEY NOTES

- 1 NOT USED THIS SHEET
- 2 NEW PLUMBING FIXTURES, PER PLUMBING SCHEDULE, SPECIFICATIONS AND DRAWINGS
- 3 NEW TOILET PARTITIONS PER PLAN, SPECIFICATION AND ELEVATIONS PROVIDE 4"x2" LOOP HANDLE ON INTERIOR OF ACCESSIBLE DOORS
- 4 NEW 2x WOOD WALLS WITH GLASS MAT GYPSUM BOARD, SEE WALL LEGEND-DETAILS 4 ON A-502 - 4A = WALL TYPE 4A
- 5 NEW SLIM FOOT TILE BASE AND WATER BASED EPOXY FLOOR IN RESTROOMS, LOCKERS AND HALLWAYS PER SCHEDULE
- 6 WOOD ACCESSIBLE BENCH, TO MATCH EXISTING BENCH IN LOCKER ROOMS PER DETAIL 6 ON A-502
- 7 PROVIDE NEW WALL, VERIFY MIN DIMENSION REQUIRED FOR REAR FLUSH TOILET PLUMBING AND CARRIER.
- 8 PROVIDE 2 ACCESSIBLE LOCKERS IN EACH SHOWER ROOM WITH BASE PER DETAIL 7 ON A-502
- 9 NOT USED THIS SHEET
- 10 REPAIR AND REFINISH EXISTING WOOD BENCHES, REPAIR BRACKETS, PER SPECIFICATIONS
- 11 PROVIDE NEW FLOOR DRAINS PER PLUMBING DRAWINGS
- 12 NOT USED THIS SHEET
- 13 NOT USED THIS SHEET
- 14 NOT USED THIS SHEET
- 15 NOT USED THIS SHEET
- 16 NOT USED THIS SHEET
- 17 NOT USED THIS SHEET
- 18 NOT USED THIS SHEET
- 19 NOT USED THIS SHEET
- 20 PROVIDE AUTOMATIC CLOSING DOOR, WITH ISA ACCESSIBLE SIGNAGE SYMBOL ON DOOR, WITH ACCESSIBLE LATCH AND 4"x2" U-SHAPED HANDLE IMMEDIATELY BELOW THE LATCH SHALL BE FLIP-TYPE NOT REQUIRING USER TO GRASP OF TWIST



LEGEND

- = NEW WOOD FRAMED WALLS & 6" CURBS, FULL HEIGHT
- = NEW WOOD FRAMED WALLS & 6" CURBS, TO 8'-0" PROVIDE PLYWOOD CAP BETWEEN G.B. WITH L-METAL
- = NEW 1/2" CDX PLYWOOD LID, PAINTED
- = REPLACE TILE BASE AND PREPARE (E) FLOOR TO RECEIVE SLIP RESISTANT WATER BASED EPOXY FLOOR
- = REMOVE AND REPLACE CONCRETE FLOOR, SLOPE 1% TO 2% AT DRAINS TYP.
- = WALL TYPE 4D, DETAIL 4 ON SHEET A-502

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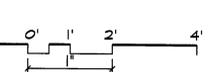


PROJECT		VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS	
SHEET TITLE:		SHEET NUMBER:	
WOMENS AREA FLOOR PLAN ALTERNATE 2		A-205	
CITY OF SAN DIEGO, CALIFORNIA		SHEET 21 OF 47	
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT		WBS B-00933	
FOR CITY ENGINEER: <i>[Signature]</i> 3/19/12		SUBMITTED BY: <i>[Signature]</i>	
DATE: 09.27.11		PROJECT MANAGER:	
DESCRIPTION	BY	APPROVED	DATE
PERMIT SUBMIT	RBR/DAW		
CONTRACTOR:		DATE STARTED:	
INSPECTOR:		DATE COMPLETED:	
		146-1753 CCS27 COORDINATE 1787-6312 CCS83 COORDINATE	
		35609-21-D	

1
A-205

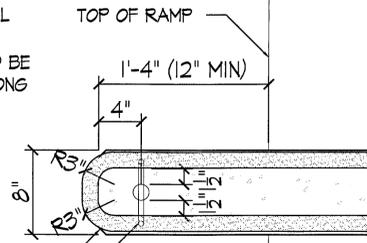
WOMENS AREA ALTERNATE 2

1/2" = 1'-0"



VISTA TERRACE POOL

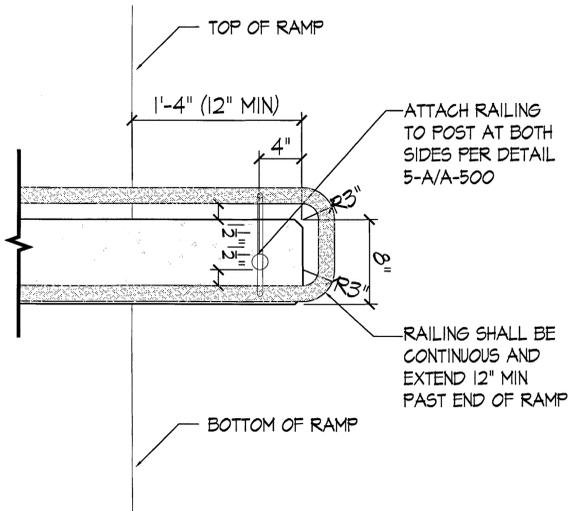
RAMP LANDINGS SHALL BE LEVEL (2% MAX SLOPE TO DRAIN) AND BE A MINIMUM OF 6'-0" LONG AT SWITCHBACKS



CHAMFER ALL CONCRETE CORNERS 3/4" TYP., AND REMOVE ALL SHARP EDGES

ATTACH RAILING TO POST AT BOTH SIDES PER DETAIL 5-A/A-500

8 RAILING SWITCHBACK DETAIL 1
A-500 1'-1/2"=1'-0"



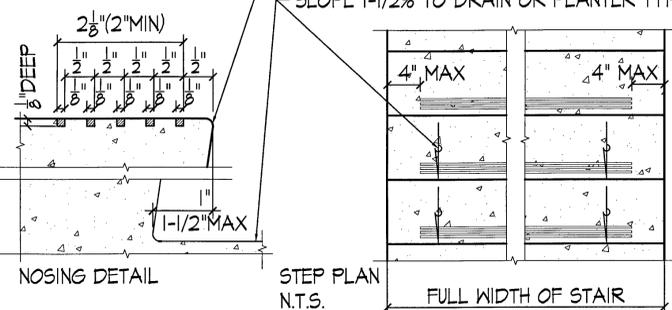
9 RAILING SWITCHBACK DETAIL 2
A-500 1'-1/2"=1'-0"

PROVIDE 2" TO 4" WIDE VISIBILITY STRIPS 1" MAX FROM NOSING. GROOVES SHALL BE TOOLED OR SAW CUT INTO STEPS SIMULTANEOUSLY, IN A STRAIGHT LINE PARALLEL TO THE NOSING, GROOVE EDGES SHALL EXTEND THE FULL WIDTH OF THE STEP AS POSSIBLE (6" MAX), THEY SHALL BE FILLED WITH CONTRASTING EPOXY PAINT, COLOR PER ARCHITECT

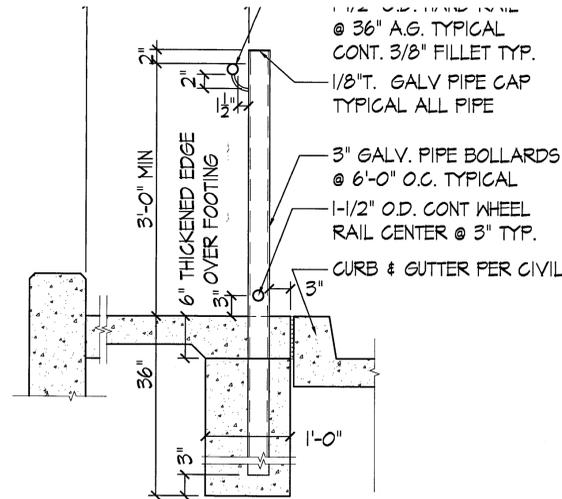
GROOVES SHALL BE 1/8" DEEP, 1/8" WIDE AND SPACED AT 1/2" O.C.

1/2" MAX STEP NOSING AND RISER RADIUS, WITH 1" TYP (1-1/2" MAX) PROJECTION PAST RISER BELOW

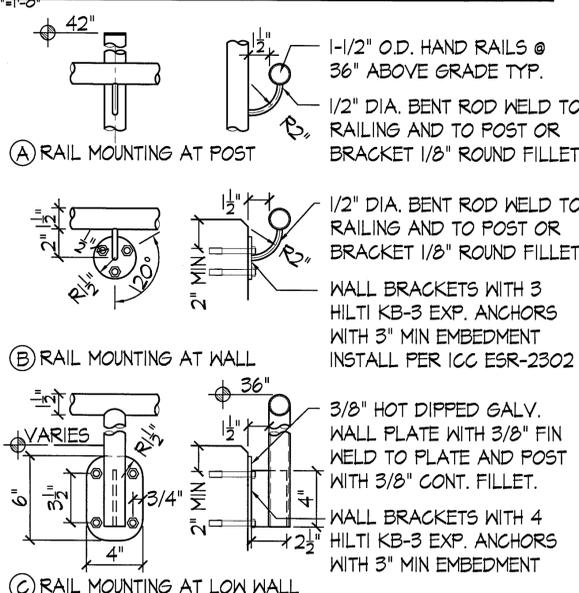
SLOPE 1-1/2% TO DRAIN OR PLANTER TYP.



10 TREAD - VISIBILITY STRIP DETAIL
A-500 N.T.S.



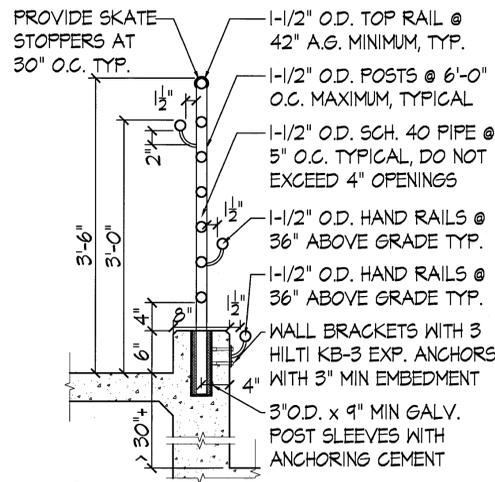
6 BOLLARD WITH RAILING DETAIL
A-500 3/4"=1'-0"



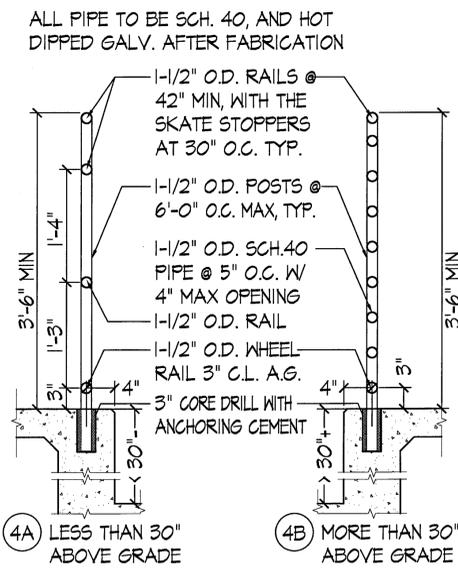
7 RAILING MOUNTING DETAILS
A-500 1'-1/2"=1'-0"

RAILING AND GUARD NOTES:

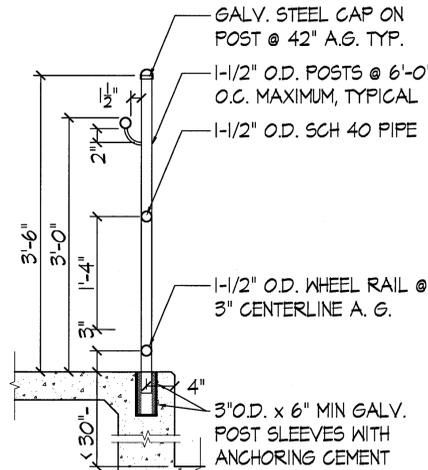
- 1/4" EXPANSION JOINTS AT 16' ± CENTERS, PROVIDE SLEEVED JOINTS TYPICAL
- WELD AND GRIND SMOOTH ALL CONNECTIONS.
- ALL RAILINGS, SLEEVES AND BRACKETS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
- PIPE (S) SHALL BE SEAMLESS STEEL ASTM A53 GRADE B.
- GUARDS AND HANDRAILS FOR STAIRS AND RAMP MORE THAN 30" ABOVE ADJACENT SURFACE SHALL HAVE INTERMEDIATE RAILS EQUALLY SPACED SUCH THAT A 4" IN DIAMETER CANNOT PASS THROUGH.
- HANDRAIL EXTENSIONS FOR STAIRS, AT ALL BOTTOM RISERS SHALL BE 12" PLUS ONE TREAD WIDTH.
- HANDRAIL EXTENSIONS AT RAMP SHALL EXTEND 12" MIN PAST END OF RAMP, AND BE CONTINUOUS IF RAMP IS.
- FIELD WELDS SHALL BE MINIMIZED, BE CLEANED, AND RECEIVE 2 COATS OF COLD GALVANIZED PAINT.
- POSTS SHALL BE GROUTED INTO PLACE WITH NON-SHRINK GROUT DESIGNED FOR EXTERIOR USE.



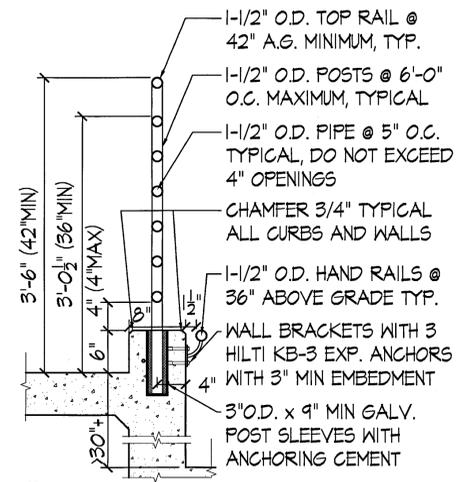
3 RAILING DETAIL 3
A-500 1"=1'-0"



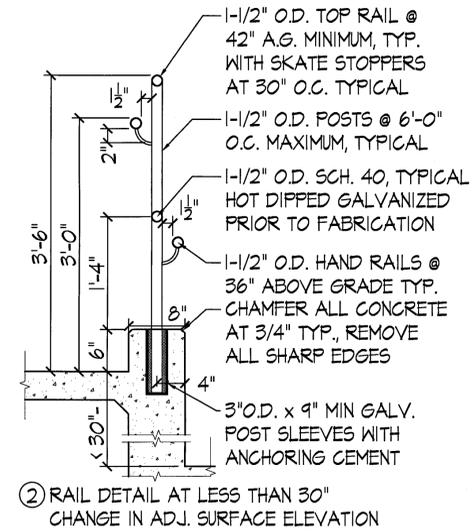
4 RAILING DETAIL 4
A-500 3/4"=1'-0"



5 RAILING DETAIL 5
A-500 3/4"=1'-0"



1 RAILING DETAIL 1
A-500 1"=1'-0"



2 RAILING DETAIL 2
A-500 1"=1'-0"

Platt/Whitelaw Architects, Inc.
4034 30th Street, SAN DIEGO CA 92104
(619) 548-4326 FAX (619) 548-4360

REGISTERED ARCHITECT
ALAN W. WHITELEY
C-10375
EXP 7-31-13
STATE OF CALIFORNIA

PROJECT
VISTA TERRACE POOL
ACCESSIBILITY IMPROVEMENTS

SHEET TITLE
RAMP AND RAILING DETAILS

SHEET NUMBER
A-500
SHEET 22 OF 47

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT

WBS B-009333

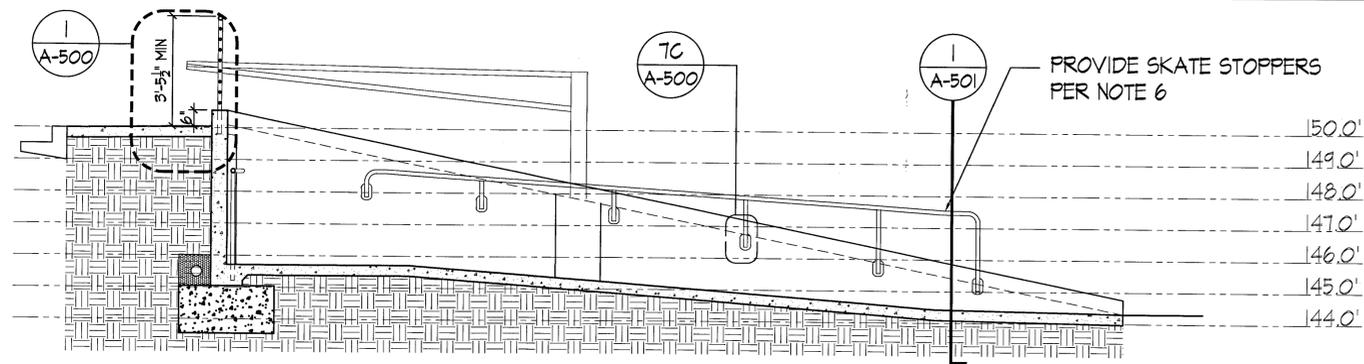
FOR CITY ENGINEER: RBZAHN 3/9/12
PROJECT MANAGER: [Signature]

DESCRIPTION	BY	APPROVED	DATE	SCANNED
PERMIT SUBMIT	RBZAHN		09.27.11	

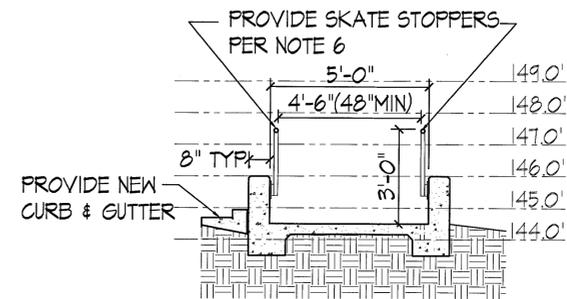
CONTRACTOR: _____ DATE STARTED: _____
INSPECTOR: _____ DATE COMPLETED: _____

146-1753
CCS27 COORDINATE
1787-6312
CCS83 COORDINATE
35609-22-D

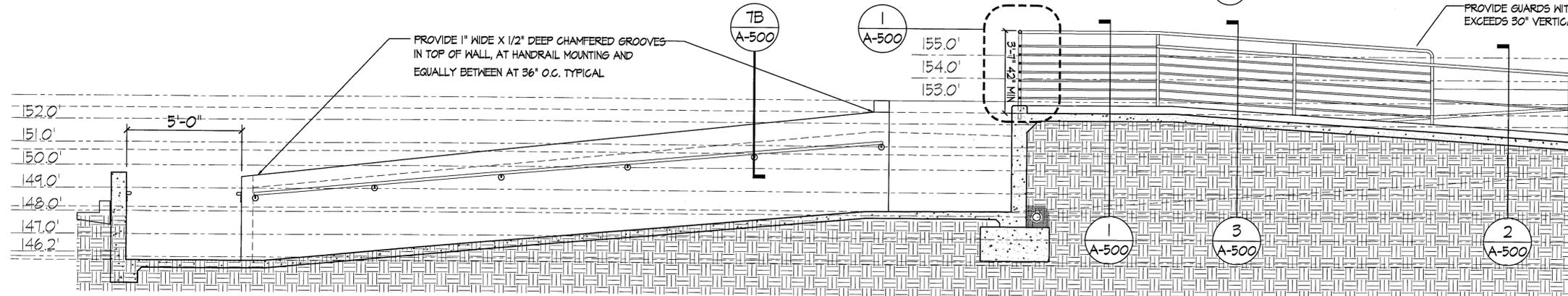
VISTA TERRACE POOL



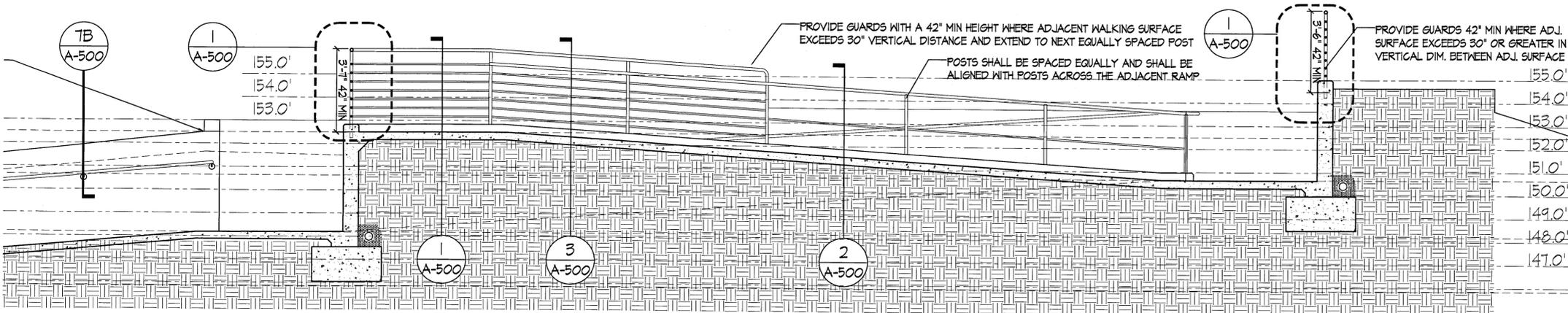
2 NORTH RAMP | SECTION
3/8"=1'-0"



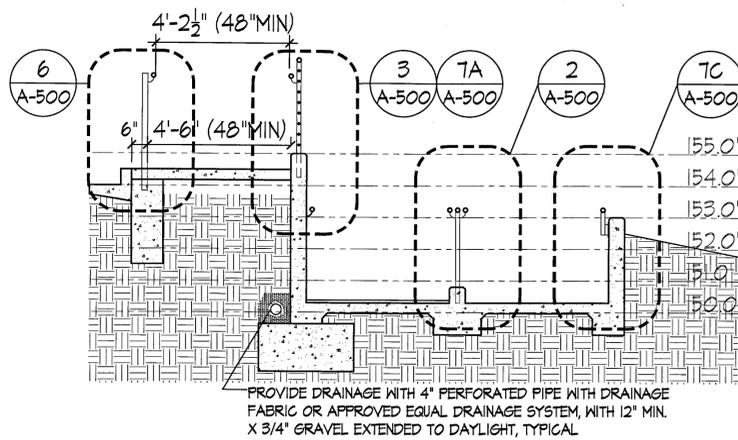
1 RAMP SECTION
3/8"=1'-0"



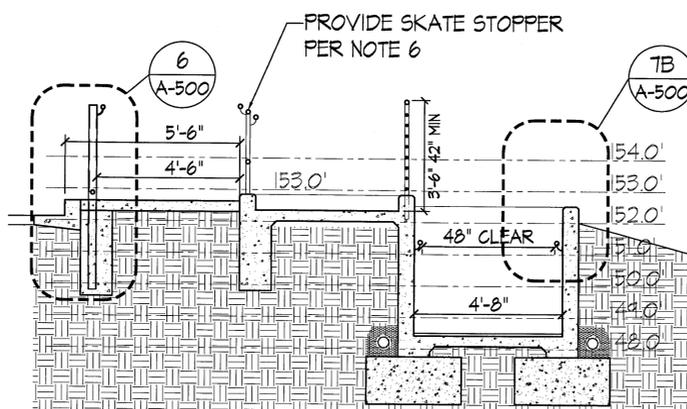
3.1 NORTH RAMP | LONGITUDINAL SECTION
3/8"=1'-0"



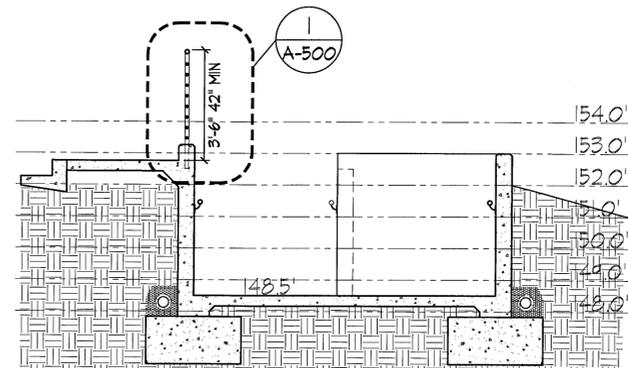
3.2 NORTH RAMP | SECTION - CONTINUED
3/8"=1'-0"



6 NORTH RAMP | SECTION
3/8"=1'-0"



5 NORTH RAMP | SECTION
3/8"=1'-0"



4 NORTH RAMP | SECTION
3/8"=1'-0"

RAMP SECTIONS - NOTES

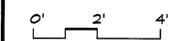
- HANDRAILS SHALL BE MOUNTED AT 36" ABOVE WALKING SURFACE. THEY SHALL BE CONTINUOUS AND EXTEND 12" MINIMUM BEYOND THE TOP AND BOTTOM LANDINGS OR WRAP AROUND IN THE DIRECTION OF TRAVEL. THEY SHALL BE 1-1/2" DIAMETER GALVANIZED STEEL WITH POSTS AT EQUAL SPACINGS NOT TO EXCEED 5'-0" O.C., THE POSTS SHALL BE EPOXY SET INTO GALV. STEEL SLEEVES 6" MINIMUM INTO RAMP.
- CONCRETE SHALL RECEIVE A 3/4" CHAMFER AT INSIDE AND OUTSIDE CONDITIONS AND HAVE ALL SHARP EDGES REMOVED.
- EXISTING CURB AND GUTTER TO REMAIN PER PLAN
- PROVIDE GUARD BARRIER 42" MINIMUM ABOVE WALKING SURFACE WHERE CHANGE IN ELEVATION EXCEEDS 30", 1-1/2" DIAMETER GALVANIZED STEEL POSTS AND RAILS EPOXY SET INTO SLEEVES A MINIMUM OF 9" INTO CONCRETE CURBS, WITH 3/4" DIA. TUBES AT 4" O.C., NO OPENING SHALL EXCEED 4".
- PROVIDE INTEGRAL CRYSTALLINE WATERPROOFING PER SPECIFICATION WITH 4" MIN DRAIN LINE AND FILTER MEMBRANE OR APPROVED DRAINAGE SYSTEM, WITH 12" MIN. X 3/4" DRAIN ROCK ON ALL SIDES OF DRAIN LINE. EXTEND DRAIN LINE TO APPROVED STORM DRAIN OUTLET.
- PROVIDE SKATE STOPPERS AND MOUNTING ON TOP OF MIDDLE GUARD RAIL AT 30" O.C. MFG. BY INTELLICPET OR EQUAL. LOCATE PER RESIDENT ENGINEER
- RAILING AND GUARD NOTES:
 - 1/4" EXPANSION JOINTS AT 16' ± CENTERS, PROVIDE SLEEVED JOINTS TYPICAL
 - WELD AND GRIND SMOOTH ALL CONNECTIONS.
 - ALL RAILINGS, SLEEVES AND BRACKETS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
 - PIPE (S) SHALL BE SEAMLESS STEEL ASTM A53 GRADE B.
 - GUARDS AND HANDRAILS FOR STAIRS AND RAMPS MORE THAN 30" ABOVE ADJACENT SURFACE SHALL HAVE INTERMEDIATE RAILS EQUALLY SPACED SUCH THAT A SPHERE 4" IN DIAMETER CANNOT PASS THROUGH.
 - HANDRAIL EXTENSIONS FOR STAIRS, AT ALL BOTTOM RISERS SHALL BE 12" PLUS ONE TREAD WIDTH.
 - HANDRAIL EXTENSIONS AT RAMPS SHALL EXTEND 12" MIN END OF RAMP, AND BE CONTINUOUS IF RAMP IS.
 - FIELD WELDS SHALL BE MINIMIZED, BE CLEANED, AND RECEIVE 2 COATS OF COLD GALVANIZED PAINT.
 - POSTS SHALL BE GROUTED INTO PLACE WITH NON-SHRINK GROUT DESIGNED FOR EXTERIOR USE.

GENERAL NOTES

- A FOUNDATIONS SHALL BE CONSTRUCTED PER STRUCTURAL DRAWINGS, GRADES SHALL BE PER CIVIL DRAWINGS NOTIFY RESIDENT ENGINEER OF ANY DISCREPANCIES IMMEDIATELY

LEGEND

- [Symbol] = EXISTING CURB AND GUTTER TO REMAIN, PROTECT IN PLACE
- [Symbol] = NEW CONCRETE PER STRUCTURAL



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REGISTERED ARCHITECT
C-10375
EXP 7-31-13
Whitelaw

PROJECT
VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

SHEET TITLE
NORTH RAMP | SECTIONS

SHEET NUMBER
A-501
SHEET 23 OF 47

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT

WBS B-00933

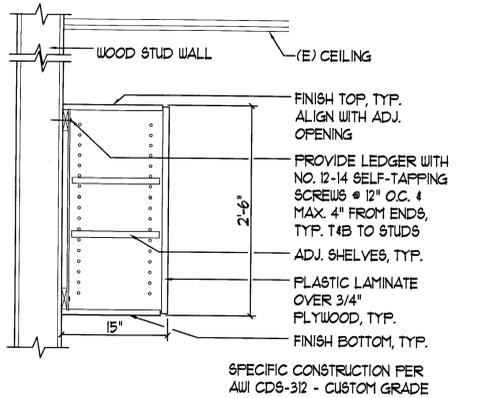
APPROVED: [Signature] DATE: 3/9/12
PROJECT MANAGER: [Signature]

DESCRIPTION	BY	APPROVED	DATE	SCANNED
PERMIT SUBMIT	RBZAHN		09.27.11	

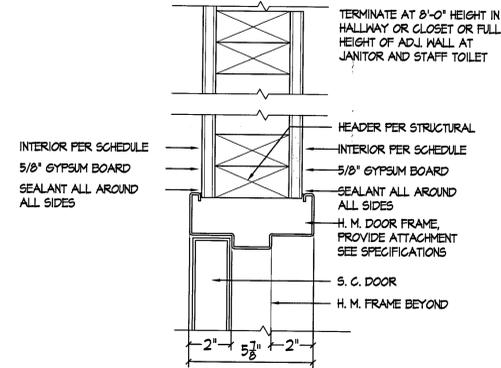
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INSPECTOR: _____ DATE COMPLETED: _____

146-1753
CCS27 COORDINATE
1787-6312
CCS83 COORDINATE
35609-23-D

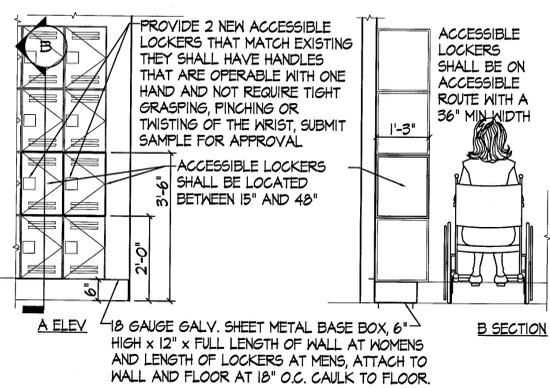
VISTA TERRACE POOL



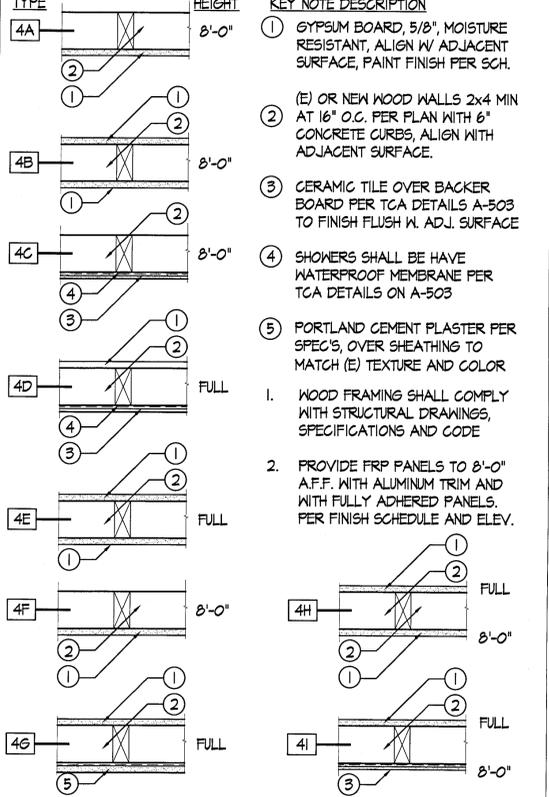
14 UPPER CABINET DETAIL
A-502 1/2"=1'-0"



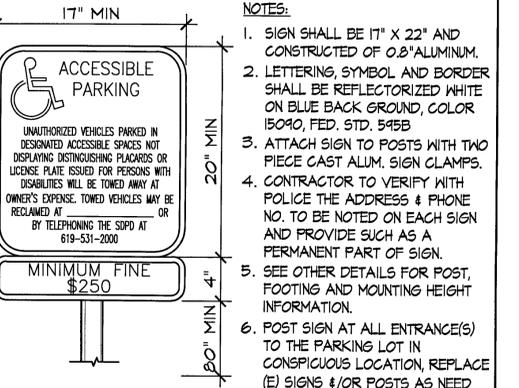
10 DOOR HEAD - INTERIOR
A-502 3/4"=1'-0"



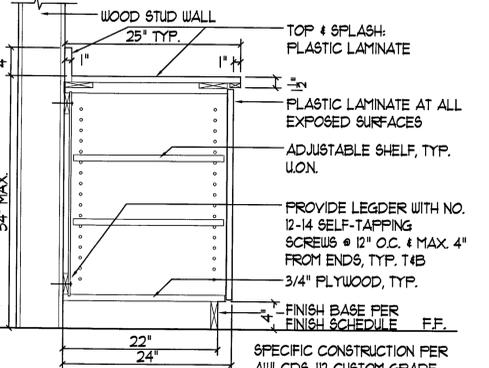
7 LOCKER DETAIL
A-502 1/2"=1'-0"



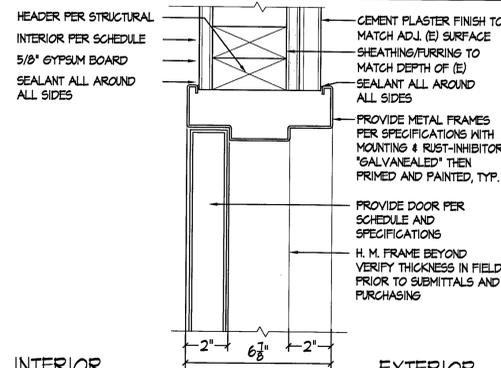
4 WALL TYPES
A-502 1/2"=1'-0"



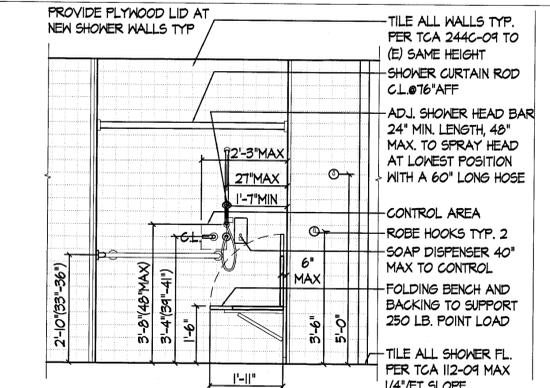
1 PARKING LOT ENTRY SIGN
A-502 1/2"=1'-0"



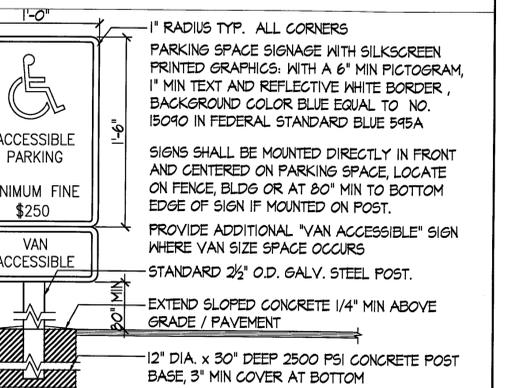
15 BASE CABINET DETAIL
A-502 1/2"=1'-0"



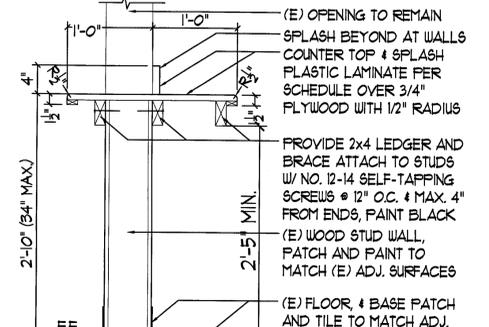
11 DOOR HEAD - EXTERIOR
A-502 3/4"=1'-0"



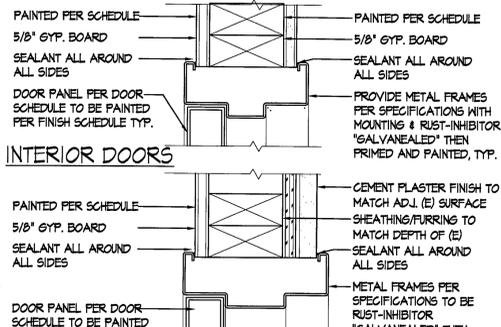
8 ACCESSIBLE SHOWER TYP.
A-502 1/2"=1'-0"



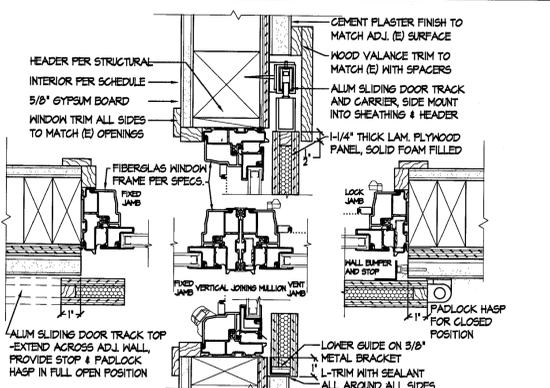
2 PARKING SPACE SIGN
A-502 1/2"=1'-0"



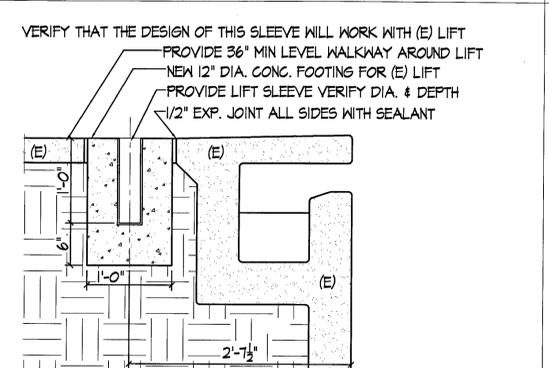
16 COUNTER DETAIL
A-502 1/2"=1'-0"



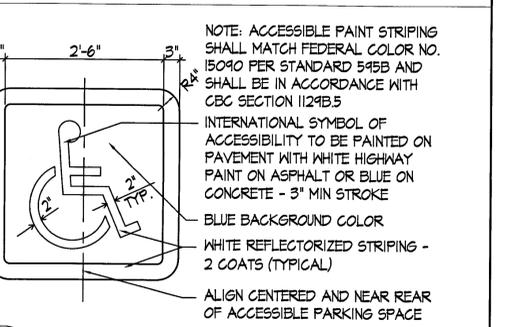
12 DOOR JAMBS
A-502 3/4"=1'-0"



9 WINDOW DETAIL
A-502 3/4"=1'-0"



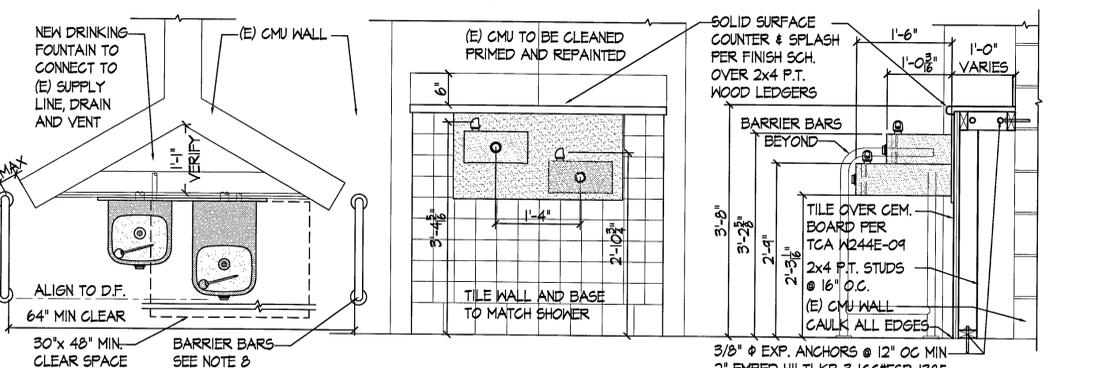
5 POOL LIFT DETAIL
A-502 1"=1'-0"



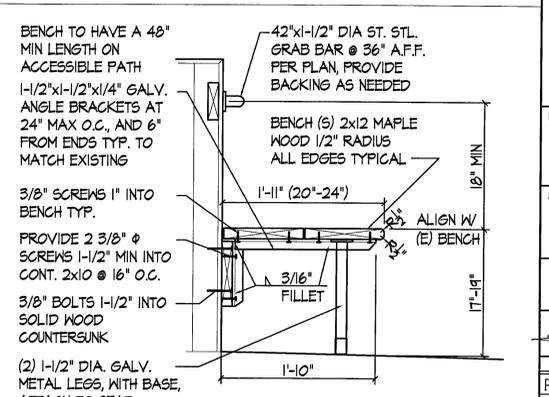
3 SYMBOL OF ACCESSIBILITY
A-502 3/4"=1'-0"

DRINKING FOUNTAINS AND WATER COOLERS

- REFER TO OPERATION AND MAINTENANCE MANUAL FOR PUSH BUTTON AND VALVE INSTALLATION/MAINTENANCE INSTRUCTIONS.
- VERIFY MANUFACTURERS MOUNTING INSTRUCTIONS AND ACCESSIBILITY REQ. PRIOR TO MOUNTING
- SPOUT HEIGHT SHALL BE NO HIGHER THAN 36" A.F.F. MEASURED FROM THE FLOOR TO THE SPOUT OUTLET. THE SPOUT SHALL BE LOCATED AT THE FRONT OF THE UNIT AND SHALL DIRECT THE WATER FLOW IN A TRAJECTORY THAT IS PARALLEL OR NEARLY PARALLEL TO THE FRONT OF THE UNIT.
- THE SPOUT SHALL PROVIDE A FLOW OF WATER AT LEAST 4" HIGH SO AS TO ALLOW FOR THE INSERTION OF A CUP OR GLASS UNDER THE FLOW OF WATER.
- ON A FOUNTAIN WITH A ROUND OR OVAL BOWL, THE SPOUT MUST BE POSITIONED SO THE FLOW OF WATER IS WITHIN 3" OF THE FRONT EDGE OF THE FOUNTAIN.
- UNIT CONTROLS SHALL BE FRONT MOUNTED OR SIDE MOUNTED. SIDE MOUNTS SHALL BE LOCATED A MAXIMUM OF 6" FROM THE FRONT EDGE. CONTROLS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL NOT EXCEED 5 LBS.
- WALL MOUNTED FOUNTAINS SHALL HAVE A CLEAR SPACE BETWEEN THE BOTTOM OF THE APRON AND THE FLOOR AT LEAST 27" HIGH, 32" WIDE, AND 17" TO 19" DEEP. SUCH UNITS SHALL HAVE A MINIMUM CLEAR FLOOR SPACE 32" BY 48" TO ALLOW A PERSON IN A WHEELCHAIR TO APPROACH THE UNIT FACING FORWARD.
- PROVIDE 1-1/2" ST. ST. BARRIER BARS WITH CONCEALED FLANGES WITH ST. ST. EXP BOLTS 3" MIN EMBED, EXTEND TO END OF FOUNTAIN, 36" MAX HEIGHT WITH LOWER HORIZONTAL BARS AT 8" MAX ABOVE GRADE.



13 DRINKING FOUNTAIN DETAIL
A-502 3/4"=1'-0"



6 ACCESSIBLE BENCH
A-502 1"=1'-0"

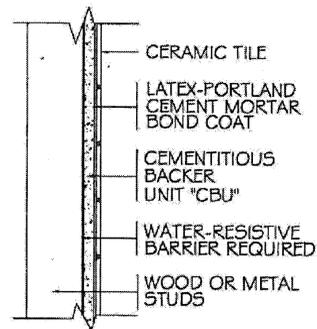
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REGISTERED ARCHITECT
C-10375
EXP 7-31-13
Allan

PROJECT		VISTA TERRACE POOL	
ACCESSIBILITY IMPROVEMENTS			
SHEET TITLE	DETAILS	SHEET NUMBER	A-502
		SHEET 24 OF 47	
CITY OF SAN DIEGO, CALIFORNIA		ENGINEERING AND CAPITAL PROJECTS DEPARTMENT	
WBS B-00933		SUBMITTED BY: [Signature]	
FOR CITY ENGINEER	DATE	APPROVED	DATE
[Signature]	3/13/12	[Signature]	
PERMIT SUBMIT	RBZAHN	09.27.11	
CONTRACTOR		DATE STARTED	
INSPECTOR		DATE COMPLETED	
		146-1753	
		CCS27 COORDINATE	
		1787-6312	
		CCS83 COORDINATE	
		35609-24-D	

VISTA TERRACE POOL

Cementitious Backer W244E-09 Unit (Interior applications see W244C) Thin-Set



Recommended Uses:

- over dry, well-braced wood studs or furring.
- over well-braced metal studs.

Requirements:

- set tile in dry-set or latex-portland cement mortar.
- stud spacing—maximum 16" o.c.
- minimum recommended stud depth—3-1/2".
- metal studs—20 gauge (0.039") or heavier.

Materials:

- cementitious backer units—ANSI A118.9 or ASTM C1325 (Type A).
- 4" alkali-resistant glass fiber mesh tape.
- water-resistive barrier per building code.
- fasteners—noncorrosive and nonoxidizing.
- hot-dipped fasteners meeting ASTM F2329-05 required in wet areas.
- latex-portland cement mortar—ANSI A118.4.
- grout—ANSI A118.3, A118.6, A118.7, or A118.8.
- when chemical resistance is required for installation, specify epoxy mortar and grout complying with ANSI A118.3.

Preparation by Backer Unit Installers:

- maximum variation in the backing surface—1/4" in 10'-0" and 1/16" in 1'-0" from the required plane.
- horizontal joints—1/8" spacing filled solid with latex-portland cement mortar.
- 4" alkali-resistant glass fiber mesh tape—embed in a skim coat of latex-portland cement mortar over joints and corners.

Preparation by Other Trades:

- water-resistive barrier required.

Movement Joint (architect must specify type of joint and show location and details on drawings):

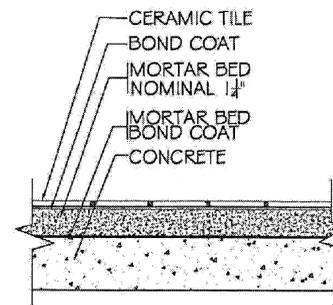
- movement joints—mandatory according to Method EJ171, page 78.

Installation Specifications:

- cementitious backer units—per manufacturer's instructions.
- tile—ANSI A108.5.
- grout—ANSI A108.6, A108.9, or A108.10.

3 DRINKING FOUNTAIN WALL
A-503

Cement Mortar, F112-09 Bonded



Recommended Uses:

- on slab-on-grade construction where no bending stresses occur.
- on properly cured structural slabs of limited area.
- see page 18 NOTE for exterior uses.

Limitations:

- use Method F111 over precast concrete floor systems, post-tensioned concrete floor systems, and other floors subject to movement or deflection.

Requirements:

- mortar bed thickness to be uniform.
- concrete must be free of cracks.

Materials:

- mortar bed—ANSI A108.1A.
- bond coat—portland cement paste on a mortar bed that is still workable, or dry-set mortar or latex-portland cement mortar on a cured bed.
- grout—ANSI A118.6 or A118.7.
- mortar bed bond coat—portland cement slurry.

Preparation by Other Trades:

- slab to have steel trowel and fine broom finish with no curing compounds used. (When used, mechanical scarifying is necessary.)
- slope, when required, to be in subfloor.
- max. variation in the slab shall not exceed 1/4" in 10'-0" from the required plane.

Movement Joint (architect must specify type of joint and show location and details on drawings):

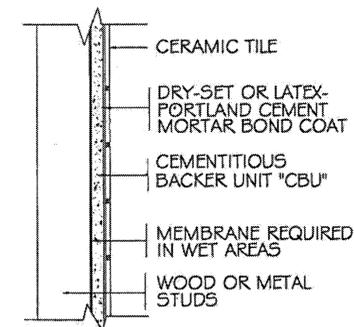
- movement joints—mandatory according to Method EJ171, page 78.

Installation Specifications:

- tile—ANSI A108.1A, .1B, or .1C.
- grout—ANSI A108.10.

2 SHOWER FLOOR TILE
A-503

Cementitious Backer W244C-09 Unit



Recommended Uses:

- in wet or dry areas.
- over dry, well-braced wood studs or furring.
- over well-braced metal studs.

Requirements:

- set tile in dry-set or latex-portland cement mortar.
- stud spacing—maximum 16" o.c.
- minimum recommended stud depth—3-1/2".
- metal studs—20 gauge (0.039") or heavier.

Materials:

- cementitious backer units—ANSI A118.9 or ASTM C1325 (Type B).
- 2" alkali-resistant glass fiber mesh tape.
- membrane—ANSI A108.02-3.8 (when required).
- fasteners—noncorrosive and nonoxidizing.
- fasteners meeting ASTM F2329-05 required in wet areas.
- dry-set mortar—ANSI A118.1.
- latex-portland cement mortar—ANSI A118.4.
- grout—ANSI A118.3, A118.6, or A118.7.
- when chemical resistance is required for interior installations, specify epoxy mortar and grout complying with ANSI A118.3.

Preparation by Backer Unit Installers:

- maximum variation in the backing surface—1/4" in 10'-0" and 1/16" in 1'-0" from the required plane.
- horizontal joints—1/8" spacing filled solid with dry-set or latex-portland cement mortar.
- 2" alkali-resistant glass fiber mesh tape—embed in a skim coat of dry-set or latex-portland cement mortar over joints and corners.

Preparation by Other Trades:

- membrane, if required.

Movement Joint (architect must specify type of joint and show location and details on drawings):

- movement joints—mandatory according to Method EJ171, page 78.

Installation Specifications:

- cementitious backer units—ANSI A108.11.
- tile—ANSI A108.5.
- grout—ANSI A108.6 or A108.10.

1 SHOWER WALLS TILE
A-503

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PROJECT VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS		
SHEET TITLE TILE INSTALLATION DETAILS		SHEET NUMBER A-503 SHEET 25 OF 47
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT		WBS B-00933
PERMITTED BY: <i>[Signature]</i> 3/13/12 PER CITY ENGINEER: RBZAHN DATE: 09.27.11		SUBMITTED BY: <i>[Signature]</i> PROJECT MANAGER
DESCRIPTION: PERMIT SUBMIT	BY: RBZAHN	DATE: 09.27.11
CONTRACTOR:		DATE STARTED:
INSPECTOR:		DATE COMPLETED:
146-1753 CCS27 COORDINATE 1787-6312 CCS83 COORDINATE		35609-25-D

VISTA TERRACE POOL

WINDOW SCHEDULE

ITEM	QUAN	LOCATION	DOOR			DETAILS	NOTES	
			DESCRIPTION	SIZE				
				WIDTH	HEIGHT			TYPE
A	2	STAFF LOUNGE - 204	DUAL SLIDERS	36	60	V.I.F.	9/A-502	1, 2, 3

WINDOW SCHEDULE NOTES

- WINDOWS SEE SPECIFICATIONS SECTION 085413
- PROVIDE NEW FIBERGLAS WINDOW FRAME, AND TEMPERED GLAZING TYPICAL
- PROVIDE LOCKING DEVICE AT 44" AFF MAX

WINDOW NOTES

- PROVIDE SAFETY GLAZING AT ALL LOCATIONS.
- ALL WINDOW DIMENSIONS SHALL BE FIELD VERIFIED WITH INTERIOR CLEAR DIMENSIONS OF ROLL-UP COUNTER DOORS, PROVIDE PROTECTION AND SEPARATION FROM DISSIMILAR METALS, PROVIDE ATTACHMENT PER MANUFACTURER AND INDUSTRY STANDARDS, PROVIDE RUBBER SEALS AT WINDOW TO FRAME AND CLEAR SILICONE SEALANT AT ALL GAPS AND JOINTS.
- PROVIDE WEATHER AND MOISTURE PROTECTION WITH 40 MIL THICK AND 8" MIN. WIDTH "JIFFY SEAL" OR EQUAL APPLIED TO SILL, THEN JAMBS THEN HEAD, WITH FULL OVERLAPPED CORNERS, WITH SILICON SEALANT TYPICAL.

DOOR SCHEDULE

ITEM	LOCATION	DESCRIPTION	SIZE			DETAILS		NOTES
			WIDTH	HEIGHT	TYPE	HEAD	JAMB	
001	EXT	EXISTING - SIGNAGE ONLY	--	--	--	EXISTING	EXISTING	5
002	EXT	EXISTING - SIGNAGE ONLY	--	--	--	EXISTING	EXISTING	1
003	EXT	EXISTING - SIGNAGE ONLY	--	--	--	EXISTING	EXISTING	--
005	INT	EXISTING - SIGNAGE ONLY	--	--	--	EXISTING	EXISTING	5
006	EXT	EXISTING - SIGNAGE ONLY	--	--	--	EXISTING	EXISTING	1
100	EXT	EXISTING - HARDWARE ONLY	--	--	--	EXISTING	--	1, 4, 7
104	INT	NEW DOOR+FRAME	3'-0"	7'-0"	1 3/4"	10/A-502	12/A-502	1, 2 NEW
105	INT	NEW DOOR+FRAME	3'-0"	7'-0"	1 3/4"	10/A-502	12/A-502	1, 2
106	INT	NEW DOOR+FRAME	3'-0"	7'-0"	1 3/4"	10/A-502	12/A-502	1, 2
200	EXT	EXISTING - HARDWARE ONLY	--	--	--	EXISTING	--	1, 4, 7
204	INT	NEW DOOR+FRAME	3'-0"	7'-0"	1 3/4"	10/A-502	12/A-502	1, 2 NEW
300	EXT	NEW DOOR+FRAME	3'-0"	7'-0"	1 3/4"	11/A-502	12/A-502	1, 2, 3
301	INT	NEW DOOR+FRAME	3'-0"	7'-0"	1 3/4"	10/A-502	12/A-502	1, 2
401	EXT	NEW DOOR+FRAME	3'-0"	7'-0"	1 3/4"	11/A-502	12/A-502	1, 2, 7
402	EXT	NEW DOOR+FRAME	3'-0"	7'-0"	1 3/4"	11/A-502	12/A-502	1, 2, 7

DOOR SCHEDULE NOTES

- HARDWARE SEE SPECIFICATIONS SECTION 08100
- PROVIDE NEW DOOR AND FRAME WITH GALVALUME FINISH- FLUSH DOOR PANELS, WITH METAL FRAME.
- NEW THRESHOLDS SHALL BE ACCESSIBLE, MAX 1/4" CHANGE IN ELEVATION OR SLOPED 2 H : 1 V. PROVIDE PANIC HARDWARE, LOCK SET AND LEVER WITH KICK PLATES.
- ADJUST CLOSER TO OPERATE AT LESS THAN 5 LB OPERATING FORCE
- PROVIDE LOCK SET WITH ACCESSIBLE LEVERS NEW CLOSER WITH HOLD OPEN DEVICE
- ALL DOORS TO HAVE NEW IDENTIFICATION SIGNAGE W/ BRAILLE. PER SIGNAGE PLAN A-103

DOOR NOTES

- HARDWARE PACKAGE, REFER TO SECTION 08100 IN THE SPECIFICATIONS.
- ALL HARDWARE SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS. CONTRACTOR TO VERIFY HARDWARE TEMPLATES. COORDINATE WITH DOOR MANUFACTURER'S TEMPLATES.
- EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
- ALL HARDWARE SHALL MEET THE REQUIREMENTS OF CBC 1133B.2.1
- THE WIDTH AND HEIGHT OF DOORWAYS SHALL COMPLY WITH SECTION 1008, EVERY REQUIRED EXIT DOORWAY SHALL PERMIT THE INSTALLATION OF A DOOR NOT LESS THAN 3 FEET WIDE AND 6 FEET 8 INCHES HIGH. EXIT DOORS SHALL BE CAPABLE OF OPENING AT LEAST 90 DEGREES, AND PROVIDE NOT LESS THAN 32" CLEAR WIDTH. CBC SECTION 1133B.2.2
- FOR HINGED DOORS, THE OPENING WIDTH SHALL BE MEASURED WITH THE DOOR POSITIONED AT AN ANGLE OF 90 DEGREES FROM ITS CLOSED POSITION. CBC SECTION 1133B.2.3
- WHERE A PAIR OF DOORS IS UTILIZED, AT LEAST ONE OF THE DOORS SHALL PROVIDE A CLEAR UNOBSTRUCTED OPENING WIDTH OF 32 INCHES WITH THE LEAF POSITIONED AT AN ANGLE OF 90 DEGREES FROM ITS CLOSED POSITION. CBC 1133B.2.3.1
- THRESHOLDS SHALL COMPLY WITH CBC SECTION 1133B.2.4.1
- THERE SHALL BE A LEVEL AND CLEAR FLOOR LANDING ON EACH SIDE OF A DOOR. THE LEVEL AREA SHALL HAVE A LENGTH IN THE DIRECTION OF THE DOOR SWING OF AT LEAST 60" AND THE LENGTH IN THE DIRECTION OPPOSITE OF THE DOOR SWING OF AT LEAST 44" AS MEASURED AT RIGHT ANGLES TO THE PLANE OF THE DOOR IN ITS CLOSED POSITION, OR 48" IF DOOR HAS BOTH LATCH AND CLOSER. CBC 1133B.2.4.2
- MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 POUNDS FOR EXTERIOR AND INTERIOR DOORS, SUCH PULL OR PUSH EFFORT BEING APPLIED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE OF SLIDING OR FOLDING DOORS. COMPENSATING DEVICES OR AUTOMATIC DOOR OPERATORS MAY BE UTILIZED TO MEET THE ABOVE STANDARDS. WHEN FIRE DOORS ARE REQUIRED, THE MAXIMUM EFFORT TO OPERATE THE DOOR MAY BE INCREASED, NOT TO EXCEED 15 POUNDS. WHEN REVISIONS ARE ALLOWED BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY. CBC 1133B.2.5
- IF DOOR CLOSER IS PROVIDED THEN THE SNEEP PERIOD OF THE CLOSER SHALL BE ADJUSTED TO SO THAT FROM AN OPEN POSITION OF 10 DEGREES, THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3" FROM THE LATCH, MEASURED TO THE LEADING EDGE OF THE DOOR. CBC 1133B.2.5.1
- LATCHING AND LOCKING HAND ACTIVATED DOORS IN A PATH OF TRAVEL SHALL BE OPERABLE WITH A SINGLE EFFORT BY LEVER TYPE HARDWARE, PANIC BARS, OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE OPENING HARDWARE. LOCKED EXIT DOORS SHALL OPERATE AS ABOVE IN EGRESS DIRECTION. HAND OPERATED DOOR OPENING HARDWARE SHALL BE CENTERED BETWEEN 30" TO 44" ABOVE THE FLOOR. CBC 1133B.2.5.2
- THE WIDTH OF THE LEVEL AREA ON THE SIDE TO WHICH THE DOOR SWINGS SHALL EXTEND 24" PAST THE STRIKE EDGE OF THE DOOR FOR EXTERIOR DOORS AND 18" PAST THE STRIKE EDGE FOR INTERIOR DOORS. AN ADDITIONAL 12" SHALL BE PROVIDED ON PUSH SIDE AT LATCH FOR DOORS EQUIPPED WITH CLOSER AND LATCH. CBC 1133B.2.5.3
- THE BOTTOM 10" OF ALL DOORS EXCEPT AUTOMATIC AND SLIDING AND DOORS, SHALL HAVE A SMOOTH, UNINTERRUPTED SURFACE TO ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION, MANDATORY ON THE PUSH SIDE ONLY. CBC 1133B.2.6
- THE FLOOR LANDING SHALL NOT BE MORE THAN 1/2" LOWER THAN THE THRESHOLD OF THE DOORWAY.
- FLOOR STOPS SHALL NOT BE LOCATED IN THE PATH OF TRAVEL AND 4" MAXIMUM FROM WALLS.
- EXIT DEVICES: PANIC HARDWARE SHALL BE MOUNTED BETWEEN ABOVE 30" TO 44" A.F.F. SURFACE. THE UNLATCHING FORCE SHALL NOT EXCEED 15# APPLIED IN THE DIRECTION OF TRAVEL. PANIC HARDWARE SHALL COMPLY WITH CBC SECTION 1008.1.1.
- PROVIDE SAFETY GLAZING WITHIN 24" OF DOOR JAMBS AND WITHIN 60" OF WALKING SURFACE.
- SIGNAGE SHALL BE PROVIDED PER SIGNAGE DETAIL SHEET A-103

FINISH SCHEDULE

ROOM	ROOM NAME	FLOOR	BASE	FINISHES				CEILING	MATERIAL	FINISH	REMARKS
				WALLS							
				EAST	SOUTH	WEST	NORTH				
001	LOBBY	EPX	CTI	PI	PI	PI	PI	EXISTING	EXISTING		
101	MEN'S TOILET	EPX	CTI	CT \ PI	PI	CT \ PI	CT \ PI	EXISTING	EXISTING		
102	MEN'S LOCKER	EPX	CTI	PI	PI	PI	PI	EXISTING	EXISTING	FRP AT LAVATORY ALCOVE - 3 SIDES	
103	MEN'S SHOWER	CTI	CTI	CT3	CT3	CT3	CT3	EXISTING	EXISTING	CT4 TRIM AT SHOWER OPENING	
105	JANITOR	EPX	CTI	PI/FRP	PI/FRP	PI/FRP	PI/FRP	G.B. @ 8'	PI	FRP TO CEILING	
104	MENS HALL	EPX	CTI	PI	PI	PI	PI	EXISTING	EXISTING		
106	STORAGE	EPX	CTI	PI	PI	PI	PI	EXISTING	EXISTING		
201	WOMEN'S TOILET	EPX	CTI	CT \ PI	CT \ PI	PI	CT \ PI	EXISTING	EXISTING		
202	WOMEN'S LOCKER	EPX	CTI	PI	PI	PI	PI	EXISTING	EXISTING		
203	WOMEN'S SHOWER	CTI	CTI	CT3	CT3	CT3	CT3	EXISTING	EXISTING	CT4 TRIM AT SHOWER OPENING	
204	WOMEN'S HALL	EPX	CTI	PI	PI	PI	PI	EXISTING	EXISTING		
300	STAFF LOUNGE	EPX	CTI	PI	PI	PI	PI	EXISTING	EXISTING		
301	STAFF TOILET	EPX	CTI	PI	CT \ PI	CT \ PI	CT \ PI	EXISTING	EXISTING		
302	STAFF SHOWER	CTI	CTI	CT3	CT3	CT3	CT3	G.B. @ 8'	PI		
401	FAMILY TOILET	EPX	CTI	PI	CT \ PI	CT \ PI	PI	EXISTING	EXISTING		
402	FAMILY TOILET	EPX	CTI	PI	PI	CT \ PI	CT \ PI	EXISTING	EXISTING		
501	CONTROL	FT	CTI	PI	PI	PI	PI	EXISTING	EXISTING		

FINISH SCHEDULE NOTES

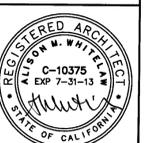
- EXTEND PAINT TO CEILING AND TO COVER ALL EXISTING PAINTED AREAS, DO NOT PAINT BEAMS OR CEILING TYP. ALL ROOMS

COLOR/MATERIAL LEGEND

ITEM	MATERIAL NAME	LOCATION	MANUFACTURER	PRODUCT	COLOR-MODEL	SIE	NOTES FINISH
CT1	CERAMIC TILE	BASE THROUGHOUT U.O.N.	CROSSVILLE	SEMI-GLOSS WALL TILE	B250 ZEOLITE	6X8	SLIMFOOT
CT2	CERAMIC TILE	FLOORS IN SHOWER	CROSSVILLE	CROSS SLATE	A900 MICA	8X8	W.COF > 6
CT3	CERAMIC TILE	WALLS	CROSSVILLE	SEMI-GLOSS WALL TILE	B250 ZEOLITE	8X8	--
CT4	CERAMIC TILE	FLOOR TRIM	CROSSVILLE	CROSS SLATE	A900 MICA	8X8	W.COF > 6
CT5	CERAMIC TILE	WALL TRIM	CROSSVILLE	SEMI-GLOSS WALL TILE	B250 ZEOLITE	4X8	BULLNOSE
EPX	EPOXY FLOOR	FLOORS THROUGHOUT	SHERWIN WILLIAMS	WATER-BASED EPOXY	WATER GLAD	--	SLIP RESIS.
FT	FLOOR TILE	CONTROL ROOM	MATCH	EXISTING	TBD	--	--
FRP	FIBER REINFORCED PLASTIC	WAINSCOTS	FORMICA	SELECT-A PREMIUM PRODUCT	TBD FROM FULL LINE	--	ALUM. TRIM
PI	PAINT	WALLS THROUGHOUT	SHERWIN WILLIAMS	TBD	TBD	--	SEMIGLOSS
SSI	SOLID SURFACE COUNTER	DRINKING FOUNTAIN	TBD	TBD	THRU BODY - TBD	3/4" MIN	--

Platt/Whitelaw Architects, Inc.

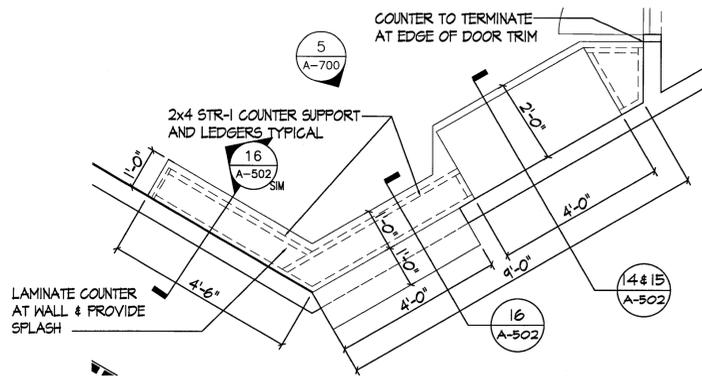
4034 30th Street, SAN DIEGO CA 92104
(619) 548-4328 FAX (619) 548-4350



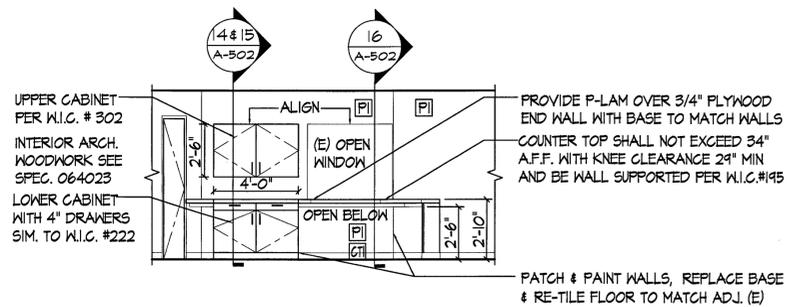
PROJECT VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

SHEET TITLE: SCHEDULES		SHEET NUMBER: A-601	
		SHEET 26 OF 47	
CITY OF SAN DIEGO, CALIFORNIA			
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT			
SUBMITTED BY: [Signature]		DATE: 3/07/12	
FOR CITY ENGINEER: [Signature]		DATE: 09.27.11	
PERMIT SUBMIT: RBZAHN		PROJECT MANAGER: [Signature]	
CONTRACTOR: [Blank]		DATE STARTED: [Blank]	
INSPECTOR: [Blank]		DATE COMPLETED: [Blank]	
		146-1753	
		CCS27 COORDINATE	
		1787-6312	
		CCS83 COORDINATE	
		35609-26-D	

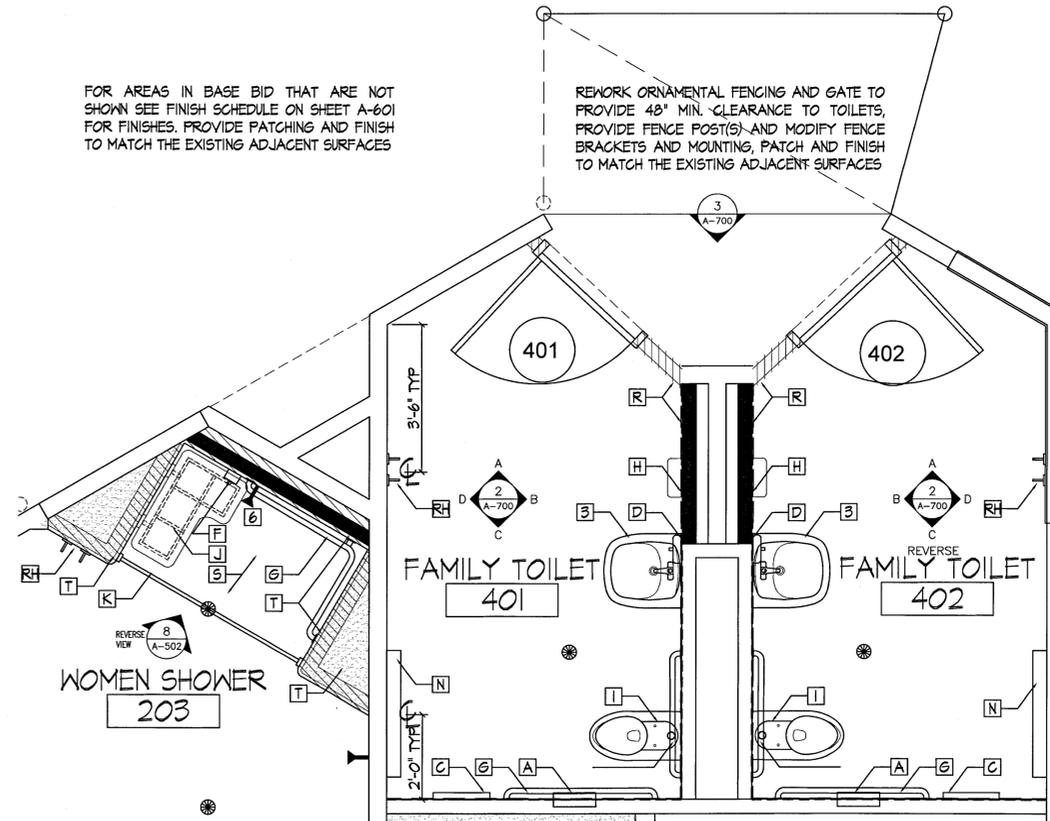
VISTA TERRACE POOL



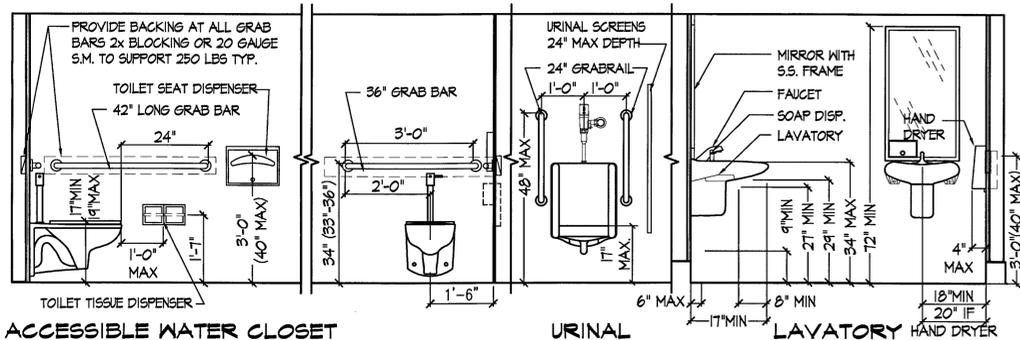
4 CONTROL ROOM ENLARGED PLAN
A-700 1/2" = 1'-0"



5 CONTROL ROOM ELEVATIONS
A-700 1/2" = 1'-0"



1 FAMILY TOILET 401, 402 & TYPICAL SHOWER - FINISH PLAN
A-700 1/2" = 1'-0"

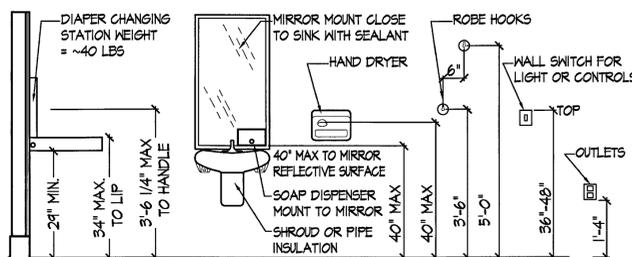


ACCESSIBLE WATER CLOSET

URINAL

LAVATORY

HAND DRYER

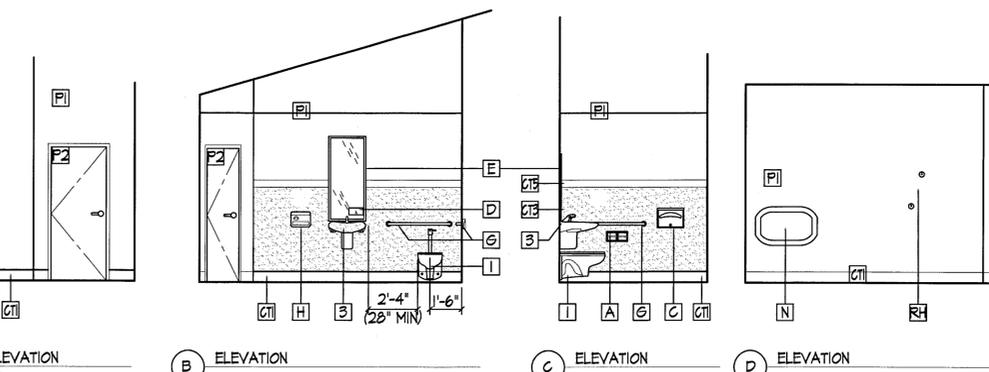


ACCESSIBLE ACCESSORIES

SEE PLAN TO VERIFY LOCATION - NOT ALL ACCESSORIES ARE USED - FIXTURES AND ACCESSORIES MAY VARY IN SIZE AND SHAPES

- PROVIDE SUBMITTALS FOR APPROVAL, VERIFY LOCATION OF ACCESSORIES BEFORE MOUNTING
- DISPENSERS SHALL BE 40" A.F.F. MAX TO POINT OF OPERABLE ACCESSORY OR FIXTURE, AT LEAST ONE OF EACH TYPE PROVIDED
- MIRRORS 40" MAX. AND 12" MIN. TO THE REFLECTIVE SURFACE
- LAVATORY'S WATER RIM SHALL BE 34" A.F.F. MAX, WITH 30"x48" CLEAR KNEE SPACE AS SHOWN ON ACCESSIBLE PATH OF TRAVEL
- PROVIDE LAVATORY LEVERS WITH DELAY OR AUTOMATIC FAUCET SET FOR 10 SECONDS MAXIMUM DURATION
- PROVIDE PIPE INSULATION OR PIPE COVER SHROUD AT HOT & DRAIN PIPES TYPICAL WITH NO SHARP EDGES UNDER LAVATORY
- THE MAX. PROJECTION OF ANY OBJECT INTO ROOM SHALL NOT EXCEED 4", BETWEEN 27"-80" ABOVE FLOOR
- FLUSH VALVES SHALL BE LOCATED ON WIDE SIDE OF WATER CLOSET,
- ALL FAUCETS AND FLUSH VALVES SHALL BE OPERABLE WITH ONE HAND WITHOUT REQUIRING GRASPING, TWISTING OR PINCHING AND OPERATE WITH 5 LB MAX FORCE

FIXTURE & ACCESSORY NOTES



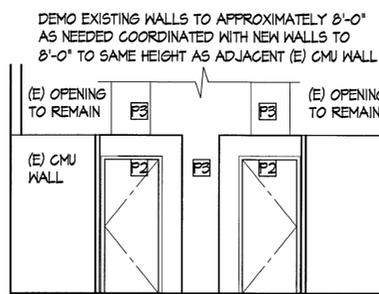
A ELEVATION

B ELEVATION

C ELEVATION

D ELEVATION

2 FAMILY TOILET ROOM 401, 402 = REVERSE VIEW
A-700 1/4" = 1'-0"



3 TOILETS 401 & 402 EXTERIOR ELEVATION
A-700 1/4" = 1'-0"

KEY NOTES

FIXTURES

- WATER CLOSET- WALL MOUNTED WITH SEAT, PER PLUMBING DRAWINGS, MOUNTING PER ACCESSIBLE COMPLIANT DIAGRAMS
- NOT USED THIS SHEET
- LAVATORY- WALL MOUNTED WITH PIPE SHROUD PER PLUMBING DRAWINGS, MOUNTING PER ACCESSIBLE COMPLIANT DIAGRAMS
- NOT USED THIS SHEET
- NOT USED THIS SHEET
- NOT USED THIS SHEET

ACCESSORIES

SEE SPECIFICATION SECTION 102800 TOILET AND SHOWER ACCESSORIES

- TOILET TISSUE DISPENSER RECESSED FOR 2 ROLLS
- NOT USED THIS SHEET
- SURFACE MOUNTED SEAT COVER DISPENSER
- LIQUID SOAP DISPENSER - BOBRICK 2112 - MOUNT TO MIRROR WITH INDUSTRIAL DOUBLE STICK TAPE WITH BUTTON AT 40" MAX. A.F.F.
- MIRROR, 24" X 48", STAINLESS STEEL FRAME AT LAVATORIES, SNAP CONCEALED MOUNT, AND 24" X 60" AT OPEN WALL LOCATIONS
- NOT USED THIS SHEET
- GRAB BAR - 1-1/2" DIAMETER STAINLESS STEEL WITH CONCEALED MOUNTING, PROVIDE BACKING, INSTALL PER DRAWINGS & DIAGRAMS
- ELECTRIC HAND DRYER - SEE ACCESSIBLE MOUNTING HEIGHT DIAGRAM, TOILET ACCESSORY SPECIFICATIONS AND ELECTRICAL DRAWINGS
- ROBE HOOKS, MOUNT AT ACCESSIBLE HEIGHTS PER DIAGRAM 6" APART HORIZONTALLY AND CLEAR OF ALL DOORS, 4" MAX. PROJECTION
- NOT USED THIS SHEET
- NOT USED THIS SHEET
- NOT USED THIS SHEET
- DIAPER CHANGING STATION - INSTALL PER DRAWINGS AND ACCESSIBLE DIAGRAMS
- NOT USED THIS SHEET

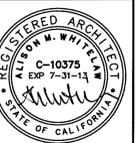
FINISH NOTES

SEE SCHEDULE & SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION

- PAINT - PREPARE, PRIME AND PAINT SURFACE TO BASE, CEILING AND ADJACENT WALLS OR DOORS AND FRAMES PER ELEVATIONS, PLANS & SPECIFICATIONS
- NOT USED THIS SHEET
- GYPSUM BOARD - WALL SCHEDULE PER DETAIL 4 ON SHEET A-502 PREPARE, PRIME AND PAINT PER FINISH SCHEDULE ON SHEET A-601
- SHOWER FLOOR - TILED AND SLOPED 1.5% SLOPE TO DRAIN, THRESHOLDS 1/4" MAX OR 1/2" MAX WITH 2H:1V SLOPED UPPER 1/4"
- SHOWER WALLS - TILE OVER WATERPROOFING OVER CEMENTITIOUS BOARD OVER 2X4 STUDS PER SPECIFICATIONS, TILE TO MATCH (E)
- NOT USED THIS SHEET
- NOT USED THIS SHEET

Platt/Whitelaw Architects, Inc.

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VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

SHEET TITLE: **BASE BID - FAMILY TOILETS FINISH PLAN AND INT. ELEV.** SHEET NUMBER: **A-700**
SHEET 27 OF 47

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT WBS: B-00933

FOR CITY ENGINEER: *[Signature]* DATE: 3/9/12 PROJECT-MANAGER: *[Signature]*

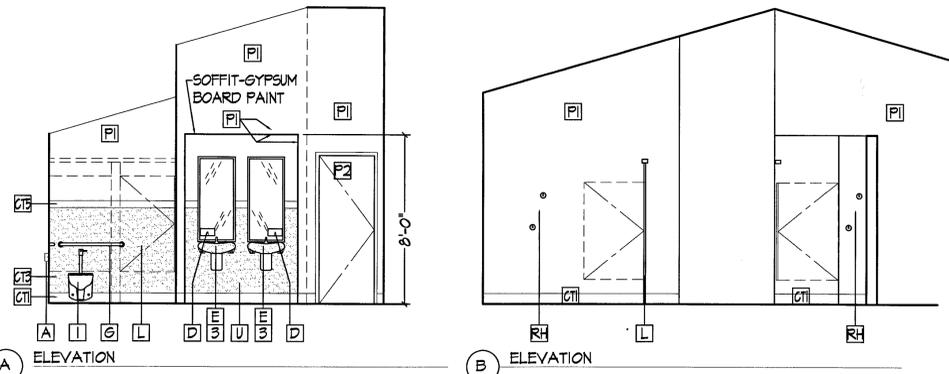
DESCRIPTION	BY	APPROVED	DATE	SCANNED
PERMIT SUBMIT	RBZAHN		09.27.11	

CONTRACTOR: _____ DATE STARTED: _____
INSPECTOR: _____ DATE COMPLETED: _____

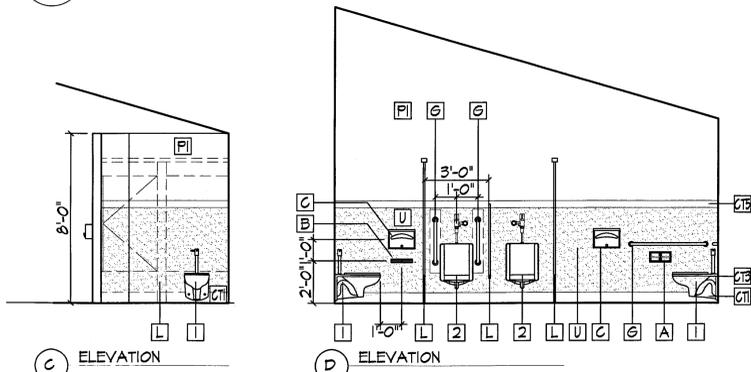
146-1753
CCS27 COORDINATE
1787-6312
CCS83 COORDINATE

35609-27

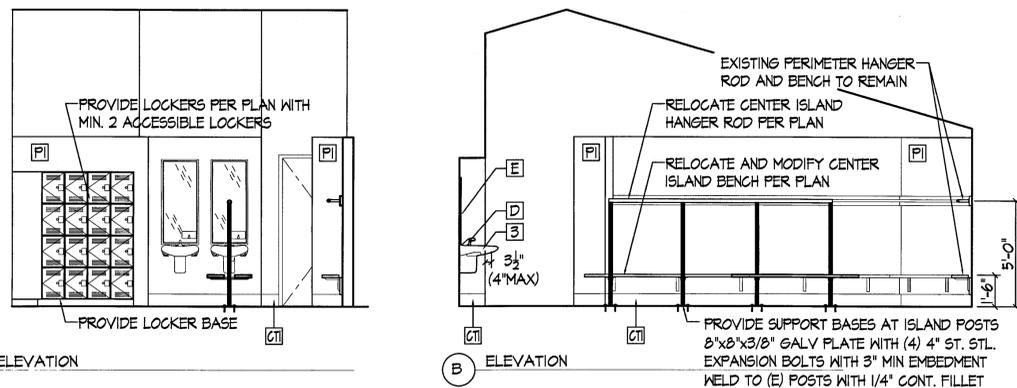
VISTA TERRACE POOL



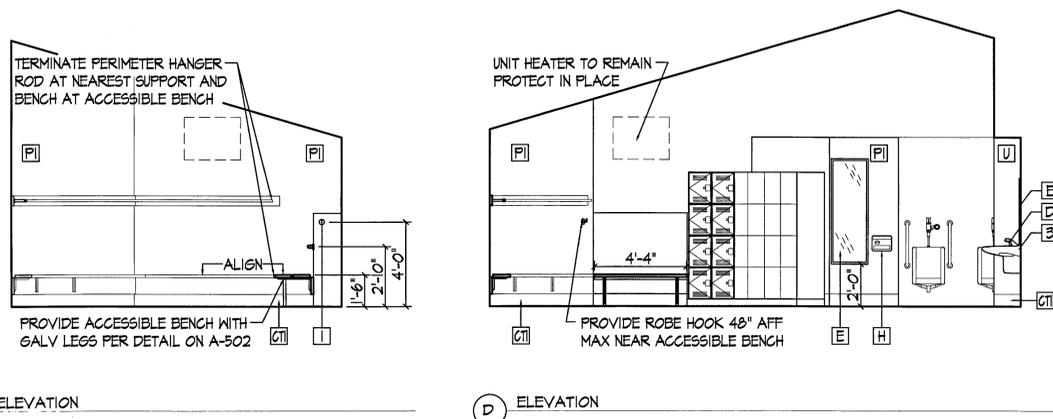
2 MENS TOILET 101 INTERIOR ELEVATIONS
A-TO1 1/4" = 1'-0"



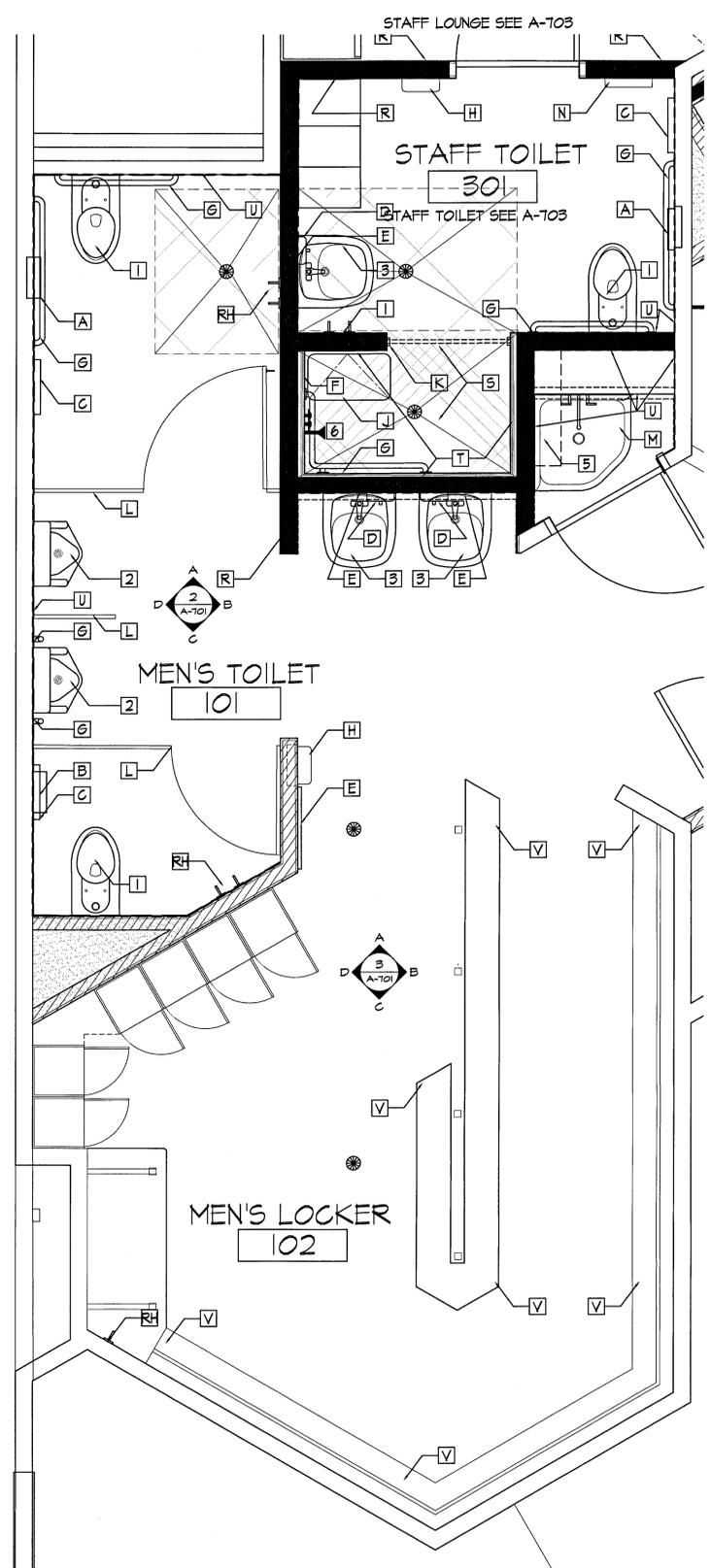
2 MENS TOILET 101 INTERIOR ELEVATIONS
A-TO1 1/4" = 1'-0"



3 MENS LOCKER 102 INTERIOR ELEVATIONS
A-TO1 1/4" = 1'-0"



3 MENS LOCKER 102 INTERIOR ELEVATIONS
A-TO1 1/4" = 1'-0"



1 MENS LOCKER 102 FINISH PLAN
A-TO1 1/2" = 1'-0"

- ### KEY NOTES
- #### FIXTURES
- 1 WATER CLOSET- WALL MOUNTED WITH SEAT, PER PLUMBING DRAWINGS, MOUNTING PER ACCESSIBLE DIAGRAMS ON A-TOO
 - 2 URINAL- PER PLUMBING DRAWINGS, MOUNTING PER ACCESSIBLE DIAGRAMS ON A-TOO
 - 3 LAVATORY- WALL MOUNTED WITH PIPE SHROUD PER PLUMBING DRAWINGS, MOUNTING PER ACCESSIBLE DIAGRAMS ON A-TOO
 - 4 DRINKING FOUNTAIN- WALL MOUNTED, DUAL HEIGHT, PER PLUMBING DRAWINGS, MOUNTING PER ACCESSIBLE REQUIREMENTS PER DETAIL
 - 5 JANITORS FLOOR MOUNTED MOP SINK, WITH FLANGE AT BACK EDGE FOR FRP, PROVIDE PER PLUMBING DRAWINGS.
 - 6 SHOWER- CONTROLS AND FLEX HEAD PER PLUMBING DRAWINGS, MOUNTING PER ACCESSIBLE REQUIREMENTS PER APPLICABLE DETAIL
- #### ACCESSORIES
- SEE SPECIFICATION SECTION 102800 TOILET AND SHOWER ACCESSORIES
- A TOILET TISSUE DISPENSER RECESSED FOR 2 ROLLS
 - B TOILET TISSUE DISPENSER SURFACE MOUNTED FOR 2 ROLLS
 - C SURFACE MOUNTED SEAT COVER DISPENSER
 - D LIQUID SOAP DISPENSER - BOBRICK 2112 - MOUNT TO MIRROR WITH INDUSTRIAL DOUBLE STICK TAPE WITH BUTTON AT 40" MAX. A.F.F.
 - E MIRROR, 24" X 48", STAINLESS STEEL FRAME AT LAVATORIES, SNAP CONCEALED MOUNT, AND 24" X 60" AT OPEN WALL LOCATIONS
 - F SOAP DISPENSER AT SHOWER AREAS - INSTALL PER DRAWINGS AND ACCESSIBLE DIAGRAMS ON A-TOO
 - G GRAB BAR - 1-1/2" DIAMETER STAINLESS STEEL WITH CONCEALED MOUNTING, PROVIDE BACKING, INSTALL PER DRAWINGS & DIAGRAMS
 - H ELECTRIC HAND DRYER - SEE ACCESSIBLE MOUNTING HEIGHT DIAGRAM, TOILET ACCESSORY SPECIFICATIONS AND ELECTRICAL DRAWINGS
 - RH ROBE HOOKS, MOUNT AT ACCESSIBLE HEIGHTS PER DIAGRAM 6" APART HORIZONTALLY AND CLEAR OF ALL DOORS, 4" MAX. PROJECTION
 - J FOLDING SHOWER SEAT 24x15 - SEE ELEVATION DETAIL 8/A-502
 - K SHOWER CURTAIN ROD WITH CONCEALED MOUNTING SHOWER CURTAIN HOOKS 204-1, VINYL SHOWER CURTAIN
 - L TOILET COMPARTMENT ENCLOSURE AND URINAL SCREENS SEE SPEC'S, WITH ACCESSIBLE HANDLES & SIGNAGE ON ACCESSIBLE TOILET STALLS
 - M JANITORS MOP SINK SHELF AND RACK, OVER FRP, PROVIDE BACKING,
 - N NOT USED THIS SHEET
 - O NOT USED THIS SHEET
- #### FINISH NOTES
- SEE SCHEDULE & SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION
- P PAINT - PREPARE, PRIME AND PAINT SURFACE TO BASE, CEILING AND ADJACENT WALLS OR DOORS AND FRAMES PER ELEVATIONS, PLANS & SPECIFICATIONS
 - Q 30"X48" PLYWOOD CABINET DOOR WITH FRAME, HINGES, HANDLE AND LATCHES
 - R GYPSUM BOARD - WALL SCHEDULE PER DETAIL 4 ON SHEET A-502 PREPARE, PRIME AND PAINT PER FINISH SCHEDULE ON SHEET A-601
 - S SHOWER FLOOR - TILED AND SLOPED 1.5% SLOPE TO DRAIN, THRESHOLDS 1/4" MAX OR 1/2" MAX WITH 2H:1V SLOPED UPPER 1/4"
 - T SHOWER WALLS - TILE OVER WATERPROOFING OVER CEMENTITIOUS BOARD OVER 2X4 STUDS PER SPECIFICATIONS, TILE TO MATCH (E)
 - U -----FIBER REINFORCED PLASTIC - ON WALLS TO 4'-0" ABOVE BASE TILE TYPICAL U.O.N.
 - V BENCHES - SAND AND RESTAIN TO MATCH ORIGINAL FINISH ACCESSIBLE MOUNTING DIAGRAM SEE SHEET A-TOO DETAIL 6

Platt/Whitelaw Architects, Inc.
4034 30th Street, SAN DIEGO CA 92104
(619) 546-4326 FAX (619) 546-4350

REGISTERED ARCHITECT
C-10375
EXP 7-31-13
Whitelaw

PROJECT: **VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS**

SHEET TITLE: **MEN & STAFF ALTERNATE 1 FINISH PLAN & ELEVATIONS** SHEET NUMBER: **A-TO1**
SHEET 25 OF 47

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT WBS: B-00933

FOR CITY ENGINEER: *[Signature]* DATE: 3/12/12
SUBMITTED BY: *[Signature]* PROJECT MANAGER

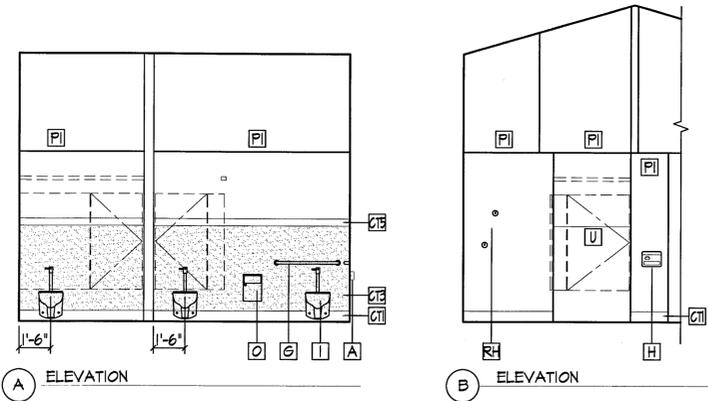
DESCRIPTION	BY	APPROVED	DATE	SCANNED
PERMIT SUBMIT	RBZAHN		09.27.11	

CONTRACTOR: _____ DATE STARTED: _____
INSPECTOR: _____ DATE COMPLETED: _____

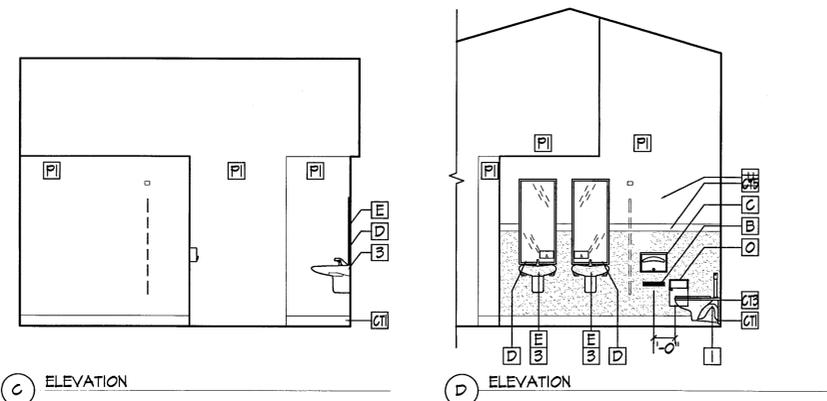
146-1753
CCS27 COORDINATE
1787-6312
CCS83 COORDINATE
35609-26-D

VISTA TERRACE POOL

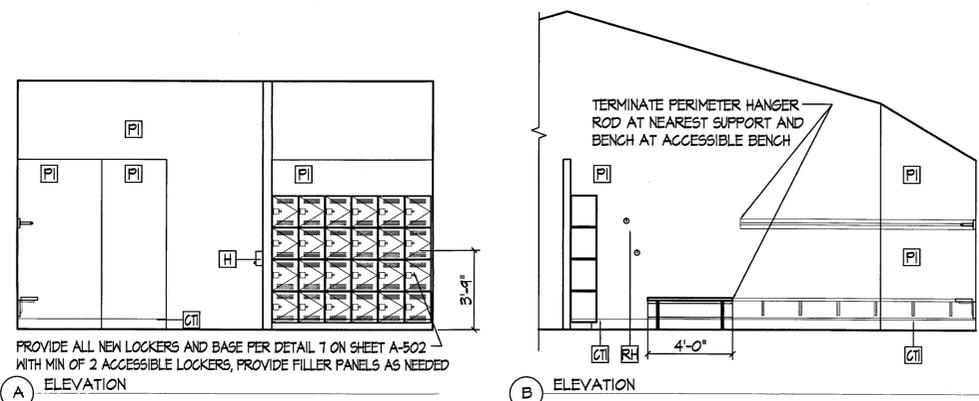
42 ista terrace03-drawingsista terrace03-alt.1 ELE. FINISH.dwg. 9/29/2011 2:18:26 PM. 1:1



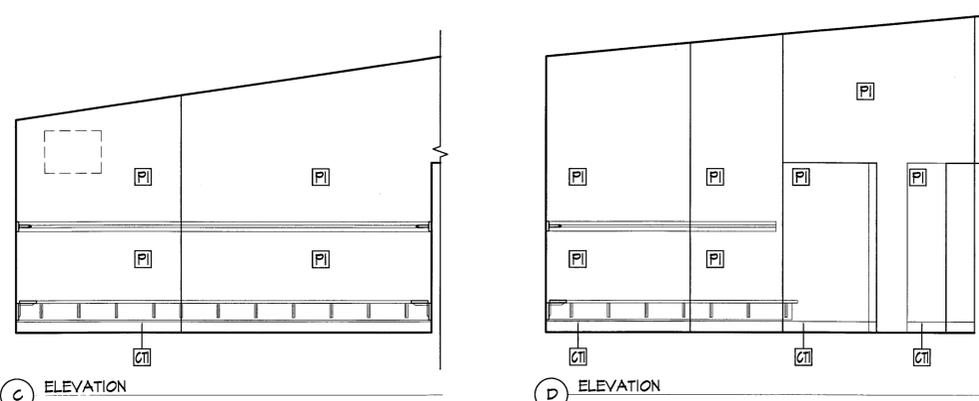
2 WOMEN'S TOILET 201
A-702 / 1/4" = 1'-0"



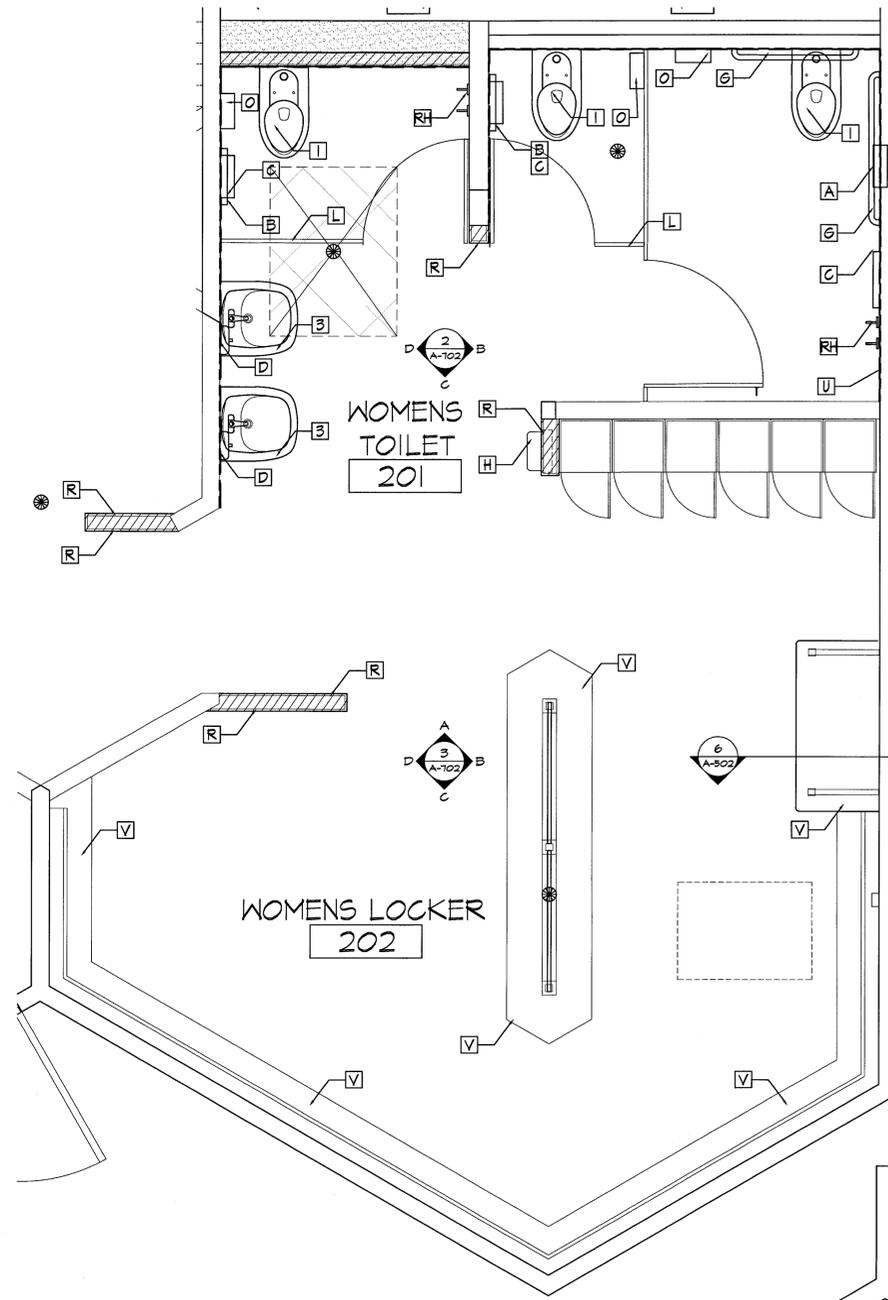
2 WOMEN'S TOILET 201
A-702 / 1/4" = 1'-0"



3 WOMEN'S LOCKER ROOM 202
A-702 / 1/4" = 1'-0"



3 WOMEN'S LOCKER ROOM 202
A-702 / 1/4" = 1'-0"



1 WOMEN'S TOILET 201 & LOCKER 202 - FINISH PLAN
A-702 / 1/2" = 1'-0"

KEY NOTES

FIXTURES

- 1 WATER CLOSET- WALL MOUNTED WITH SEAT, PER PLUMBING DRAWINGS, MOUNTING PER ACCESSIBLE DIAGRAMS ON A-700
- 2 NOT USED THIS SHEET
- 3 LAVATORY- WALL MOUNTED WITH PIPE SHROUD PER PLUMBING DRAWINGS, MOUNTING PER ACCESSIBLE DIAGRAMS ON A-700
- 4 NOT USED THIS SHEET

- 5 JANITORS FLOOR MOUNTED MOP SINK, WITH FLANGE AT BACK EDGE FOR FRP, PROVIDE PER PLUMBING DRAWINGS.
- 6 SHOWER- CONTROLS AND FLEX HEAD PER PLUMBING DRAWINGS, MOUNTING PER ACCESSIBLE REQUIREMENTS PER APPLICABLE DETAIL

ACCESSORIES

SEE SPECIFICATION SECTION 102800 TOILET AND SHOWER ACCESSORIES

- A TOILET TISSUE DISPENSER RECESSED FOR 2 ROLLS
- B TOILET TISSUE DISPENSER SURFACE MOUNTED FOR 2 ROLLS
- C SURFACE MOUNTED SEAT COVER DISPENSER
- D LIQUID SOAP DISPENSER - BOBRICK 212 - MOUNT TO MIRROR WITH INDUSTRIAL DOUBLE STICK TAPE WITH BUTTON AT 40" MAX. A.F.F.
- E MIRROR, 24" X 48", STAINLESS STEEL FRAME AT LAVATORIES, SNAP CONCEALED MOUNT, AND 24" X 60" AT OPEN WALL LOCATIONS
- F NOT USED THIS SHEET
- G GRAB BAR - 1-1/2" DIAMETER STAINLESS STEEL WITH CONCEALED MOUNTING, PROVIDE BACKING, INSTALL PER DRAWINGS & DIAGRAMS
- H ELECTRIC HAND DRYER - SEE ACCESSIBLE MOUNTING HEIGHT DIAGRAM, TOILET ACCESSORY SPECIFICATIONS AND ELECTRICAL DRAWINGS
- RH ROBE HOOKS, MOUNT AT ACCESSIBLE HEIGHTS PER DIAGRAM 6" APART HORIZONTALLY AND CLEAR OF ALL DOORS, 4" MAX. PROJECTION
- J NOT USED THIS SHEET

- K SHOWER CURTAIN ROD WITH CONCEALED MOUNTING SHOWER CURTAIN HOOKS 204-1, VINYL SHOWER CURTAIN
- L TOILET COMPARTMENT ENCLOSURE SEE SPEC'S, WITH ACCESSIBLE HANDLES & SIGNAGE ON ACCESSIBLE TOILET STALLS
- M NOT USED THIS SHEET

- N NOT USED THIS SHEET
- O FEMALE NAPKIN DISPENSER - INSTALL PER DRAWINGS AND ACCESSIBLE DIAGRAMS

FINISH NOTES

SEE SCHEDULE & SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION

- P PAINT - PREPARE, PRIME AND PAINT SURFACE TO BASE, CEILING AND ADJACENT WALLS OR DOORS AND FRAMES PER ELEVATIONS, PLANS & SPECIFICATIONS
- Q NOT USED THIS SHEET
- R GYPSUM BOARD - WALL SCHEDULE PER DETAIL 4 ON SHEET A-502 PREPARE, PRIME AND PAINT PER FINISH SCHEDULE ON SHEET A-601
- S NOT USED THIS SHEET
- T NOT USED THIS SHEET
- U ----- FIBER REINFORCED PLASTIC - ON WALLS TO 4'-0" ABOVE BASE TILE TYPICAL U.O.N.
- V BENCHES - SAND AND RESTAIN TO MATCH ORIGINAL FINISH ACCESSIBLE MOUNTING DIAGRAM SEE SHEET A-700 DETAIL 6

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 4034 30th Street, SAN DIEGO CA 92104
 (619) 546-4326 FAX (619) 546-4350

PROJECT VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

SHEET TITLE: **WOMENS - ALTERNATE 2 INTERIOR ELEVATIONS**
 SHEET NUMBER: **A-702**
 SHEET 29 OF 47

CITY OF SAN DIEGO, CALIFORNIA
 ENGINEERING AND CAPITAL PROJECTS DEPARTMENT

FOR CITY ENGINEER: *[Signature]* 3/8/12
 DATE: 09.27.11
 PROJECT MANAGER: *[Signature]*

CONTRACTOR: _____ DATE STARTED: _____
 INSPECTOR: _____ DATE COMPLETED: _____

146-1753
 CCS27 COORDINATE
 1787-6312
 CCS83 COORDINATE

35609-29-D

VISTA TERRACE POOL

GENERAL NOTES

THE FOLLOWING GENERAL NOTES ARE A SUMMARY OF THE SPECIFICATIONS FOR THE CONVENIENCE OF THE CONTRACTOR. REFER TO THE SPECIFICATIONS.

REINFORCING STEEL

- DETAILS OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH CHAPTER 7 OF "AMERICAN CONCRETE INSTITUTE 318" UNLESS OTHERWISE NOTED. REINFORCING STEEL DETAILING, BENDING AND PLACING SHALL BE IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE", LATEST EDITION.
- WELDING OF REINFORCING STEEL, IF PERMITTED BY THE ARCHITECT, SHALL BE IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE - REINFORCING STEEL" OF THE AMERICAN WELDING SOCIETY, AWS D1-4, AND SHALL BE PERFORMED BY WELDERS QUALIFIED UNDER THE PROCEDURES CONTAINED THEREIN.
- ALL REINFORCING STEEL SHOP DRAWINGS SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER AND THE ARCHITECT PRIOR TO FABRICATION.
- ALL REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60 FOR NO. 4 AND LARGER, OTHERWISE GRADE 40. WELDED REBAR SHALL CONFORM TO ASTM 106.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185, FLAT SHEETS.
- WALLS AND COLUMNS SHALL BE DOWELED FROM SUPPORTS WITH BARS OF THE SAME SIZE AND SPACING.
- SPACER TIES: PROVIDE A MINIMUM OF 3 TIES AT 24 INCHES IN ALL BEAMS AND FOOTINGS.
- SPlice MINIMUM REINFORCING IN ACCORDANCE WITH THE TYPICAL DETAIL ON SHEET S1.1.
- PROVIDE MINIMUM EMBEDMENT OF REINFORCING IN CONFORMANCE WITH THE TYP. DETAIL ON SHEET S1.1.
- LAP SPlice WELDED WIRE FABRIC 8 INCHES MINIMUM.
- BAR SUPPORTS SHALL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF "BAR SUPPORT SPECIFICATION" BY THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
- ALL REINFORCING STEEL, ANCHOR BOLTS AND OTHER EMBEDDED ITEMS SHALL BE SECURELY HELD IN POSITION AND INSPECTED PRIOR TO PLACING CONCRETE.

REINFORCED CONCRETE (CONT. SPECIAL INSPECTION REQ'D.)

- ALL CONCRETE WORK SHALL CONFORM TO THE "REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318) AND THE "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301), LATEST APPROVED EDITIONS, WITH MODIFICATIONS AS NOTED IN THESE DRAWINGS AND SPECIFICATIONS.
- ALL REINFORCING DETAILING SHALL CONFORM TO THE CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE" LATEST EDITION.
- CONTINUOUS INSPECTION BY A REGISTERED DEPUTY INSPECTOR IS REQUIRED FOR ALL STRUCTURAL CONCRETE WORK.
- ALL REINFORCING STEEL SHOP DRAWINGS SHALL BE REVIEWED BY THE ARCHITECT PRIOR TO FABRICATION.
- CONCRETE STRENGTHS: THE CONCRETE STRENGTHS SHOWN IN THE FOLLOWING TABLE ARE MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, THE AGGREGATES SHOWN ARE THE MAXIMUM SIZE (INCHES) AND THE SLUMP SHOWN IS THE MAXIMUM (INCHES).

ITEM OF CONSTRUCTION (145 P.C.F. AVG.)	STRENGTH	AGGREGATE	SLUMP
A. FOUNDATION SYSTEM	3,000 PSI	1 1/2	4
B. SLAB ON GRADE	3,000 PSI	1	3

- ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60 FOR NO. 4 AND LARGER, OTHERWISE GRADE 40.
- ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185, FLAT SHEETS.
- MINIMUM PROTECTIVE CONCRETE COVER OF REINFORCING:
 - ON EARTH SIDE WHEN PLACED AGAINST EARTH.....3 IN.
 - ON EARTH SIDE WHEN FORMED.....2 IN.
 - TIED COLUMNS (TO TIES) ABOVE GRADE.....1 1/2 IN.
 - WELDED WIRE FABRIC.....CENTERLINE OF SLAB
- NO PIPES OR DUCTS SHALL BE PLACED IN CONCRETE COLUMNS, WALLS OR SLABS UNLESS SPECIFICALLY DETAILED OR UNLESS SLEEVES ARE PROVIDED IN ACCORDANCE WITH THE TYPICAL DETAIL ON SHEET S1.2 & S1.3
- SPlice CONTINUOUS REINFORCING IN ACCORDANCE WITH THE TYPICAL DETAIL ON SHEET S1.2.
- PROVIDE MINIMUM EMBEDMENT OF REINFORCING IN ACCORDANCE WITH THE TYP. DETAIL ON SHEET S1.1.
- REFER TO THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS OF PIPES, DUCTS, VENTS AND SIMILAR OPENINGS.
- REINFORCING, ANCHOR BOLTS AND ALL OTHER EMBEDDED ITEMS SHALL BE SECURELY HELD IN POSITION AND SHALL BE INSPECTED PRIOR TO PLACING CONCRETE.
- HOLD-DOWN ANCHORS TO BE TIED IN PLACE PRIOR TO CALLING FOR FOUNDATION INSPECTION.
- CHAMFER: 3/4" ON ALL EXPOSED CORNERS, U.N.O. SEE ARCH. ANY DISCREPANCY SHALL BE REPORTED TO FLC
- USE ONLY TYPE V CEMENT AND MAXIMUM WATER/CEMENT RATIO OF 0.45

FOUNDATION

- THE FOLLOWING DESIGN VALUES ARE RECOMMENDED PER INVESTIGATION BY THE GEOTECHNICAL NINTO & MOORE (REPORT #1061910201)

ALLOWABLE FOUNDATION PRESSURE	= 2500 PSF
LATERAL BEARING PRESSURE	= 250 PSF/FT
LATERAL SLIDING RESISTANCE	= 0.30
VERTICAL SUBGRADE REACTION (MODIFIED BY TERZAGHI)	= 50 PCF
- THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE INFORMATION CONTAINED WITHIN THE SOILS REPORT BEFORE COMMENCING ANY WORK.
- FOOTING ELEVATIONS SHOWN ARE FOR INFORMATION PURPOSES ONLY AND ARE ASSUMED TO BE IN SUITABLE BEARING MATERIALS. THE ACTUAL ADEQUACY OF THE BEARING MATERIAL SHALL BE DETERMINED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEERING COMPANY. PRIOR TO PLACING OF REINFORCING OR POURING OF CONCRETE, AND FOOTING ELEVATIONS SHALL BE ADJUSTED, OR OTHER REMEDIAL ACTION TAKEN, AS DIRECTED BY THIS REPRESENTATIVE AND APPROVED BY THE ENGINEER.
- ALL ANCHORS AND DOWELS SHALL BE TIED IN PLACE PRIOR TO CALLING FOR FOUNDATION INSPECTION.
- ALL HOLD-DOWNS MUST BE TIED IN PLACE PRIOR TO THE FOUNDATION INSPECTION.
- PER THE GEOTECHNICAL REPORT THE SOIL AT THE SITE IS CLASSIFIED AS CORROSIVE. SEE REINFORCED CONC. NOTE #1 FOR SPECIFIC REQUIREMENTS.

SLAB-ON-GRADE

- THE PURPOSE OF THESE NOTES IS TO ACHIEVE THE BEST POSSIBLE FLOOR FINISH UTILIZING THE EXPERIENCE OF THE CONTRACTOR SINCE THE CONTRACTOR'S MEANS AND METHODS SIGNIFICANTLY AFFECT THE QUALITY AND THEREFORE THE SUCCESS OR FAILURE OF THE DESIGN.
- THE CONTRACTOR SHALL SUBMIT A FOUR SEQUENCE SCHEDULE FOR REVIEW BY THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO CASTING ANY SLAB-ON-GRADES. THE SUBMITTAL MUST CONTAIN THE FOLLOWING: AMOUNT OF CEMENT, STRENGTH OF CONCRETE, AGGREGATE SIZE, SLUMP AMOUNT AND THE CONTRACTOR'S ENDORSEMENT THAT HE CAN PRODUCE A SUCCESSFUL SLAB-ON-GRADE.
- IF A PUMP MIX IS PROPOSED, IT SHOULD BE PROPORTIONED TO MINIMIZE SHRINKAGE IN ADDITION TO CONFORMING TO ALL OTHER REQUIREMENTS.
- AS A GUIDELINE TO THE CONTRACTOR, THE SLAB-ON-GRADE SHALL BE CAST IN SQUARE OR RECTANGULAR SECTIONS APPROXIMATELY 400 SQUARE FEET MAXIMUM IN AREA WITH A MAXIMUM DISTANCE OF 20 FEET BETWEEN CONSTRUCTION OR WEAKENED JOINTS.
- AS A FURTHER GUIDELINE TO THE CONTRACTOR, THE DRAWINGS MAY CONTAIN SUGGESTED LOCATIONS FOR CONSTRUCTION JOINTS (C.J.) AND WEAKENED JOINTS (W.J.).
- REFER TO DETAIL 6/S1.2 FOR WEAKENED JOINT (W.J.) AND CONSTRUCTION JOINT (C.J.) DETAIL.

GENERAL

- CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE STARTING WORK AND NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.
- SPECIFIC CODES AND DETAILS SHALL TAKE PRECEDENCE OVER THESE GENERAL NOTES AND THE TYPICAL DETAILS ON SHEETS S1.0 TO S1.3 IN CASE OF CONFLICT.
- WHERE NO CONSTRUCTION DETAILS ARE SHOWN OR NOTED FOR ANY PART OF THE WORK, THE DETAILS USED SHALL BE THE SAME AS FOR OTHER SIMILAR WORK, PROVIDED THAT PRIOR APPROVAL IS OBTAINED FROM THE ARCHITECT OR ENGINEER.
- THE CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES WITH THE STRUCTURAL REQUIREMENTS, REFER TO CIVIL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
- THE DESIGN IS BASED ON THE 2001 CBC AND THE LOCAL BUILDING CODE.
- NEITHER THE OWNER NOR THE ARCHITECT WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE SUBCONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.

DESIGN CRITERIA

- "LATERAL FORCE REQUIREMENTS AND COMMENTARY" BY THE STRUCTURAL ENGINEERS ASSOCIATION OF CALIFORNIA, 1999 EDITION.
- "INTERNATIONAL BUILDING CODE" BY THE INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS, 2006 EDITION.
- "CALIFORNIA BUILDING CODE", 2001 EDITION.
- DESIGN LOADS:
 - LIVE LOADS SIDEWALKS100 PSF

FOR GENERAL NOTES CONTINUATION
SEE S1.1

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THE PROJECT, THAT I EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6103 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

ARMANDO VALDOS

SE1808

JUNE 30, 2012
EXPIRES

 7220 TRADE STREET, SUITE 120 SAN DIEGO, CALIFORNIA 92121-2325 TEL (658) 566-0626 FAX (658) 566-0627																					
	Platt/Whitelaw Architects, Inc. 4034 30th Street, SAN DIEGO CA 92104 (619) 546-4326 FAX (619) 546-4350																				
PROJECT VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS																					
SHEET TITLE: <h3 style="text-align: center;">GENERAL NOTES</h3>	SHEET NUMBER: <h3 style="text-align: center;">S1.0</h3> SHEET 31 OF 47																				
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT																					
WBS B-00933																					
FOR CITY ENGINEER: <i>[Signature]</i> 2/10/12	SUBMITTED BY: <i>[Signature]</i> PROJECT MANAGER																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>DESCRIPTION</th> <th>BY</th> <th>APPROVED</th> <th>DATE</th> <th>SCANNED</th> </tr> </thead> <tbody> <tr> <td>ORIGINAL PERMIT</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> </td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> </td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		DESCRIPTION	BY	APPROVED	DATE	SCANNED	ORIGINAL PERMIT														
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146-1753 CCS27 COORDINATE 1787-6312 CCS83 COORDINATE																					
CONTRACTOR: _____ DATE STARTED: _____ INSPECTOR: _____ DATE COMPLETED: _____																					
35609-31-D																					

STATEMENT OF SPECIAL INSPECTIONS:

CONCRETE CONSTRUCTION - VERIFICATION AND INSPECTION REQUIREMENTS (CBC T-1104.4)

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD	CBC REFERENCE	PROJECT SPECIFIC REF.
1. INSPECTION OF REINFORCING STEEL.	-	X	ACI 318: 3.5, 7.1-7.7	1913.4	§3.0
2. INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE.	-	X	-	1911.5	§3.0
3. VERIFYING USE OF REQUIRED DESIGN MIX.	-	X	ACI 318: CH. 4, 5.2-5.4	1904.2.2, 1913.2, 1913.3	§3.0
4. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	1913.10	§3.0
5. INSPECTION OF CONCRETE FOR PROPER APPLICATION TECHNIQUES.	X	-	ACI 318: 5.9, 5.10	1913.6, 1913.7, 1913.8	PROJECT SPECS

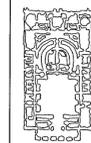
REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION (CBC T-1104.3)

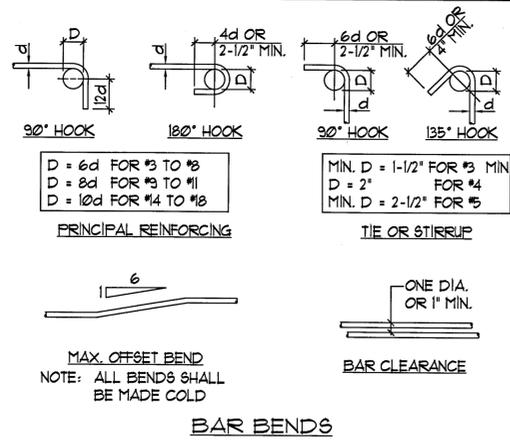
ITEM OF VERIFICATION AND INSPECTION	INSPECTION FREQUENCY		REFERENCE FOR TESTING & INSPECTION CRITERIA		
	CONTINUOUS	PERIODIC	REFERENCED STANDARD	CBC REFERENCE	PROJECT SPECIFIC REFERENCE
1. MATERIAL VERIFICATION OF WELD FILLER MATERIALS:					
A. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS.	-	X	AISC 360, SECTION A3.5 & APPLICABLE AWS A5 DOCUMENTS	-	
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.	-	X	-	-	
2. INSPECTION OF WELDING:					
A. STRUCTURAL STEEL:					
1) COMPLETE PENETRATION GROOVE WELDS.	X	-	AWS D1.1	1104.3.1	
2) SINGLE-PASS FILLET WELDS \leq 5/16"	-	X			

GENERAL NOTES (CONT.)

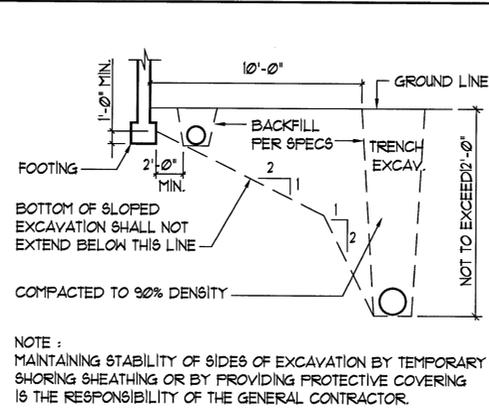
STRUCTURAL OBSERVATIONS AND SPECIAL INSPECTION

- THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE STRUCTURAL DESIGN SHALL SUBMIT A STATEMENT IN WRITING TO THE BUILDING OFFICIAL, STATING THAT DURING THE CONSTRUCTION OF THIS STRUCTURE, SITE VISITS HAVE BEEN PERFORMED TO OBSERVE GENERAL COMPLIANCE WITH THE APPROVED STRUCTURAL PLANS, SPECIFICATIONS AND CHANGE ORDERS. FURTHER, THE STATEMENT SHALL, IN DETAIL, NOTE HOW ANY DEFICIENCIES HAVE BEEN CORRECTED.
- THE GENERAL CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY FOR CONSTRUCTION OF ITEMS LISTED FOR SPECIAL INSPECTION PRIOR TO COMMENCEMENT OF WORK.
- STRUCTURAL VISUAL OBSERVATION MUST BE PROVIDED AT THE SIGNIFICANT ITEMS OF CONSTRUCTION. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE INSPECTIONS REQUIRED BY SECTION 1701 OR OTHER SECTIONS OF THE CODE. AS A MINIMUM, THIS STRUCTURE REQUIRES SITE OBSERVATIONS BEFORE THE FOLLOWING HAS BEEN STARTED:
 - POURING THE INITIAL FOOTINGS.
- THE CONSTRUCTION MATERIALS TESTING LABORATORY MUST BE APPROVED BY THE CITY OF SAN DIEGO DEVELOPMENT SERVICES, FOR TESTING OF MATERIALS, SYSTEMS, COMPONENTS AND EQUIPMENTS.
- FABRICATOR SHALL BE REGISTERED AND APPROVED BY THE CITY OF SAN DIEGO DEVELOPMENT SERVICES FOR FABRICATION OF MEMBERS AND ASSEMBLIES ON THE PREMISES OF THE FABRICATOR'S SHOP.
- FABRICATOR SHALL SUBMIT AN "APPLICATION TO PERFORM OFF-SITE FABRICATION" TO THE INSPECTION SERVICES DIVISION FOR APPROVAL PRIOR TO COMMENCEMENT OF FABRICATION.
- FABRICATOR SHALL SUBMIT A "CERTIFICATE OF COMPLIANCE FOR OFF-SITE FABRICATION" TO THE INSPECTION SERVICES DIVISION PRIOR TO ERECTION OF FABRICATED ITEMS AND ASSEMBLIES.
- A "PROPERTY OWNER'S FINAL REPORT FORM" FOR WORK REQUIRED TO HAVE SPECIAL INSPECTIONS, TESTING AND STRUCTURAL OBSERVATIONS MUST BE COMPLETED BY THE PROPERTY OWNER, PROPERTY OWNER'S AGENT OF RECORD, ARCHITECT OF RECORD OR ENGINEER OF RECORD AND SUBMITTED TO THE INSPECTION SERVICES DIVISION.
- SPECIAL INSPECTION IS REQUIRED DURING TAKING TEST SPECIMENS AND PLACING CONCRETE.
- SPECIAL INSPECTION IS REQUIRED PRIOR TO AND DURING PLACEMENT OF CONCRETE AROUND THE BOLTS USING THE ALLOWABLE VALUES FOR BOLTS INSTALLED WITH SPECIAL INSPECTION.
- SPECIAL INSPECTION IS REQUIRED VERIFYING THE REINFORCING PRIOR TO CLOSING THE FORMS OR DELIVERY OF CONCRETE TO THE JOB SITE.
- THE SPECIAL INSPECTOR MUST BE CERTIFIED BY THE CITY OF SAN DIEGO, DEVELOPMENT SERVICES, IN THE CATEGORY OF WORK REQUIRED TO HAVE SPECIAL INSPECTION.
- THE SPECIAL INSPECTIONS IDENTIFIED ON PLANS ARE IN ADDITION TO, AND NOT A SUBSTITUTE FOR, THOSE INSPECTIONS REQUIRED TO BE PERFORMED BY A CITY'S BUILDING INSPECTOR.
- SPECIAL INSPECTION IS REQUIRED FOR EPOXY ANCHORS. THE SPECIAL INSPECTOR IS TO VERIFY THE DRILLING OF ANY HOLES, THE CLEANLINESS OF THE HOLE, THE MOISTURE IN THE HOLE, MIXING THE EPOXY, THE BRAND OF THE EPOXY AND THE PROPER MATERIAL FOR THE ASSEMBLY.
- PROVIDE SPECIAL INSPECTIONS FOR INSTALLATION OF EXPANSION ANCHORS IN ACCORDANCE WITH THE SPECIFICATIONS PRESCRIBED ON THE ICC APPROVAL REPORT, ON THE STATEMENT OF SPECIAL INSPECTIONS.

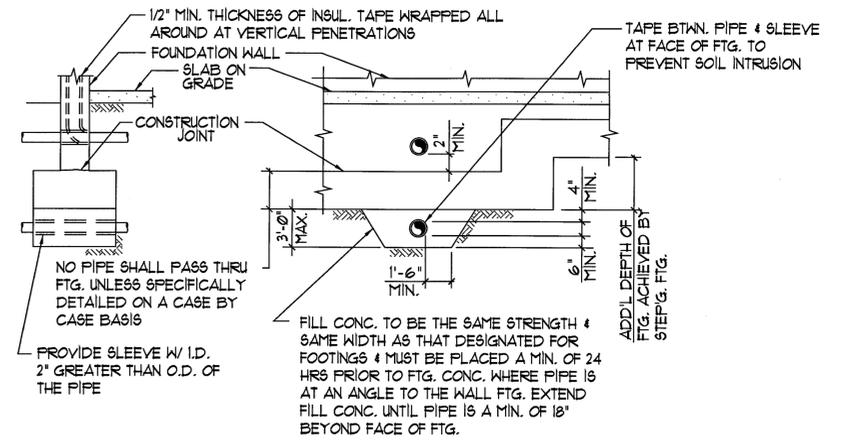
FLC FLORES LUND CONSULTANTS 7220 TRADE STREET, SUITE 120 SAN DIEGO, CALIFORNIA 92121-2325 TEL (858) 566-0626 FAX (858) 566-0627	
 Platt/Whitelaw Architects, Inc. 4034 30th Street, SAN DIEGO CA 92104 (619) 546-4326 FAX (619) 546-4350	
PROJECT VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS	
SHEET TITLE: GENERAL NOTES	SHEET NUMBER: SI.1 SHEET 02 OF 47
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT	
WBS <u>B-00933</u>	
FOR CITY ENGINEER: <i>[Signature]</i> 3/9/12	SUBMITTED BY: <i>[Signature]</i> PROJECT MANAGER
ORIGINAL PERMIT	146-1753 CCS27 COORDINATE 1787-6312 CCS83 COORDINATE
CONTRACTOR: _____ DATE STARTED: _____ INSPECTOR: _____ DATE COMPLETED: _____	35609-32-D



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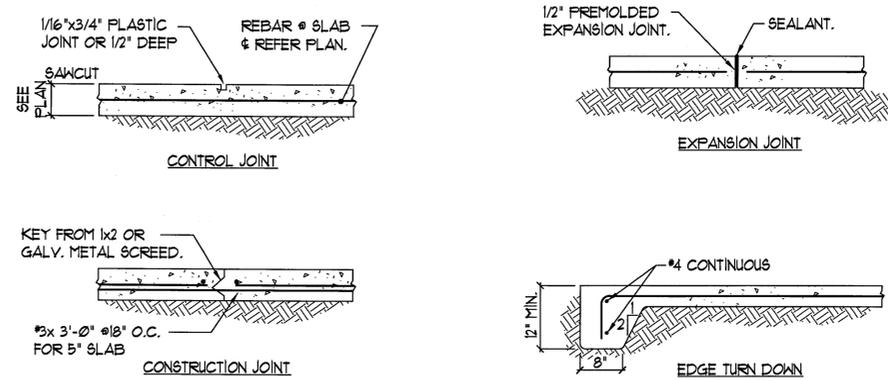


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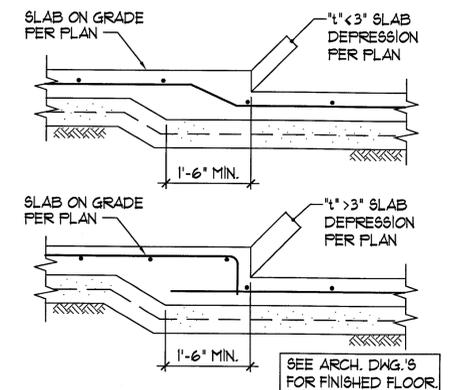
l_d TENSION DEVELOPMENT LENGTH FOR BEAM, SLAB & WALL REBARS
 (GRADE 60 UNCOATED BARS-NORMAL WEIGHT CONCRETE)

BAR SIZE	$f'_c=3000$ psi		$f'_c=4000$ psi		$f'_c=5000$ psi	
	l_d TOP	l_d BOT.	l_d TOP	l_d BOT.	l_d TOP	l_d BOT.
#3	1'-9"	1'-4"	1'-6"	1'-2"	1'-5"	1'-1"
#4	2'-4"	1'-10"	2'-1"	1'-7"	1'-10"	1'-5"
#5	3'-0"	2'-3"	2'-7"	2'-0"	2'-4"	1'-9"
#6	3'-7"	2'-9"	3'-1"	2'-4"	2'-9"	2'-1"
#7	5'-2"	4'-0"	4'-6"	3'-6"	4'-0"	3'-1"
#8	5'-11"	4'-7"	5'-2"	3'-11"	4'-7"	3'-6"
#9	6'-8"	5'-2"	5'-9"	4'-5"	5'-2"	4'-0"
#10	7'-6"	5'-10"	6'-6"	5'-0"	5'-10"	4'-6"
#11	8'-4"	6'-5"	7'-3"	5'-7"	6'-6"	5'-0"

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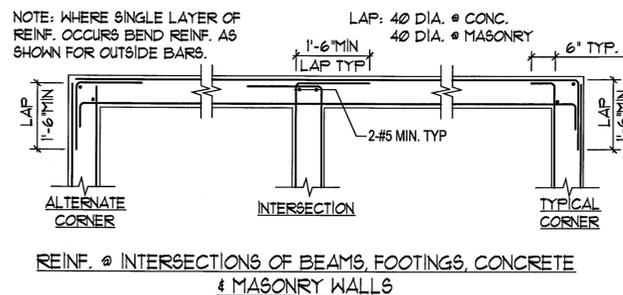
- NOTES:**
- "TOP" BARS ARE HORIZONTAL REBARS WITH MORE THAN 12 IN. OF FRESH CONCRETE CAST BELOW THE BARS AT THE DEVELOPMENT LENGTH.
 - l_d FOR #3 & #4 BARS IN SLAB OR WALL ARE CONSERVATIVE & MAY BE REDUCED TO 0.75 TIMES (FOR #3 BARS) AND 0.94 TIMES (FOR #4 BARS) THE TABULATED VALUES.
 - FOR LIGHT-WEIGHT CONCRETE MULTIPLY THE TABULATED VALUES BY 1.3.
 - l_d FOR ABOVE TABLE IS BASED ON MIN. CLEAR CONC. COVER ONE BAR DIAMETER
 - l_d FOR GRADE 40 BARS MAY BE 2/3 OF ABOVE TABLE VALUES, BUT NOT LESS THAN 12".

TENSION LAP SPLICES - CLASS B FOR TOP & BOTTOM BARS
 (GRADE 60 UNCOATED BARS - NORMAL WEIGHT CONCRETE)

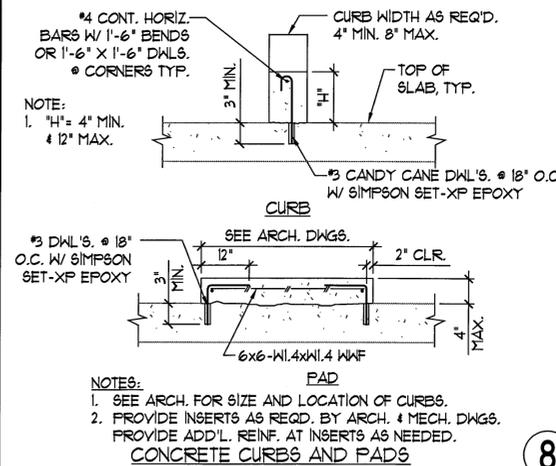
BAR SIZE	$f'_c=3000$ psi		$f'_c=4000$ psi		$f'_c=5000$ psi	
	TOP	BOT.	TOP	BOT.	TOP	BOT.
#3	2'-4"	1'-9"	2'-0"	1'-6"	1'-10"	1'-5"
#4	3'-1"	2'-4"	2'-8"	2'-1"	2'-5"	1'-10"
#5	3'-10"	3'-0"	3'-4"	2'-7"	3'-0"	2'-4"
#6	4'-8"	3'-7"	4'-0"	3'-1"	3'-7"	2'-9"
#7	6'-9"	5'-2"	5'-10"	4'-6"	5'-3"	4'-0"
#8	7'-9"	5'-11"	6'-8"	5'-2"	6'-0"	4'-7"
#9	8'-8"	6'-8"	7'-6"	5'-9"	6'-9"	5'-2"
#10	9'-10"	7'-6"	8'-6"	6'-6"	7'-7"	5'-10"
#11	10'-11"	8'-4"	9'-5"	7'-3"	8'-5"	6'-6"

NOTE:
 FOR CLASS 'A' SPLICE (PERMITTED ONLY WHEN NOT MORE THAN HALF THE BARS SPLICED & SPLICES STAGGERED BY THE DISTANCE OF SPLICE LENGTH), USE SAME AS l_d = TENSION DEVELOPMENT LENGTH TABLE.

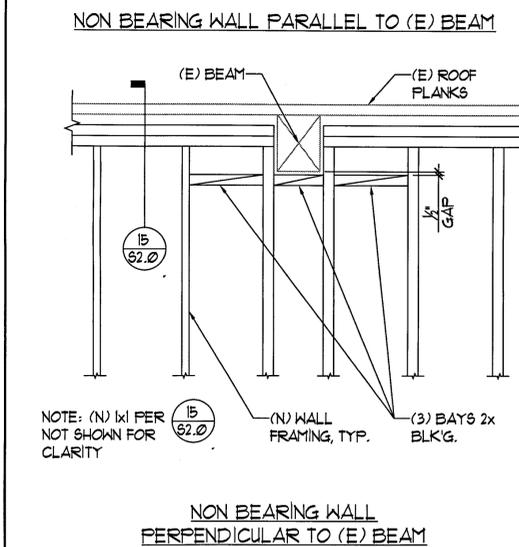
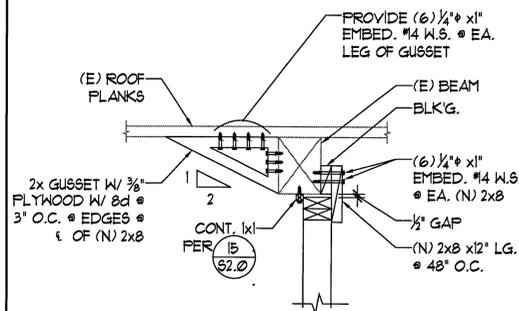
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FLC FLORES LUND CONSULTANTS
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VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

TYPICAL DETAILS

CITY OF SAN DIEGO, CALIFORNIA
 ENGINEERING AND CAPITAL PROJECTS DEPARTMENT

FOR CITY ENGINEER [Signature] **DATE** 3/9/12

PROJECT MANAGER [Signature]

DESCRIPTION [Table with columns: DESCRIPTION, BY, APPROVED, DATE, SCANNED]

ORIGINAL PERMIT [Table with columns: DESCRIPTION, BY, APPROVED, DATE, SCANNED]

CONTRACTOR [Table with columns: CONTRACTOR, DATE STARTED, DATE COMPLETED]

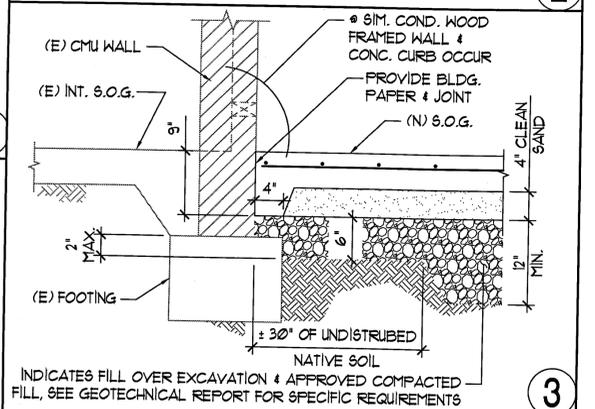
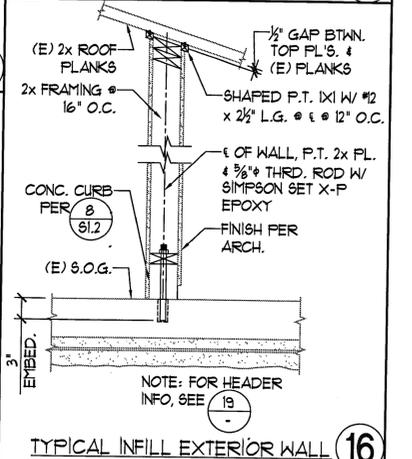
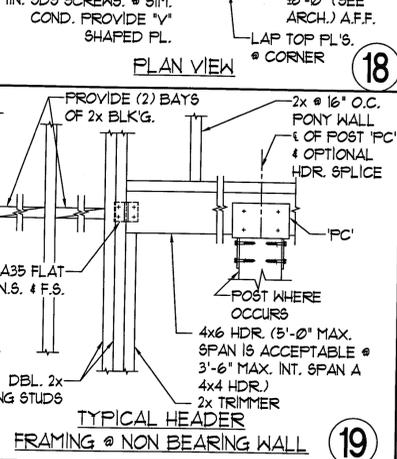
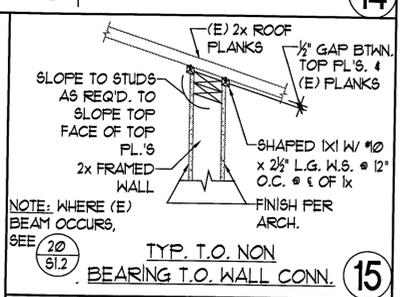
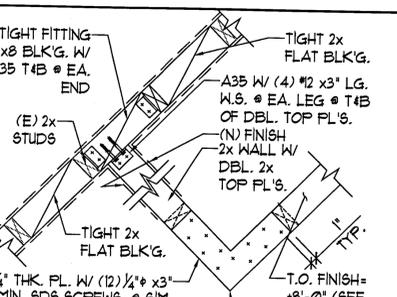
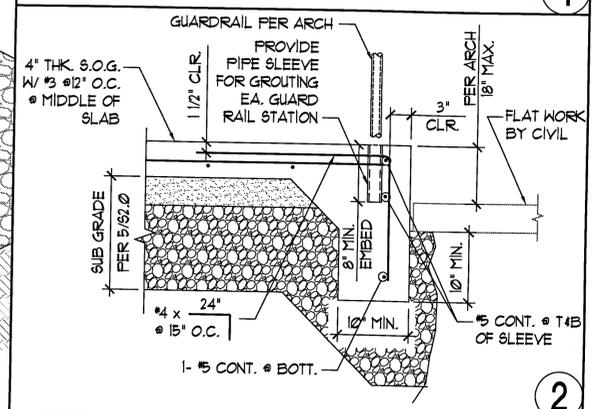
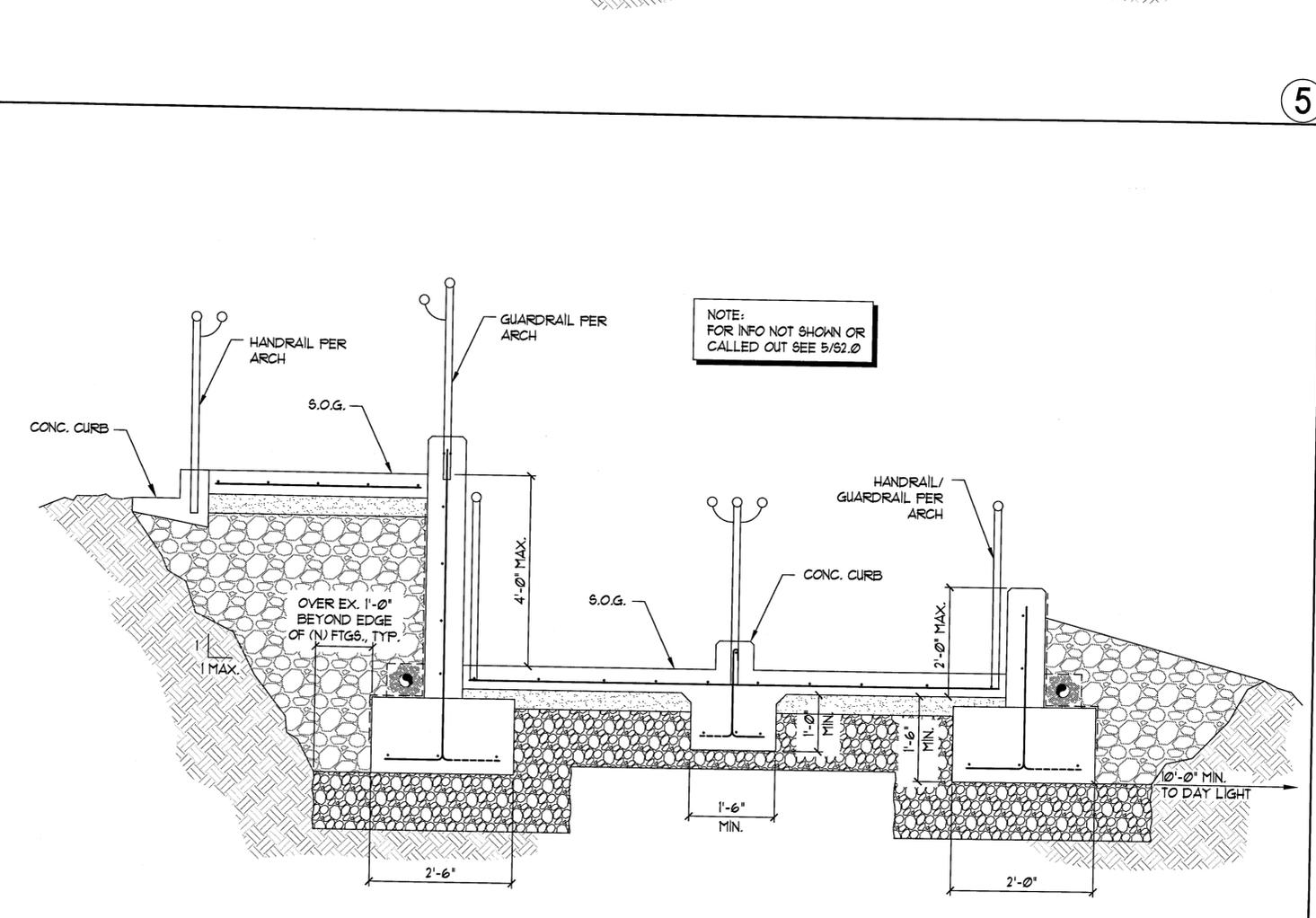
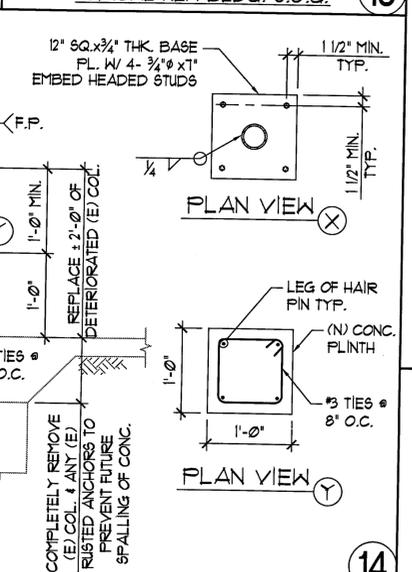
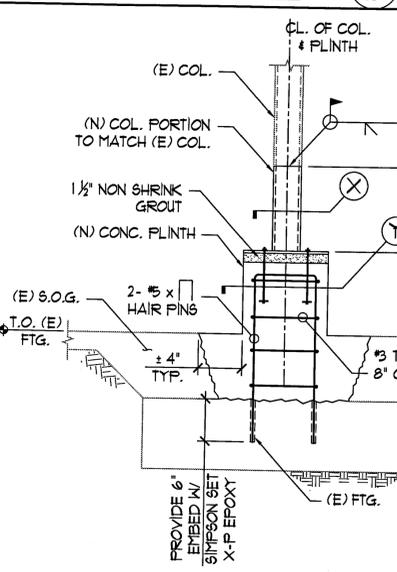
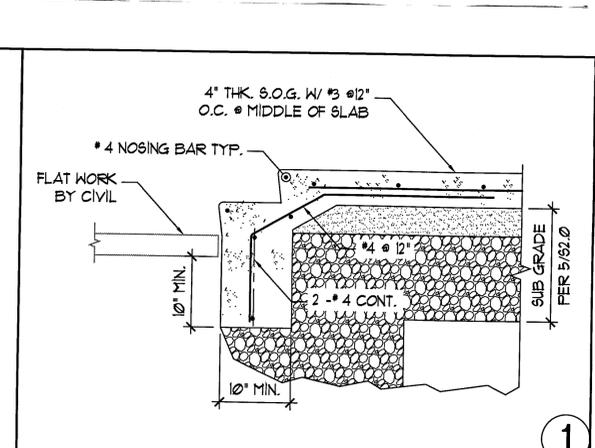
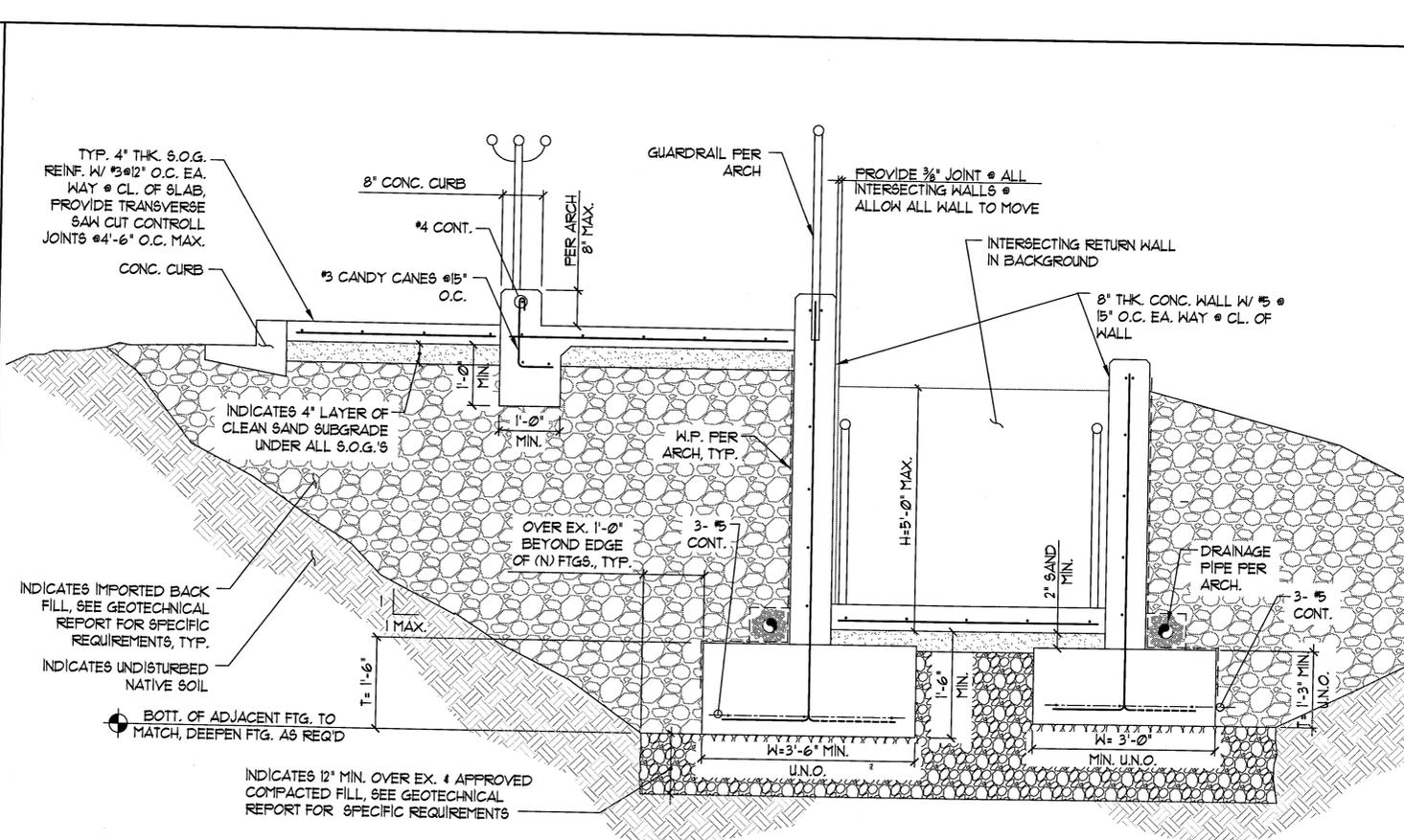
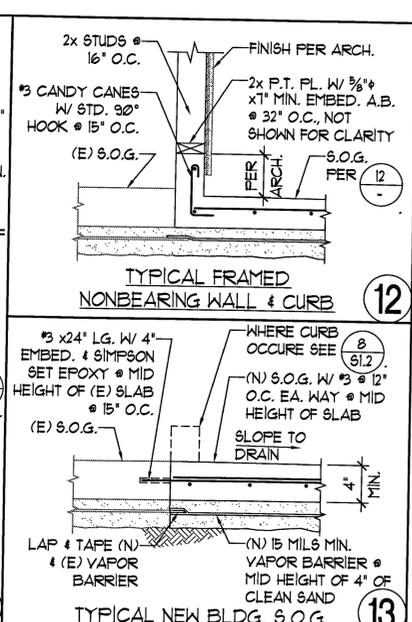
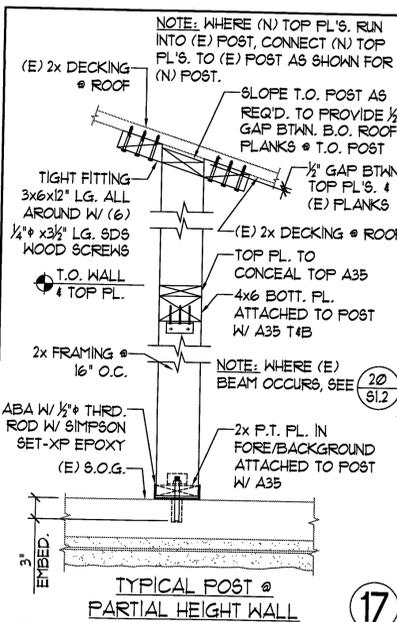
WBS B-009333

SHEET NUMBER S1.2

SHEET 93 OF 47

146-1753
 CCS27 COORDINATE
 1787-6312
 CCS83 COORDINATE

35609-33-D



FLC FLORES LUND CONSULTANTS

7220 TRADE STREET, SUITE 120
SAN DIEGO, CALIFORNIA 92121-2325
TEL (858) 566-0626
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Platt/Whitelaw Architects, Inc.

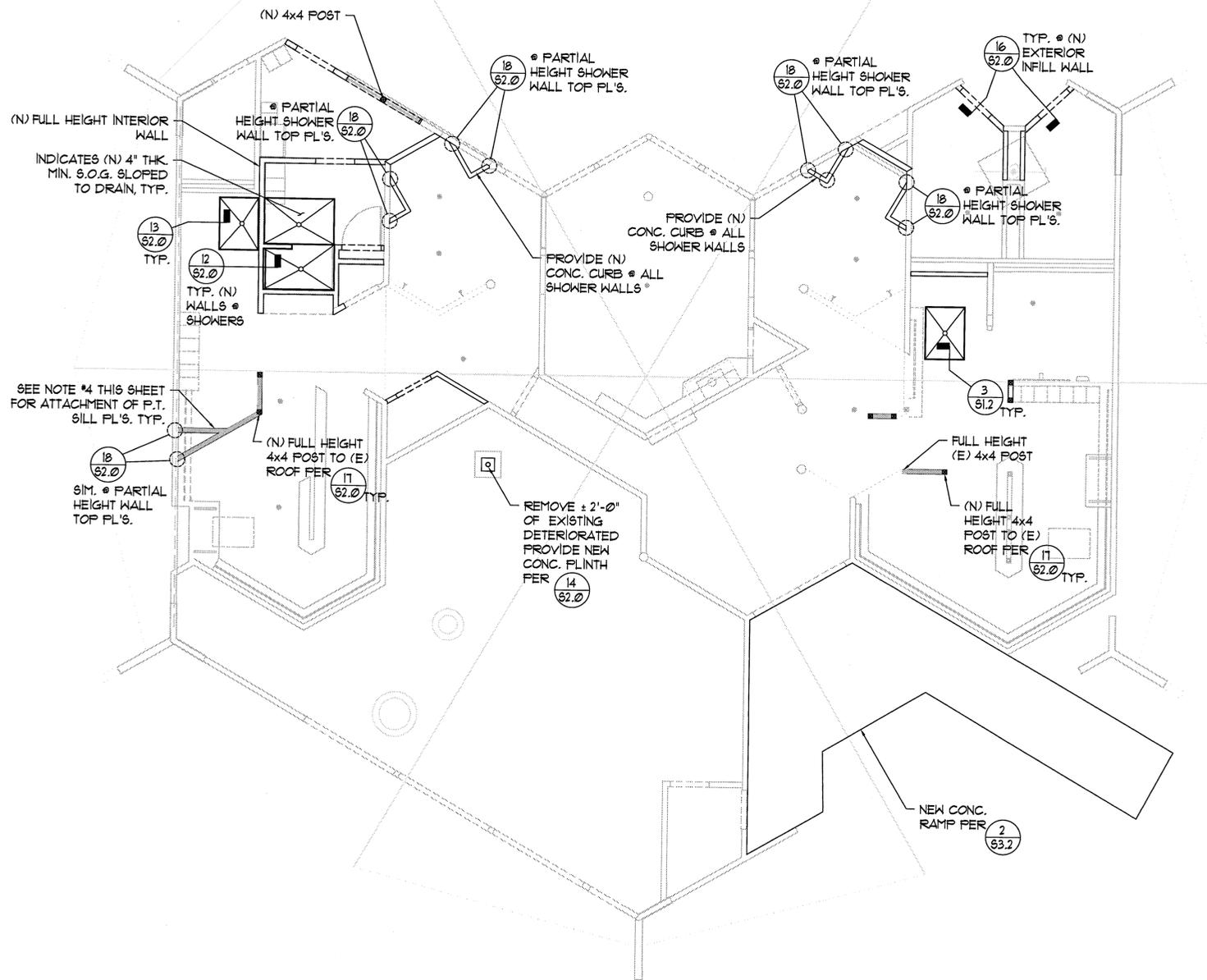
4034 30th Street, SAN DIEGO CA 92104
(619) 546-4326 FAX (619) 546-4350

PROJECT: VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

SHEET TITLE: FOUNDATION AND FRAMING DETAILS	SHEET NUMBER: S2.0 SHEET 34 OF 47
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT	
FOR CITY ENGINEER: <i>[Signature]</i> 3/9/12	DATE: 3/9/12
DESIGNED BY: <i>[Signature]</i>	APPROVED BY: <i>[Signature]</i>
DATE STARTED: _____	DATE COMPLETED: _____

SUBMITTED BY: *[Signature]*
PROJECT MANAGER

146-1753
CCS27 COORDINATE
1787-6312
CCS83 COORDINATE
35609-34-D



FOUNDATION PLAN

3/16" = 1'-0"



FOUNDATION NOTES

1. REFER TO SHEETS S1.0 THRU S1.3 FOR GENERAL NOTES AND STANDARD DETAILS. THESE NOTES AND DETAILS SHALL BE USED WHERE APPLICABLE WHETHER SPECIFICALLY REFERENCED OR NOT.
2. REFER TO ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:
 - A. ALL DIMENSIONS NOT SHOWN.
 - B. ALL OPENINGS NOT SHOWN.
 - C. ALL NON-BEARING WALLS NOT SHOWN.
3. BEFORE ANY CUTTING OR DRILLING OF EXISTING SLAB ON GRADE, VERIFY THAT NO EXISTING REINFORCING WILL BE DAMAGED BY SUCH CUTTING OR DRILLING.
4. PROVIDE 2x P.T. SILL PL'S., U.N.O. @ ALL NEW WALLS
5. ATTACHED NEW SILL PL'S. TO (E) S.O.G. W/ Ø 145" x 1/4" EMBED. SHOT PINS @ 32" O.C. ± 6" FROM EA. END.
6. U.N.O. SEE (S1.0) FOR CONNECTION OF NEW NON BEARING WALL EXISTING ROOF

LEGEND

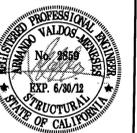
1. INDICATES (N) 8'-0" TALL PARTIAL HEIGHT WALL, PER (S1.0)
2. INDICATES (N) FULL HEIGHT 4x4 POST TO (E) ROOF PER (S1.0)
3. INDICATES (N) FULL HEIGHT WALL

FLC FLORES LUND CONSULTANTS

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 4034 30th Street, SAN DIEGO CA 92104
 (619) 546-4326 FAX (619) 546-4350



PROJECT VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

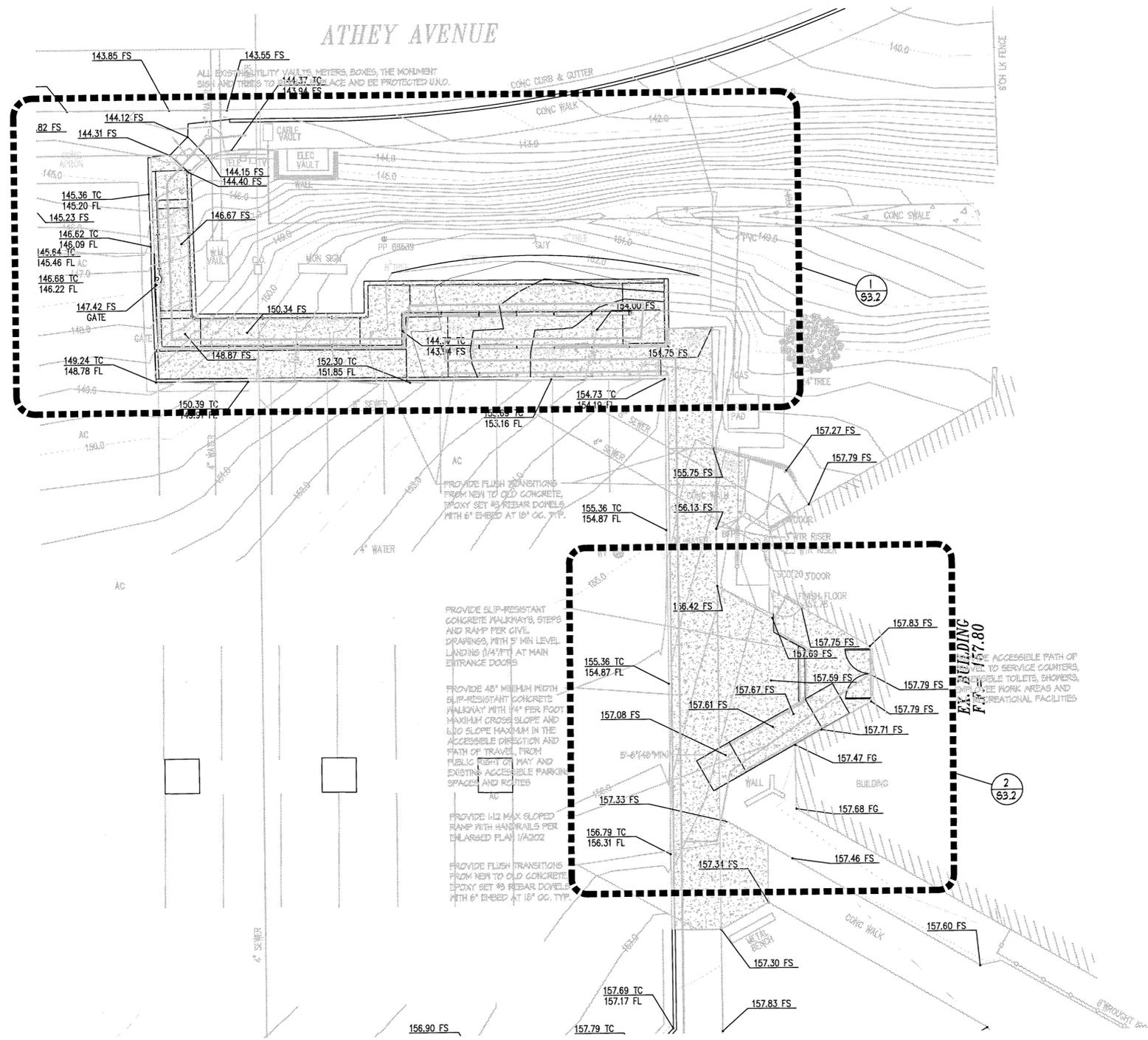
SHEET TITLE: **FOUNDATION PLAN** SHEET NUMBER: **S3.0**
 SHEET 35 OF 47

CITY OF SAN DIEGO, CALIFORNIA
 ENGINEERING AND CAPITAL PROJECTS DEPARTMENT WBS B-00933

FOR CITY ENGINEER: *[Signature]* DATE: 3/16/12 SUBMITTED BY: *[Signature]* PROJECT MANAGER

DESCRIPTION	BY	APPROVED	DATE	SCANNED
ORIGINAL PERMIT				

CONTRACTOR: DATE STARTED: INSPECTOR: DATE COMPLETED: 146-1753
 CCS27 COORDINATE 1787-6312
 CCS83 COORDINATE 35609-35-D

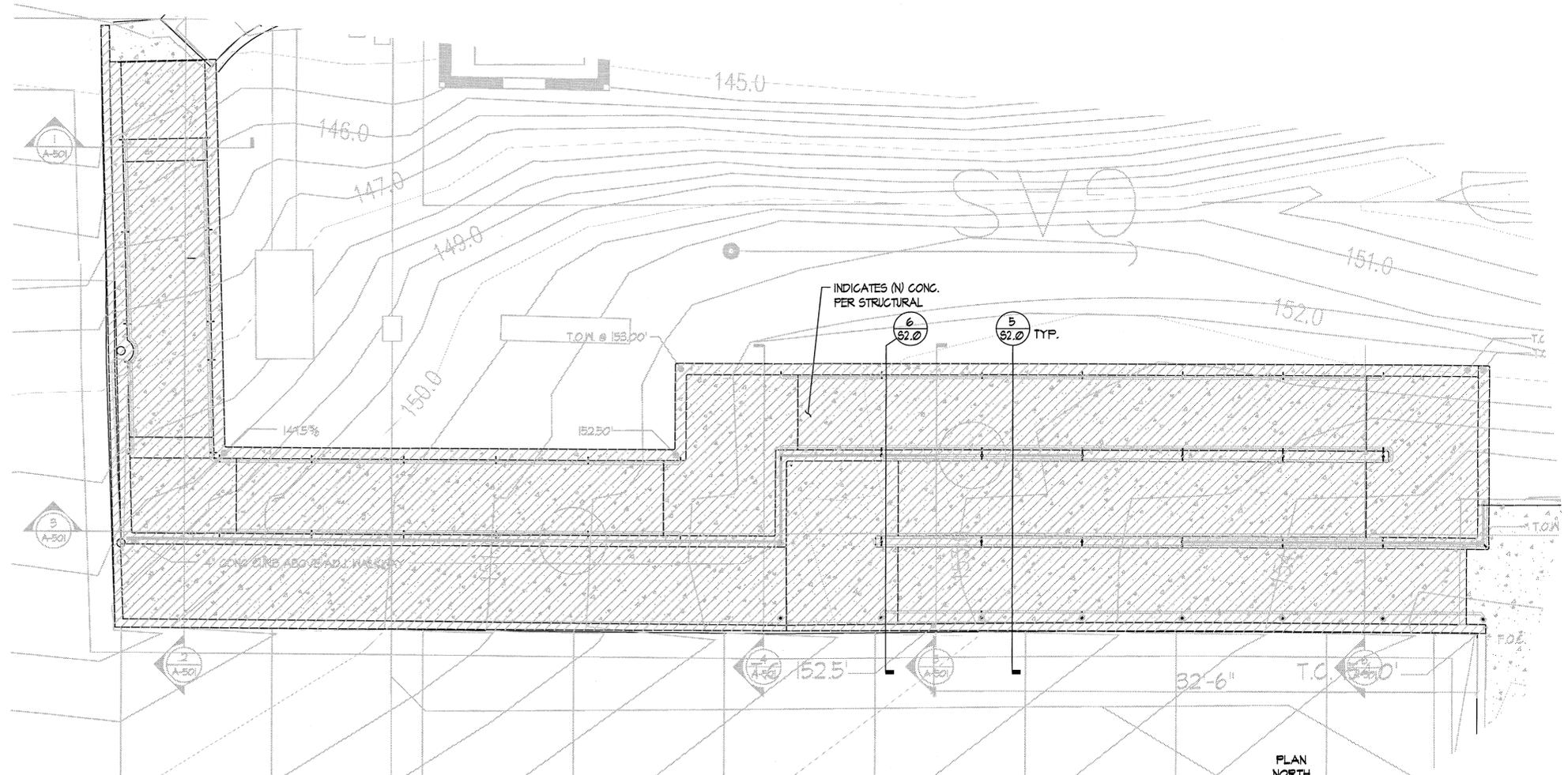


- NOTES:**
1. ALL ELEVATIONS & SLOPES SHOWN ARE FOR REFERENCE ONLY. SEE ARCH & CIVIL DRAWINGS FOR ACTUAL ELEVATIONS & SLOPES.
 2. SEE SHEETS 61.0 THRU 61.2 FOR GENERAL NOTES & TYPICAL DETAILS.

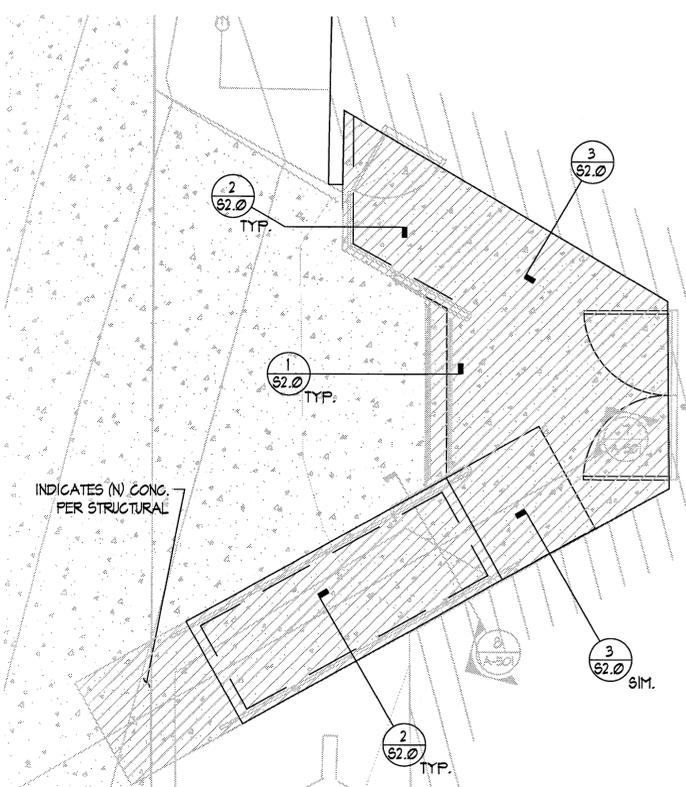
SITE PLAN
1:10



FLC FLORES LUND CONSULTANTS 7220 TRADE STREET, SUITE 120 SAN DIEGO, CALIFORNIA 92121-2325 TEL (858) 566-0626 FAX (858) 566-0627											
	Platt/Whitelaw Architects, Inc. 4034 30th Street, SAN DIEGO CA 92104 (619) 546-4326 FAX (619) 546-4350										
PROJECT VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS											
SHEET TITLE: SITE PLAN	SHEET NUMBER: 53.1 SHEET 36 OF 47										
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT											
WBS B-00933											
FOR CITY ENGINEER: <i>[Signature]</i> DATE: 3/9/12	SUBMITTED BY: <i>[Signature]</i> PROJECT MANAGER										
<table border="1"> <thead> <tr> <th>DESCRIPTION</th> <th>BY</th> <th>APPROVED</th> <th>DATE</th> <th>SCANNED</th> </tr> </thead> <tbody> <tr> <td>ORIGINAL PERMIT</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	DESCRIPTION	BY	APPROVED	DATE	SCANNED	ORIGINAL PERMIT					146-1753 CCS27 COORDINATE 1787-6312 CCS83 COORDINATE
DESCRIPTION	BY	APPROVED	DATE	SCANNED							
ORIGINAL PERMIT											
CONTRACTOR: _____ DATE STARTED: _____ INSPECTOR: _____ DATE COMPLETED: _____	35609-36-D										



NORTH RAMP #1 FOUNDATION PLAN
1/4" = 1'-0"



ENTRY RAMP #2 FOUNDATION PLAN
1/4" = 1'-0"



NOTES:
1. ALL ELEVATIONS & SLOPES SHOWN ARE FOR REFERENCE ONLY. SEE ARCH & CIVIL DRAWINGS FOR ACTUAL ELEVATIONS & SLOPES.
2. SEE SHEETS S1.0 THRU S1.2 FOR GENERAL NOTES & TYPICAL DETAILS.

FLC FLORES LUND CONSULTANTS 7220 TRADE STREET, SUITE 120 SAN DIEGO, CALIFORNIA 92121-2325 TEL (858) 566-0626 FAX (858) 566-0627		
Platt/Whitelaw Architects, Inc. 4034 30th Street, SAN DIEGO CA 92104 (619) 546-4326 FAX (619) 546-4350		
PROJECT VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS		
SHEET TITLE: RAMPS FOUNDATION PLAN		SHEET NUMBER: S3.2 SHEET 37 OF 47
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT		WBS B-00933
FOR CITY ENGINEER: <i>[Signature]</i> 3/9/12		PROJECT MANAGER: <i>[Signature]</i>
ORIGINAL PERMIT	BY	DATE
146-1753 CCS27 COORDINATE 1787-6312 CCS83 COORDINATE	CONTRACTOR:	DATE STARTED:
35609-37-D	INSPECTOR:	DATE COMPLETED:

GENERAL NOTES:

- CONTRACTOR IS REQUIRED TO VERIFY ALL EQUIPMENT MODEL NUMBERS, CAPACITIES, SIZES, VOLTAGES, AND ALL OTHER SCHEDULED INFORMATION WITH OTHER APPLICABLE TRADES AND WITH THE MANUFACTURER PRIOR TO INSTALLATION.
- CONTRACTOR IS REQUIRED TO CAREFULLY REVIEW THESE PLANS AND SPECIFICATIONS PRIOR TO BID. CONTRACTOR IS REQUIRED TO ALSO REVIEW PLANS AND SPECIFICATIONS OF OTHER RELATED TRADES (INCLUDING CIVIL, STRUCTURAL, AND ELECTRICAL) PRIOR TO BID TO INSURE AN ACCURATE UNDERSTANDING OF EXACT SCOPE OF WORK. ANY ITEMS REQUIRING CLARIFICATION SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN SUFFICIENT TIME TO BE INCORPORATED INTO THE BID.
- THESE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC, AND ARE NOT INTENDED TO INDICATE ALL DETAILS AND NECESSARY OFFSETS OF PIPING. THE CONTRACTOR IS REQUIRED TO INSTALL MATERIAL AND EQUIPMENT IN A MANNER AS TO CONFORM TO STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE HEADROOM, AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. ALL INSTALLATIONS SHALL BE CONSISTENT WITH NORMALLY ACCEPTABLE INDUSTRY STANDARDS. THE CONTRACTOR IS REQUIRED TO NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES OR CONFLICTS THAT WOULD AFFECT THE SYSTEM PERFORMANCE OR INCUR ADDITIONAL COSTS. THIS NOTIFICATION SHALL BE SUBMITTED PRIOR TO INSTALLATION OF THE ITEMS CONCERNED.
- NEW AND/OR EXISTING EQUIPMENT INDICATED ON THIS DRAWING IS SHOWN IN APPROXIMATE POSITION(S). CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS, INCLUDING EQUIPMENT LOCATIONS, P.O.C.'S AND STRUCTURAL MEMBERS PRIOR TO INSTALLATION. IN ALL CASES, ADEQUATE ACCESS (PER MANUFACTURER'S RECOMMENDATIONS AND CODE COMPLIANCE) FOR MAINTENANCE AND REPLACEMENT OF EQUIPMENT SHALL BE PROVIDED.
- CONTRACTOR IS RESPONSIBLE TO CUT AND PATCH WALLS, CEILINGS AND FLOORS AS REQUIRED TO MAKE CONNECTIONS TO EXISTING SURFACE. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR LOCATION AND MATERIALS.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES. NOTHING SHOWN ON THE PLANS OR STATED IN THE SPECIFICATIONS IS INTENDED TO INDICATE THAT THE INSTALLATIONS OR CONNECTIONS OF ANY ITEM OR DEVICE SHOULD BE DONE CONTRARY TO MANUFACTURER'S INSTRUCTIONS AND ALL APPLICABLE CODES AND REGULATIONS.
- IF THE CONTRACTORS' USE OF SUBSTITUTE MATERIALS, EQUIPMENT OR METHODS OF INSTALLATION REQUIRES ANY CHANGES IN OTHER TRADES' WORK FROM THAT SHOWN ON THE DRAWINGS, THE EXTRA COST OF THE OTHER TRADES WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INITIATING THE SUBSTITUTION.
- SUBMITTALS: APPROVAL OF THE SUBMITTALS DOES NOT RELEASE THE CONTRACTOR FROM OBLIGATIONS TO FULLY COMPLY WITH ALL REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS OR APPLICABLE CODE REGULATIONS. CONTRACTOR IS RESPONSIBLE TO CUT AND PATCH WALLS, CEILINGS AND FLOORS AS REQUIRED TO MAKE CONNECTIONS TO EXISTING SURFACE. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR LOCATION AND MATERIALS.
- ALL WORK SHALL CONFORM TO 2007 C.B.C. PART 5, TITLE 24 C.C.R. REFER TO SMACNA FOR DUCT & PIPE BRACING.
- AIR FILTERS SHALL BE A STATE FIRE MARSHAL APPROVED AND LISTED TYPE. PREFORMED FILTERS HAVING COMBUSTIBLE FRAMING SHALL BE TESTED AS A COMPLETE ASSEMBLY. AIR FILTERS IN ALL OCCUPANCIES SHALL BE CLASS 2 OR BETTER (AS SHOWN IN THE STATE FIRE MARSHAL LISTING). AIR FILTERS SHALL BE ACCESSIBLE FOR CLEANING OR REPLACEMENT.
- ALL DUCTWORK AND PIPING SHALL BE SUPPORTED AND BRACED IN ACCORDANCE WITH SMACNA GUIDELINES CONFORMING TO SEISMIC HAZARD LEVEL "AA" TYPICAL.
- PENETRATIONS OF FIRE-RESISTIVE WALLS, FLOORS-CEILINGS AND ROOF-CEILINGS SHALL BE PROTECTED AS REQUIRED BY CBC SECTIONS 712 AND 713.
- ALL PLUMBING EQUIPMENT, MATERIAL, AND ALL CONNECTIONS THERETO SHALL BE INSTALLED COMPLETE PER MANUFACTURER'S INSTRUCTIONS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL SYSTEM.
- SOIL, SEWER AND WASTE PIPING SHALL SLOPE AT 1/4" PER FOOT MINIMUM, UNLESS OTHERWISE NOTED.
- ALL PLUMBING SOLDER SHALL BE LEAD FREE.
- CROSS CONNECTION PROTECTION SHALL BE PROVIDED AT ALL POTABLE WATER SUPPLIED APPLIANCES AND EQUIPMENT. BACKFLOW PREVENTERS SHOWN ON THESE PLANS, WHICH ARE USED FOR EQUIPMENT (I.E. MEDICAL, PROCESS, AIR CONDITIONING, KITCHEN EQUIPMENT, LANDSCAPE, ETC.) SHALL BE APPROVED BY THE FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH (FCCCHR) AT THE UNIVERSITY OF SOUTHERN CALIFORNIA.
- ALL VENT-THROUGH-ROOF PIPES SHALL TERMINATE NO LESS THAN 10"-0" MIN FROM ALL OUTSIDE AIR AND BUILDING OPENINGS.
- A WATER HAMMER ARRESTOR SHALL BE INSTALLED AT LOCATIONS OF SELF-CLOSING VALVES PER UPC 609.10. PROVIDE 8X8 ACCESS PANEL.
- INSTALL FLUSH VALVE HANDLES ON WIDE SIDE OF ACCESSIBLE TOILETS PER ADA STANDARDS.
- BUILDING DRAIN AND VENT PIPING MATERIALS SHALL COMPLY WITH SECTION 710.0 AND 903.0 OF THE CALIFORNIA PLBG. CODE.
- ALL SANITARY SYSTEM MATERIALS SHALL BE LISTED BY AN APPROVED LISTING AGENCY.
- ALL DRAINPIPES AND ALL HOT WATER PIPES, UNDER LAVATORIES, ARE TO BE COVERED WITH FACTORY SUPPLIED VITREOUS CHINA SHROUD. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.
- FLOOR DRAINS SHALL NOT SLOPE MORE THAN 1.5% IF THEY ARE LOCATED ON THE PATH OF TRAVEL.

ENERGY CONSERVATION NOTES:

- PIPING IS TO BE INSULATED CONSISTENT WITH THE REQUIREMENTS OF SECTION 118, 123 AND 124 OF THE ENERGY EFFICIENCY STANDARDS.
- LAVATORY FAUCETS IN RESTROOMS ARE TO BE OF THE SELF CLOSING TYPE WITH .25 GALLONS PER CYCLE.
- PROVIDE VACUUM BREAKERS AT DOMESTIC WATER HOSE BIBBS.
- SINK FAUCETS TO BE 2.2 GALLONS PER MINUTE MAX.
- TOILETS SHALL BE ULTRA LOW FLUSH TYPE (1.6 GPF MAX)
- URINALS TO BE 1.0 GPF MAX.
- WATER HEATER / BOILER WILL COMPLY WITH SECTION 608.3(C) C.P.C. THERMAL EXPANSION REQUIREMENTS.
- SHOULD CONTRACTOR PROPOSE AND/OR INSTALL ALTERNATIVE EQUIPMENT OR SYSTEMS, THE CONTRACTOR WILL SECURE APPROVALS OF ALL REVIEWING AGENCIES AS REGARDS TO PLAN CHECK, CODE COMPLIANCE AND TITLE 24 COMPLIANCE.
- ALL PLUMBING FIXTURE CONTROLS MUST NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE TO ACTIVATE THE CONTROLS TO BE LESS THAN OR EQUAL TO 5 lbs.
- PIPING BELOW ACCESSIBLE SINKS AND LAVATORIES ARE TO BE INSULATED. SEE SPECIFICATIONS.
- WHERE SELF-CLOSING VALVES ARE USED, THEY WILL REMAIN OPEN FOR 10 SECONDS.
- EACH SHOWERHEAD SHALL NOT EXCEED A WATER FLOW OF 2.5 GPM.
- ALL PIPING SHALL BE INSULATED CONSISTENT WITH THE REQUIREMENTS OF SECTION 118, 123 AND 124 E.E.S. INSULATION SHALL HAVE THE FLAME SPREAD RATINGS OF 25 OR LESS AND, A SMOKE DEVELOPED RATING OF 50 OR LESS.
- SHOULD CONTRACTOR PROPOSE AND/OR INSTALL ALTERNATIVE EQUIPMENT OR SYSTEMS, IT WILL BE HIS RESPONSIBILITY TO SECURE APPROVALS OF ALL REVIEWING AGENCIES AS REGARDS TO PLANCHECK, CODE COMPLIANCE AND TITLE 24 COMPLIANCE.

PLUMBING FIXTURE SCHEDULE

MARK	MIN. BRANCH SIZE				TRAP OR ARM	FIXTURE
	C.W.	H.W.	VENT	WASTE		
WC-1	1-1/4"	-	2"	4"	INTEGRAL	WATER CLOSET: AMERICAN STANDARD 3351.001 AFWALL FLOWWISE ELONGATED HIGH EFFICIENCY TOILET SYSTEM, EVERCLEAN SURFACE, 1-1/2" TOP SPUD, 2-1/8" TRAPWAY, HIGH EFFICIENCY (1.28 GPF) SIPHON JET ACTION, WALL MOUNTED. TOTO TET1LN32CP HIGH EFFICIENCY ECOPOWER FLUSHOMETER VALVE, HYDROPOWER SELF-GENERATING SYSTEM, WITH VACUUM BREAKER. PROVIDE WITH UNIVERSAL CARRIER. PROVIDE WITH AMERICAN STANDARD 5905.110 SEAT. MOUNT TO MEET CA TITLE 24 CBC PART 2 AND CPC PART 6 REQUIREMENTS.
WC-2	1-1/4"	-	2"	4"	INTEGRAL	WATER CLOSET: AMERICAN STANDARD 3351.001 AFWALL FLOWWISE ELONGATED HIGH EFFICIENCY TOILET SYSTEM, EVERCLEAN SURFACE, 1-1/2" TOP SPUD, 2-1/8" TRAPWAY, HIGH EFFICIENCY (1.28 GPF) SIPHON JET ACTION, WALL MOUNTED. TOTO TET1LN32CP HIGH EFFICIENCY ECOPOWER FLUSHOMETER VALVE, HYDROPOWER SELF-GENERATING SYSTEM, WITH VACUUM BREAKER. PROVIDE WITH UNIVERSAL CARRIER. PROVIDE WITH AMERICAN STANDARD 5905.110 SEAT.
U-1	1"	-	1-1/2"	2"	INTEGRAL	URINAL: AMERICAN STANDARD 6590.005 WASHBROOK FLOWISE, 0.5 GPF, VITREOUS CHINA, WASHOUT ACTION, 3/4" TOP SPUD, 2" I.P.S. WITH INTEGRAL TRAP, 14" EXTENDED RIM, VANDAL RESISTANT, PROVIDE WITH FLUSH VALVE TOTO TEU1LN12CP HIGH EFFICIENCY ECOPOWER FLUSHOMETER VALVE, HYDROPOWER SELF-GENERATING SYSTEM, WITH VACUUM BREAKER. PROVIDE WITH UNIVERSAL CARRIER. MOUNT TO MEET CA TITLE 24 CBC PART 2 AND CPC PART 6 REQUIREMENTS.
L-1	1/2"	1/2"	1-1/2"	2"	1-1/4"	LAVATORY: AMERICAN STANDARD 0954.023 22"X21-1/4" VITREOUS CHINA, WALL MOUNTED, 1-1/4" O.D., 5" DEEP, FAUCET HOLES ON 4" CENTERS, EXTRA RIGHT-HAND HOLE, REAR OVERFLOW, RECESSED SELF-DRAINING DECK. PROVIDE WITH AMERICAN STANDARD 0059.020 VITREOUS CHINA SHROUD/KNEE CONTACT GUARD. PROVIDE SYMMONS S-6080 ULTRA SENSE BATTERY POWERED FAUCET, DECK MOUNTED COVER PLATE 4" CENTERS, 1/2" I.P.S., 0.5 GPM VANDAL RESISTANT AERATOR. PROVIDE BRASS CRAFT KTR 17-C QUARTER TURN VALVE 1/2" I.P.S. INLET 3/8" O.D. OUTLET ANGLE STOP. PROVIDE AMERICAN STANDARD 4503.115 LIQUID SOAP DISPENSER, .002 POLISHED CHROME FINISH. PROVIDE WITH A THERMOSTATIC MIXING VALVE SET TO 104°, MOUNT TO MEET CA TITLE 24 CBC PART 2 AND CPC PART 6 REQUIREMENTS.
FD-1	-	-	2"	2"	2"	FLOOR DRAIN: ZURN ZN-415-VP 2" CAST IRON ENAMELED WITH DOUBLE DRAINAGE FLANGE, WEEP HOLES, REVERSIBLE, ADJUSTABLE CLAMPING COLLAR, NICKLE BRONZE STRAINER THREADED COLLAR, BOTTOM OUTLET WITH TRAP PRIMER CONNECTION
DF-1	1/2"	-	-	2"	-	DRINKING FOUNTAIN: HAWS 1501 "HI-LO" WALL MOUNTED BARRIER-FREE, WHITE ENAMELED-IRON BASINS, PUSH-BUTTON OPERATED VALVES, CHROME PLATED BRASS BUBBLER HEADS, PROVIDE WITH WALL MOUNTING PLATE, 1-1/4" IPS TRAPS, BRASSCRAFT KTR-C 17C QUARTER TURN VALVES, MOUNT TO MEET CA TITLE 24 CBC PART 2 AND CPC PART 6 REQUIREMENTS.
SH-1	1/2"	1/2"	2"	2"	1-1/2"	SHOWER: ZURN Z7300-SSC-HW11-MT-VB TEMP-GUARD III SHOWER UNIT, SINGLE HANDLE PRESSURE BALANCING, POLISHED NICKEL CHROME FOR EXPOSED AREAS, 1/2"NPT INLETS AND OUTLETS, ADJUSTABLE LIMIT STOP, 1.5 GPM HAND/WALL SHOWER HEAD, HAND/WALL UNIT, 60" FLEXIBLE METAL HOSE, 24" MOUNTING BAR, INLINE-VACUUM BREAKER. MOUNT TO MEET CA TITLE 24 CBC PART 2 AND CPC PART 6 REQUIREMENTS.
SH-2	1/2"	1/2"	2"	2"	1-1/2"	SHOWER: ZURN Z7301-SSC-HW11-MT-VB TEMP-GUARD III SHOWER UNIT, SINGLE HANDLE PRESSURE BALANCING, POLISHED NICKEL CHROME FOR EXPOSED AREAS, 1/2"NPT INLETS AND OUTLETS, ADJUSTABLE LIMIT STOP, 1.5 GPM HAND/WALL SHOWER HEAD, INLINE-VACUUM BREAKER.
SS-1	1/2"	1/2"	1-1/2"	2"	2"	SERVICE SINK (MOP SINK): AMERICAN STANDARD 7741.000 28" FLORWELL CORNER ROUND MOP SINK, 13" STANDARD HEIGHT, PROVIDE WITH 7745.811 REMOVABLE VINYL RIM GUARD. CHICAGO FAUCET 897-RFC ROUGH CHROME PLATED SERVICE SINK FAUCET WITH VACUUM BREAKER SPOUT, 3/4" HOSE AND THREAD ON SPOUT, LEVER HANDLES MARKED "HOT" AND "COLD", ADJUSTABLE WALL BRACE, PAIL HOOK, INTEGRAL STOPS IN SUPPLY ARMS. PROVIDE SOLID BLOCKING FOR FAUCET BRACE.

• PROVIDE ALL FIXTURES WITH ALL VANDAL PROOF OPTIONS.
• SEE ARCHITECTURAL DRAWINGS FOR ACCESSIBILITY MOUNTING HEIGHTS
• CONTROLS FOR WATER CLOSETS AND LAVATORIES SHALL BE ON THE WIDE SIDE OF THE FIXTURE (CBC 1115B.2)

EXHAUST FAN SCHEDULE

MARK	SERVICE	TYPE	CFM	S.P.	FAN RPM	OUTLET VELOCITY	HP	OPER. POWER	VOLTS/PH	SOUND dBA	WEIGHT	MANUFACTURER & MODEL NO.	REMARKS
EF 1	STAFF LOUNGE 300 STAFF TOILET 301	CENTRIFUGAL INLINE	140	0.20	1015	107	1/4	0.03	120/1	53	70	GREENHECK BSQ-70-4	PROVIDE MOUNTING KIT AND BACKDRAFT DAMPER. INTERLOCK WITH OCCUPANCY SENSOR WITH HUMIDITY SENSOR OVERRIDE
EF 2	MEN'S TOILET 101 MEN'S LOCKER 102	CENTRIFUGAL INLINE	620	0.25	801	355	1/4	0.05	120/1	50	81	GREENHECK BSQ-120-4	PROVIDE MOUNTING KIT AND BACKDRAFT DAMPER. INTERLOCK WITH OCCUPANCY SENSOR WITH HUMIDITY SENSOR OVERRIDE
EF 3	WOMEN'S 201 WOMEN'S LOCKER	CENTRIFUGAL INLINE	700	0.25	855	407	1/4	0.06	120/1	51	81	GREENHECK BSQ-120-4	PROVIDE MOUNTING KIT AND BACKDRAFT DAMPER. INTERLOCK WITH OCCUPANCY SENSOR WITH HUMIDITY SENSOR OVERRIDE

• FAN SENSORS (OCCUPANCY AND HUMIDITY) WILL BE IN PARRALLEL. IF EITHER OCCUPANCY IS SENSED OR HUMIDITY IS SENSED ABOVE SENSOR LIMIT THE FAN WILL BE ON. SEE DETAIL 1
• EXHAUST DUCTS SHALL BE EQUIPPED WITH BACKDRAFT DAMPERS (SECTION 501.0 CMC)

BUILDING A WATER CALCULATIONS

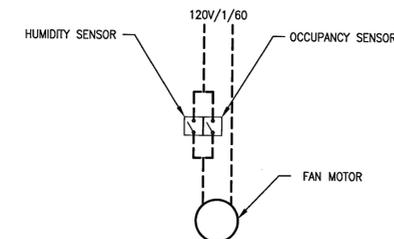
TOTAL DEVELOPED LENGTH TO LAST FIXTURE = FITTINGS	- FT.	20 FT.
TOTAL LENGTH	- FT.	20 FT.
PSI LOSS		
RISE 10 FT x 0.43 PSI/FT	4.3 PSI	
FIXTURE	15 PSI	
TOTAL LOSS	19.3 PSI	
REQUIRED WATER PRESSURE LOSS	25 PSI	
DIFFERENCE	19.3 PSI	
	5.7 PSI	
5.7 PSI DIFFERENCE X 100 = FEET TOTAL LENGTH	4.75 P.S.I. MAXIMUM PRESS. DROP ALLOWABLE /100 FT. OF PIPE	

WATER PIPE SIZE TABLE

PIPE SIZE	COLD WATER (8 FPS MAX. VELOCITY)				HOT WATER (5 FPS MAX. VELOCITY)		
	GPM	VELOCITY (FPS)	FLUSH TANK FU	FLUSH VALVE FU	GPM	VELOCITY (FPS)	FIXTURE UNITS
1/2"	2.5	3.0	3	0	2.5	3.0	3
3/4"	6	4.0	7	0	6	4.0	7
1"	14	4.8	20	0	14	4.8	20
1-1/4"	22	5.6	34	0	19	5.0	28
1-1/2"	35	6.2	67	20	28	5.0	47
2"	75	8.0	255	130	48	5.0	120
2-1/2"	125	9.0	505	390	70	5.0	235
3"	180	8.0	812	778	120	5.0	480
4"	290	8.0	1670	1670	190	5.0	872

PIPING MATERIAL NOTES:

- SOIL, WASTE AND DOWNSPOUTS ABOVE AND BELOW GRADE WITHIN 5' OF BUILDING LINE: CAST IRON SOIL PIPE AND FITTINGS CONFORMING TO THE LATEST ISSUE OF CSP1 301, ASTM A-888, OR SERVICE WEIGHT HUB AND SPOUT CONFORMING TO ASTM A-74. PIPE AND FITTINGS SHALL BE GREENSPEC LISTED. MANUFACTURER SHALL BE CHARLOTTE, TYLER, AB&I OR RECEIVE PRIOR APPROVAL OF THE ENGINEER.
- SEWER FROM 5' OUTSIDE BUILDING EXCEPT AS OTHERWISE NOTED ON PLANS: SCHEDULE 40 PVC PIPING CONFORMING TO ASTM D 2665, FITTINGS CONFORMING TO ASTM D 2466 WITH SOLVENT WELDED JOINTS CONFORMING TO ASTM D2564.
- VENT PIPING: SERVICE WEIGHT CAST-IRON WITH SAME JOINT AS USED FOR SOIL AND WASTE ABOVE GRADE.
- ALL DOMESTIC WATER PIPING: ABOVE GRADE SHALL BE TYPE "L" COPPER TUBING HARD DRAWN WITH WROUGHT COPPER SOLDER SWEAT FITTINGS. WHERE BELOW GRADE AND WITHIN 5' OF BUILDING LINE, SHALL BE TYPE "K" COPPER TUBING IN SINGLE CONTINUOUS LENGTH WITH POLYETHYLENE OUTER TUBING.
- ALL SANITARY SYSTEM MATERIALS SHALL BE LISTED BY AN APPROVED LISTING AGENCY.
- FLOOR DRAINS OR SIMILAR TRAPS DIRECTLY CONNECTED TO THE DRAINAGE SYSTEM AND SUBJECT TO INFREQUENT USE SHALL BE PROVIDED WITH AN APPROVED AUTOMATIC MEANS OF MAINTAINING THEIR WATER SEALS.
- SHOWERS SHALL BE PROVIDED WITH MIXING VALVES PER SECTION 418 CPC.



EF CONTROL DIAGRAM

NO SCALE

1

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THE PROJECT, THAT I EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

MARK BENDER, P.E. #24209 9/30/12 EXPIRES

MECHANICAL / PLUMBING LEGEND

SYMBOL	ABBREV.	DESCRIPTION
(E)	EXIST	DENOTES EXISTING
⊙	POC	POINT OF CONNECTION
8"ø/10x4		NEW DUCTWORK (1ST NUMBER INDICATES SIDE SHOWN)
MVD		MANUAL VOLUME DAMPER
⊗	CD	CEILING DIFFUSER
⊠	EA	EXHAUST AIR DUCT UP
⊠	ER	CEILING EXHAUST REGISTER
⊠	TG	TRANSFER GRILLE (WALL)
---	(E)	EXISTING PIPING OR EQUIPMENT TO BE REMOVED
---	(E)	EXISTING PIPING OR EQUIPMENT ABANDONED IN PLACE
---	(E)CW	EXISTING COLD WATER IN WALL
---	(E)CW	EXISTING COLD WATER BELOW GRADE
---	CW	COLD WATER
---	(E)HW	EXISTING HOT WATER IN WALL
---	(E)HW	EXISTING HOT WATER BELOW GRADE (E)TWR,(E)THWR,(E)THW,(E)HWR
---	HW	HOT WATER (120°F)
---	HWR	HOT WATER RETURN
---	(E)W	EXISTING WASTE BELOW GRADE
---	(E)W	EXISTING WASTE IN WALL
---	S OR W	SOIL OR WASTE ABOVE SLAB
---	S OR W	SOIL OR WASTE BELOW SLAB
---	(E)V	EXISTING VENT ABOVE CEILING
---	(E)V	EXISTING VENT IN WALL
---	V	SANITARY VENT
DN	DN	DOWN OR DROP
UP	UP	RISE OR RISE
SOV	SOV	SHUT-OFF VALVE ON RISE OR DROP
WCO	WCO	WALL CLEAN-OUT
FCO	FCO	FLOOR CLEAN-OUT
FD	FD	FLOOR DRAIN
HB	HB	HOSE BIBB
ABV	ABV	ABOVE
BEL	BEL	BELOW
CONN	CONN	CONNECT OR CONNECTION
CONT	CONT	CONTINUATION
CLG	CLG	CEILING
CFM	CFM	CUBIC FEET PER MINUTE
DN	DN	DOWN
EXH	EXH	EXHAUST
EXIST	EXIST	EXISTING
FFE	FFE	FINISHED FLOOR ELEVATION
FIN	FIN	FINISH
FLR	FLR	FLOOR
GPM	GPM	GALLONS PER MINUTE
LAV	LAV	LAVATORY
MAX	MAX	MAXIMUM
MIN	MIN	MINIMUM
OA	OA	OUTSIDE AIR
PLBG	PLBG	PLUMBING
TP	TP	TYPICAL
U.N.O.	U.N.O.	UNLESS NOTED OTHERWISE

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PROJECT VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

SHEET TITLE **LEGEND, SCHEDULE & NOTES** SHEET NUMBER **MP-001** SHEET **38** OF **47**

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT

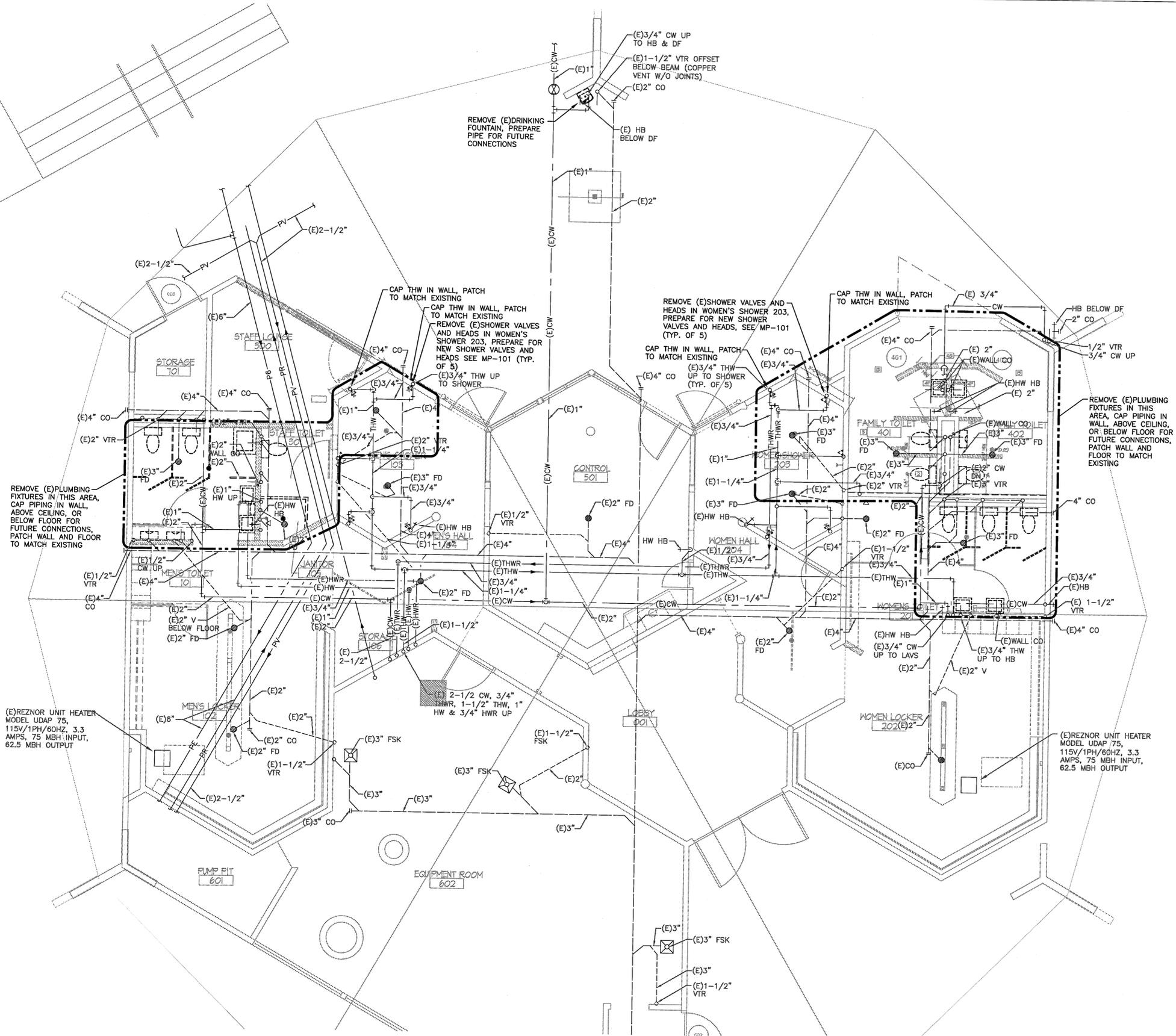
WBS **B-00933** SUBMITTED BY **[Signature]**

FOR CITY ENGINEER	DATE	APPROVED	DATE	SCANNED
ORIGINAL PERMIT	HS	MB	09.26.11	

PROJECT ENGINEER **146-1753**
CCS27 COORDINATE **1787-6312**
CCS83 COORDINATE

CONTRACTOR: _____ DATE STARTED: _____ DATE COMPLETED: _____

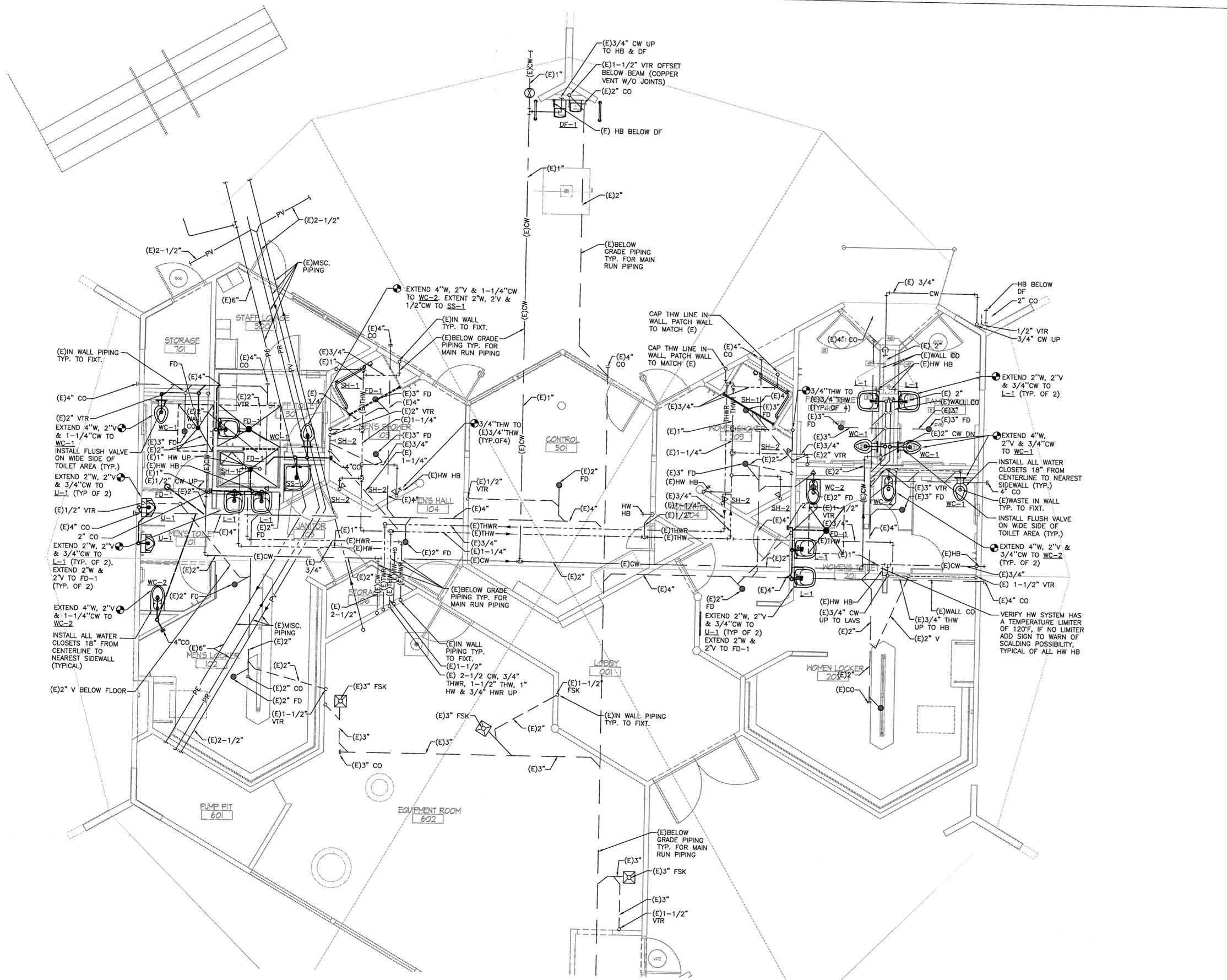
VISTA TERRACE POOL



DEMOLITION FLOOR PLAN
SCALE: 1/4" = 1'-0"

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PROJECT VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS		
SHEET TITLE DEMOLITION FLOOR PLAN		SHEET NUMBER MP-100 SHEET 39 OF 47
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT		
DESIGNED BY: <i>[Signature]</i> DATE: 3/9/12 FOR CITY ENGINEER:		WBS: B-00933 SUBMITTED BY: <i>[Signature]</i>
ORIGINAL PERMIT:	HS:	MB: 09.26.11 DATE:
CONTRACTOR:		PROJECT ENGINEER: 146-1753 CCS27 COORDINATE: 1787-6312 CCS85 COORDINATE: 35609-39-D
INSPECTOR:		DATE STARTED:
DATE COMPLETED:		

VISTA TERRACE POOL



PLUMBING LEGEND		
SYMBOL	ABBREV.	DESCRIPTION
(E)	EXIST	DENOTES EXISTING
⊕	POC	POINT OF CONNECTION
---	(E)	EXISTING PIPING OR EQUIPMENT TO BE REMOVED
---	(E)	EXISTING PIPING OR EQUIPMENT ABANDONED IN PLACE
---	(E)CW	EXISTING COLD WATER IN WALL
---	(E)CW	EXISTING COLD WATER BELOW GRADE
---	CW	COLD WATER
---	(E)HW	EXISTING HOT WATER IN WALL
---	(E)HW	EXISTING HOT WATER BELOW GRADE (E)TWR,(E)THWR,(E)THW,(E)HWR
---	HW	HOT WATER (120°F)
---	HWR	HOT WATER RETURN
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---	S OR W	SOIL OR WASTE BELOW SLAB
---	(E)V	EXISTING VENT ABOVE CEILING
---	(E)V	EXISTING VENT IN WALL
---	V	SANITARY VENT
⊕	DN	DOWN OR DROP
⊕	UP	RISE OR RISER
⊕	SOV	SHUT-OFF VALVE ON RISE OR DROP
⊕	WCO	WALL CLEAN-OUT
⊕	FCO	FLOOR CLEAN-OUT
⊕	FD	FLOOR DRAIN
⊕	HB	HOSE BIBB
⊕	ABV	ABOVE
⊕	BEL	BELOW
⊕	CONN	CONNECT OR CONNECTION
⊕	CONT	CONTINUATION
⊕	CLG	CEILING
⊕	DN	DOWN
⊕	EXIST	EXISTING
⊕	FIN	FINISH
⊕	FLR	FLOOR
⊕	GPM	GALLONS PER MINUTE
⊕	LAV	LAVATORY

NEW WORK FLOOR PLAN

SCALE: 1/4" = 1'-0"



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PROJECT
VISTA TERRACE POOL
ACCESSIBILITY IMPROVEMENTS

SHEET
NEW PLUMB FLOOR
PLAN

SHEET NUMBER
MP-101
SHEET 40 OF

CITY OF SAN DIEGO, CALIFORNIA
 ENGINEERING AND CAPITAL PROJECTS DEPARTMENT

WBS B-00933

FOR CITY ENGINEER *[Signature]* DATE 3/9/12

SUBMITTED BY *[Signature]*

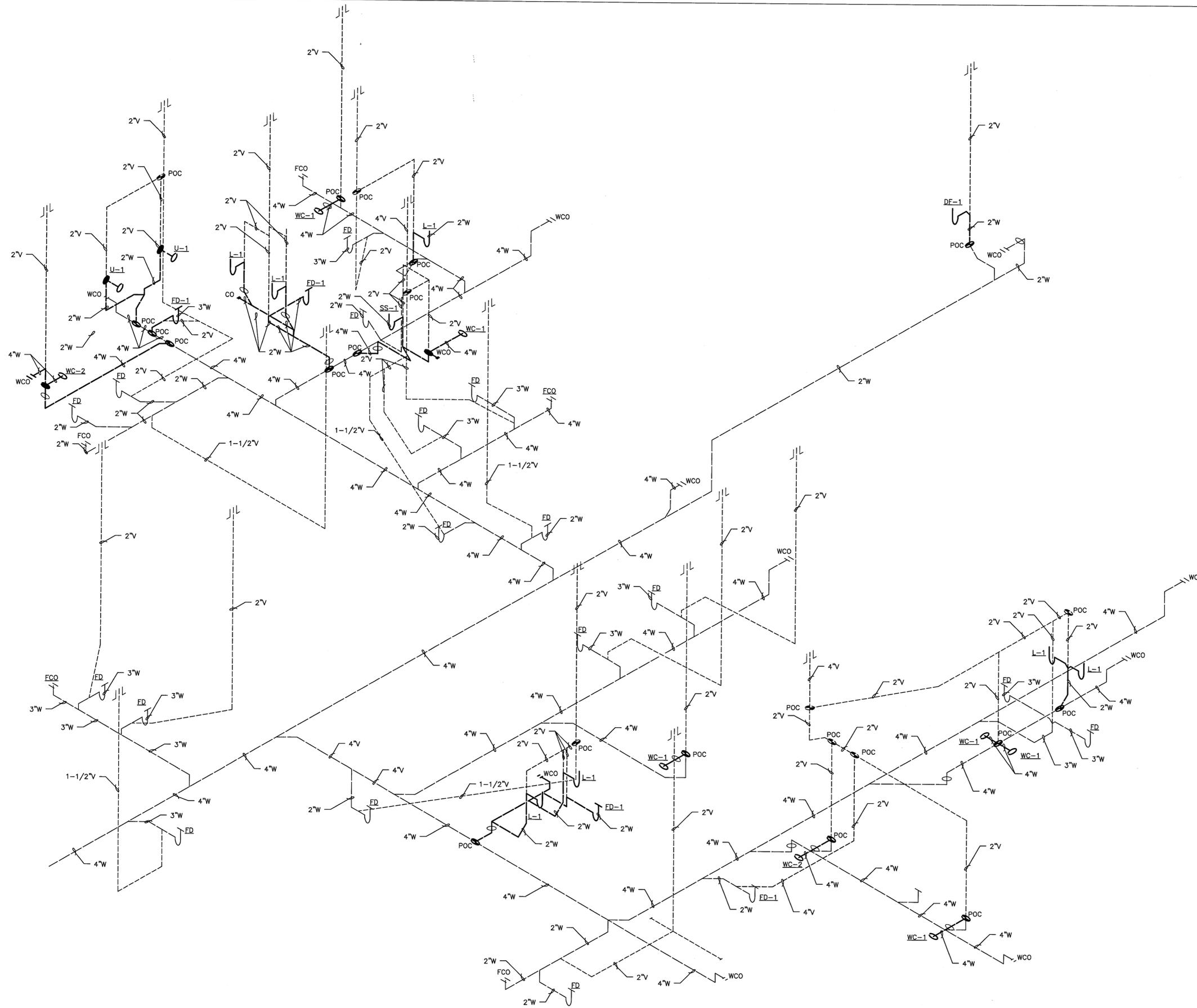
DESCRIPTION	BY	APPROVED	DATE	SCANNED
ORIGINAL PERMIT	HS	MB	09.26.11	

PROJECT ENGINEER
 146-1753
 CCS27 COORDINATE
 1787-6312
 CCS83 COORDINATE

CONTRACTOR _____ DATE STARTED _____
 INSPECTOR _____ DATE COMPLETED _____

35609-40-D

VISTA TERRACE POOL



ISOMETRIC WASTE PLAN

NTS

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 Platt/Whitelaw Architects, Inc. 4084 30th Street, SAN DIEGO CA 92104 (619) 540-4326 FAX (619) 540-4360		
PROJECT VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS		
SHEET TITLE: DIAGRAMS		SHEET NUMBER: MP-103 SHEET 42 OF 47
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT		WBS: B-00933
FOR CITY ENGINEER: <i>[Signature]</i> DATE: 3/15/12		SUBMITTED BY: <i>[Signature]</i>
ORIGINAL PERMIT	BY: HS	APPROVED: MB
		DATE: 09.26.11
CONTRACTOR: _____ DATE STARTED: _____		PROJECT ENGINEER: 146-1753
INSPECTOR: _____ DATE COMPLETED: _____		CCS27 COORDINATE: 1787-6312
		CCS83 COORDINATE: 35609-42-D

VISTA TERRACE POOL

GENERAL SYMBOL LIST

- DASHED SYMBOL INDICATES EXISTING FIXTURE, OUTLET, DEVICE OR EQUIPMENT TO BE REMOVED.
- FINE-LINED SYMBOL INDICATES EXISTING FIXTURE, OUTLET, DEVICE OR EQUIPMENT TO REMAIN.
- CROSS MARK ON ANY SWITCH SYMBOL INDICATES EXISTING SWITCH OUTLET.
- EXISTING CONDUIT TO REMAIN.
- EXISTING CONDUIT TO BE REMOVED IF IN AN ACCESSIBLE AREA OR TO BE ABANDONED IF IN AN INACCESSIBLE AREA.
- INDICATES FIXTURE TYPE. SEE FIXTURE SCHEDULE FOR LAMP, WATTAGE, AND MOUNTING INFORMATION. TYPICAL FOR ROOM INDICATED, UNLESS OTHERWISE NOTED.
- INDICATES CONTROLLING SWITCH LEG.
- DENOTES BRANCH CIRCUIT NUMBER SUPPLYING FIXTURE.
- SURFACE MOUNTED FLUORESCENT LIGHTING FIXTURE.
- SQUARE LIGHTING FIXTURE. LAMP AND MOUNTING PER FIXTURE TYPE.
- WALL MOUNTED LIGHTING FIXTURE. MOUNTING HEIGHT AS INDICATED.
- MANUAL MOTOR STARTER SWITCH WITH THERMAL OVERLOAD PROTECTION
- SINGLE RELAY TYPE WALL MOUNTED OCCUPANCY SENSOR/WALL SWITCH AT +45" AFF. SEE DETAIL 1/E-601.
- DUPLEX RECEPTACLE, MOUNTED AT +18" U.O.N.
- DUPLEX RECEPTACLE, WITH GFI PROTECTION, MOUNTED AT +18" U.O.N.
- SURFACE MOUNTED PANELBOARD.
- JUNCTION BOX, SIZED PER CEC, U.O.N.
- JUNCTION BOX, FOR NEW HEATER.
- MOTOR CONNECTION.
- MECHANICAL EQUIPMENT REFERENCE. (TYPICAL)
- CONDUIT CONCEALED IN WALL OR CEILING SPACE.
- CONDUIT CONCEALED UNDER FLOOR SLAB OR UNDERGROUND.
- CONDUIT INSTALLED EXPOSED.
- CONDUIT TURNED UP.
- CONDUIT TURNED DOWN.
- CONDUIT STUBBED UP AND CAPPED IN CEILING SPACE.
- FLEXIBLE METAL CONDUIT, INSTALL REQUIRED BRANCH CIRCUIT CONDUCTORS AND EQUIPMENT GROUND CONDUCTOR.
- HOMERUN TO INDICATED PANELBOARD ('A'). NUMBERS (1,3) INDICATE BRANCH CIRCUIT NUMBERS. (TYPICAL)
- INDICATES 3/4" CONDUIT WITH 3 NUMBER 8 CONDUCTORS + 1 NUMBER 10 INSULATED EQUIPMENT GROUND. (TYPICAL)
- INDICATES 3/4" CONDUIT WITH 3 NUMBER 10 PHASE CONDUCTORS PLUS 3 NUMBER 10 INDIVIDUAL NEUTRAL CONDUCTORS PLUS 1 NUMBER 10 INSULATED EQUIPMENT GROUND.
- 3/4" CONDUIT WITH 2#12 CONDUCTORS PLUS 1#12 INSULATED EQUIPMENT GROUNDING CONDUCTOR.
- 3/4" CONDUIT WITH 3#12 CONDUCTORS PLUS 1#12 INSULATED EQUIPMENT GROUNDING CONDUCTOR.
- A NUMBER ADJACENT TO THE HASH MARK IN ANY CONDUIT RUN INDICATES THE CONDUCTOR SIZE TO BE USED IN LIEU OF #12 AWG. CONDUIT AND INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE SIZED PER CEC, U.O.N.
- ELECTRICAL NOTE REFERENCE (TYPICAL)

ABBREVIATIONS LIST

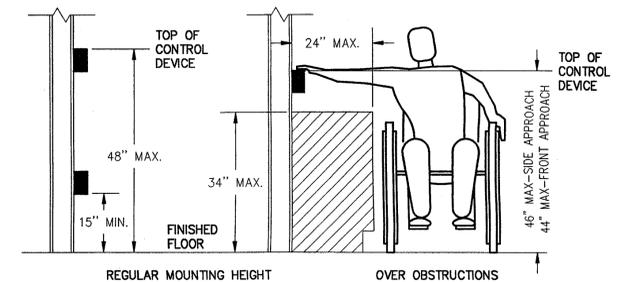
- A, AMP AMPERE
- AC ALTERNATING CURRENT
- AF AMPS FRAME, OR AMPS FUSE RATING
- AFF ABOVE FINISHED FLOOR
- AFG ABOVE FINISHED GRADE
- AIC AMPERE INTERRUPTING CAPACITY
- AT AMPS TRIP RATING
- AS AMPS SWITCH RATING
- C CONDUIT
- CEC CALIFORNIA ELECTRICAL CODE
- CIR CIRCUIT
- C.O. CONDUIT ONLY
- CU COPPER
- CW COLD WATER
- DWG DRAWING
- EA. EACH
- EG EQUIPMENT GROUND
- ELEC ELECTRICAL
- EMERG. EMERGENCY
- EWH ELECTRIC WATER HEATER
- EX EXISTING
- GFCI GROUND-FAULT CIRCUIT INTERRUPTER
- GFI GROUND-FAULT INTERRUPTER
- GND GROUND
- HPF HIGH POWER FACTOR
- JB JUNCTION BOX
- KVA KILOVOLT AMPS (KVA)
- KW KILOWATT (KW)
- KWH KILOWATT-HOUR (KWH)
- LTG LIGHTING
- NEC NATIONAL ELECTRICAL CODE
- NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
- NIC NOT IN CONTRACT
- NTS NOT TO SCALE
- OC ON CENTER
- POC POINT OF CONNECTION
- REF REFERENCE
- SCCR SHORT CIRCUIT CURRENT RATING
- TYP TYPICAL
- U.O.N. UNLESS OTHERWISE NOTED
- +48" MOUNTING HEIGHT ABOVE FINISHED FLOOR (TYPICAL)

GENERAL NOTES

1. ALL WORK SHALL BE IN COMPLIANCE WITH THE 2007 CALIFORNIA ELECTRICAL CODE (CEC), CALIFORNIA BUILDING CODE (CBC), CALIFORNIA FIRE CODE (CFC) AND WHERE APPLICABLE AS AMENDED BY LOCAL ORDINANCES AND CODES OF GOVERNING MUNICIPALITIES, AND ALL CALIFORNIA AMENDMENTS.
2. ALL ELECTRICAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL OTHER RELATED CONTRACT DRAWINGS.
3. THE CONTRACTOR SHALL VERIFY EXACT LOCATION, SIZE AND EXTENT OF ALL EXISTING UTILITIES, OBSTRUCTIONS AND/OR OTHER CONDITIONS WHICH MAY AFFECT THE PROPOSED WORK UNDER THE PROJECT. THE CONTRACTOR SHALL TAKE EVERY PRECAUTION TO PREVENT DAMAGE TO EXISTING WORK. ANY DAMAGE TO EXISTING UTILITIES OR STRUCTURES DURING CONSTRUCTION SHALL BE IMMEDIATELY REPAIRED OR REPLACED IN ACCORDANCE WITH THE OWNERS DIRECTION AT THE CONTRACTOR'S EXPENSE.
4. THE CONTRACTOR SHALL CAREFULLY EXAMINE ALL CONTRACT DRAWINGS AND BE RESPONSIBLE FOR THE PROPER FITTING OF MATERIALS AND EQUIPMENT AT EACH LOCATION AS INDICATED WITHOUT SUBSTANTIAL ALTERATION. IN AS MUCH AS THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND BECAUSE OF THE SMALL SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES WHICH MAY BE REQUIRED. FURNISHING FITTINGS REQUIRED TO MEET SUCH CONDITIONS SHALL BE AT NO COST TO THE OWNER.
5. SYSTEM AND EQUIPMENT GROUNDING SHALL BE AS REQUIRED BY THE C.E.C.
6. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURAL CONDITIONS. EXPOSED CONDUITS SHALL BE INSTALLED PARALLEL TO BEAMS AND WALLS.
7. ALL FEEDERS AND BRANCH CIRCUITS SHALL HAVE A GROUND CONDUCTOR INSTALLED.
8. THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUITS ARE BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. MODIFICATIONS APPROVED BY THE ENGINEER MAY BE MADE BY THE CONTRACTOR AT HIS EXPENSE TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND SPECIFICATIONS.
9. ALL CIRCUIT PROTECTIVE DEVICES SHALL HAVE THE REQUIRED RATINGS AND INTERRUPTING CAPACITY EQUAL TO OR GREATER THAN THE AVAILABLE SHORT CIRCUIT CURRENT AT ITS SUPPLY TERMINAL. MINIMUM INTERRUPTING CAPACITY SHALL BE 10,000 AMPS.
10. OUTLET BOXES, UTILIZATION EQUIPMENT CABINETS, CONDUIT SYSTEMS, AND CONVENIENCE OUTLETS SHALL BE GROUNDED IN ALL ELECTRICAL SYSTEMS OPERATING AT 48 VOLTS AND ABOVE. EACH GROUND WIRE SHALL BE TERMINATED AT THE EQUIPMENT GROUND BAR. GROUND WIRES SHALL BE SIZED PER C.E.C. 250.122.
11. ALL CONDUITS SHALL BE A MINIMUM OF 3/4", UNLESS SPECIFICALLY STATED OTHERWISE.
12. ALL WIRING SHALL BE THHN/THWN COPPER, REGARDLESS OF APPLICATION. NO ALUMINUM WIRING SHALL BE USED.
13. FIELD VERIFY EXISTING CONDITIONS AND ADVISE ARCHITECT OF ANY DISCREPANCIES OR DEVIATIONS BETWEEN PLANS AND ACTUAL CONDITIONS PRIOR TO SUBMITTING BID.
14. ALL WIRING SHALL BE IN CONDUIT. NO TYPE 'MC' OR SIMILAR PRE-ASSEMBLED CABLE SHALL BE USED.
15. ALL CONDUIT SHALL BE EMT. FITTINGS SHALL BE COMPRESSION TYPE.
16. RECEPTACLES SHALL BE 20A WHITE SPECIFICATION GRADE HEAVY DUTY FLUSH NYLON FACE, BACK AND SIDE WIRED, HUBBELL HBL5352I OR APPROVED EQUAL BY PASS & SEYMOUR OR LEVITON TO MATCH EXISTING. PROVIDE SUBMITTAL FOR REVIEW.
17. ALL DEVICE BOXES SHALL BE METALLIC.
18. WALL PLATES SHALL BE WHITE HIGH IMPACT SMOOTH NYLON. PROVIDE SUBMITTAL FOR REVIEW.
19. ALL OVERCURRENT DEVICE TERMINATIONS SHALL BE LISTED FOR USE WITH 75' CONDUCTORS.
20. THE CONTRACTOR IS RESPONSIBLE FOR SEALING ALL FIRE RATED PENETRATIONS WHETHER INDICATED OR NOT.
21. IF THE CONTRACTOR BELIEVES THAT THERE ARE CONFLICTS WITHIN THESE ELECTRICAL DRAWINGS OR BETWEEN THE ELECTRICAL DRAWINGS AND THE SPECIFICATIONS, OR BETWEEN THE ELECTRICAL DRAWINGS AND ANY MECHANICAL, ARCHITECTURAL, PLUMBING OR STRUCTURAL DRAWING, BID THE MORE EXPENSIVE OR ELABORATE PROCESS OR PROCEDURE SHOWN AND CALL THE ARCHITECT'S ATTENTION. SHOULD THE CLIENT, IN ITS DISCRETION, CHOOSE TO IMPLEMENT THE CHEAPER OR SIMPLER PROCEDURE AFTER BID OPENING, A CREDIT CHANGE ORDER WILL BE ISSUED BY THE CONTRACTOR.
22. DEVICE MOUNTING HEIGHTS ARE MEASURED FROM FINISHED FLOOR TO CENTER OF BOX.

SUBSTITUTIONS:

WHEN CONTRACTOR CHOOSES TO SUBSTITUTE A DEVICE, COMPONENTS, OR ASSEMBLIES HE SHALL BE FULLY RESPONSIBLE FOR THE FULL COORDINATION OF THE COMPLETED SYSTEM. THIS INCLUDES THE ADDITION OF ANY AND ALL EQUIPMENT MOUNTING, CONDUCTORS, AND RE-ENGINEERING AS NEEDED TO MAKE THE SUBSTITUTED SYSTEM(S) FULLY OPERATIONAL.



NOTE

WHERE LIGHT SWITCHES, RECEPTACLES, TELEPHONE/DATA OUTLETS, DIMMING CONTROL STATIONS, FIRE ALARM PULL STATIONS OR OTHER OPERABLE OUTLET DEVICES OCCUR OVER FIXED OBSTRUCTIONS (SUCH AS CASEWORK, ETC) RESPECTIVE DEVICE MOUNTING HEIGHT LIMITS AFF SHALL BE AS TYPICALLY DEPICTED ABOVE.

1 SWITCH, OUTLET OR OTHER CONTROL DEVICE MOUNTING HEIGHT OVER OBSTRUCTIONS
NO SCALE

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THE PROJECT, THAT I EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

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Stephen J. Kurtzman 09/28/11 09-30-12
Stephen J. Kurtzman 13554 EXPIRES

NOTE

ALL LAMPS INCLUDING SPARES SHALL BE MANUFACTURED BY OSRAM/SYLVANIA, VENTURE, PHILIPS OR G.E. UNLESS SPECIFICALLY NOTED OTHERWISE. WHERE AVAILABLE, ALL FLUORESCENT LAMPS SHALL BE OF THE TYPE THAT PERMITS NON-HAZARDOUS DISPOSAL. ALL LAMPS (INCLUDING SPARES) OF EACH TYPE, STYLE AND WATTAGE SHALL BE FROM ONE (1) SINGLE MANUFACTURING BATCH TO ENSURE UNIFORM VISUAL APPEARANCE WHEN ENERGIZED. LAMPS DIFFERING IN VISUAL APPEARANCE WITH REGARD TO COLOR TEMPERATURE SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

ALTERATIONS: LESS THAN 50 PERCENT OF THE INSTALLED LUMINAIRES ARE BEING REPLACED OR RELOCATED. NO NEW LIGHTING LOAD HAS BEEN ADDED. THEREFORE THIS PROJECT IS EXEMPT FROM COMPLIANCE WITH TITLE 24 SECTIONS 130 (CONTROLS) AND 146 (POWER DENSITY) PER SECTION 149 (B) 111.

LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	MANUFACTURER AND CATALOG NUMBER	LAMPS				FIXTURE		BALLAST TYPE	MOUNTING	DESCRIPTION
		QTY.	TYPE	WATTS	COLOR TEMP.	INPUT VOLTS	TOTAL INPUT WATTS			
(A)	KENALL CDL6HF-1-32P-RS-120-2FV-PAH-CS-U	1	PLT	32	3500K	120	34	ELECTRONIC	RECESSED	6" ROUND WET LOCATION DOWNLIGHT WITH SEALED LENS FLAT WHITE TRIM, CLEAR SPECULAR REFLECTOR AND 0.125" #12 PRISMATIC LENS.
(B)	KENALL SH8-48-2-32-SB-1-120	2	T-8	32	3500K	120	56	ELECTRONIC	SURFACE	CEILING MOUNT 8"WX48"HX2.75"D 0.156" P12 POLYCARBONATE LENS WITH ONE PIECE SEAM WELDED 16-GAUGE HOUSING AND LIFETIME WARRANTY.
(C)	LITHONIA WP-2-32-MVOLT	2	T-8	32	3500K	120	61	ELECTRONIC	SURFACE	WALL MOUNT FOUR FOOT FIXTURE, HIGH IMPACT ACRYLIC LOWER DIFFUSER, ELECTRONIC BALLAST.

NOTE

ALL 4'-0" T8 LAMPS SHALL BE SPECIFICALLY SYLVANIA XPS TYPE #F032/835XPS/ECO WITH A CRI OF 86, 3200 INITIAL LUMENS AND 3040 MEAN LUMENS.

ALL NON-DIMMED 4'-0" FIXTURES SHALL BE PROVIDED WITH THE FOLLOWING LAMP/BALLAST COMBINATIONS:

LAMPS: SYLVANIA #F032/835XPS/ECO AND SYLVANIA BALLASTS AS FOLLOWS:

- 1 LAMP: # QTP1X32T8/UNV PSX F (25 WATTS)
- 2 LAMP: # QTP2X32T8/UNV PSX F (49 WATTS)

THESE COMBINATIONS SHALL PROVIDE 30000 HOUR RATED LAMP LIFE TOGETHER WITH A LIMITED 36 MONTH LAMP WARRANTY AND AN ASSOCIATED 5 YEAR BALLAST WARRANTY. (REFER SYLVANIA QUICK 60+ WARRANTY)

TRUE EQUALS FROM G.E. OFFERING THE SAME OR BETTER WARRANTY, INITIAL LUMENS, AND TOTAL FIXTURE WATTAGE(S) ARE ALSO ACCEPTABLE.

TURPIN & RATTAN
ENGINEERING, INC.
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4719 PALM AVENUE
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619 / 466 / 6224 FAX 466 / 6233
E-MAIL: ENGINEER@TRRSD.COM
TREI # 09006.00
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09/27/11

Platt/Whitelaw Architects, Inc.
4034 30th Street, SAN DIEGO CA 92104
(619) 546-4326 FAX (619) 546-4350

PROJECT VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS

SHEET TITLE: SYMBOLS, ABBREVIATIONS, NOTES, FIXTURE SCHEDULE SHEET NUMBER: E-001 SHEET 43 OF 47

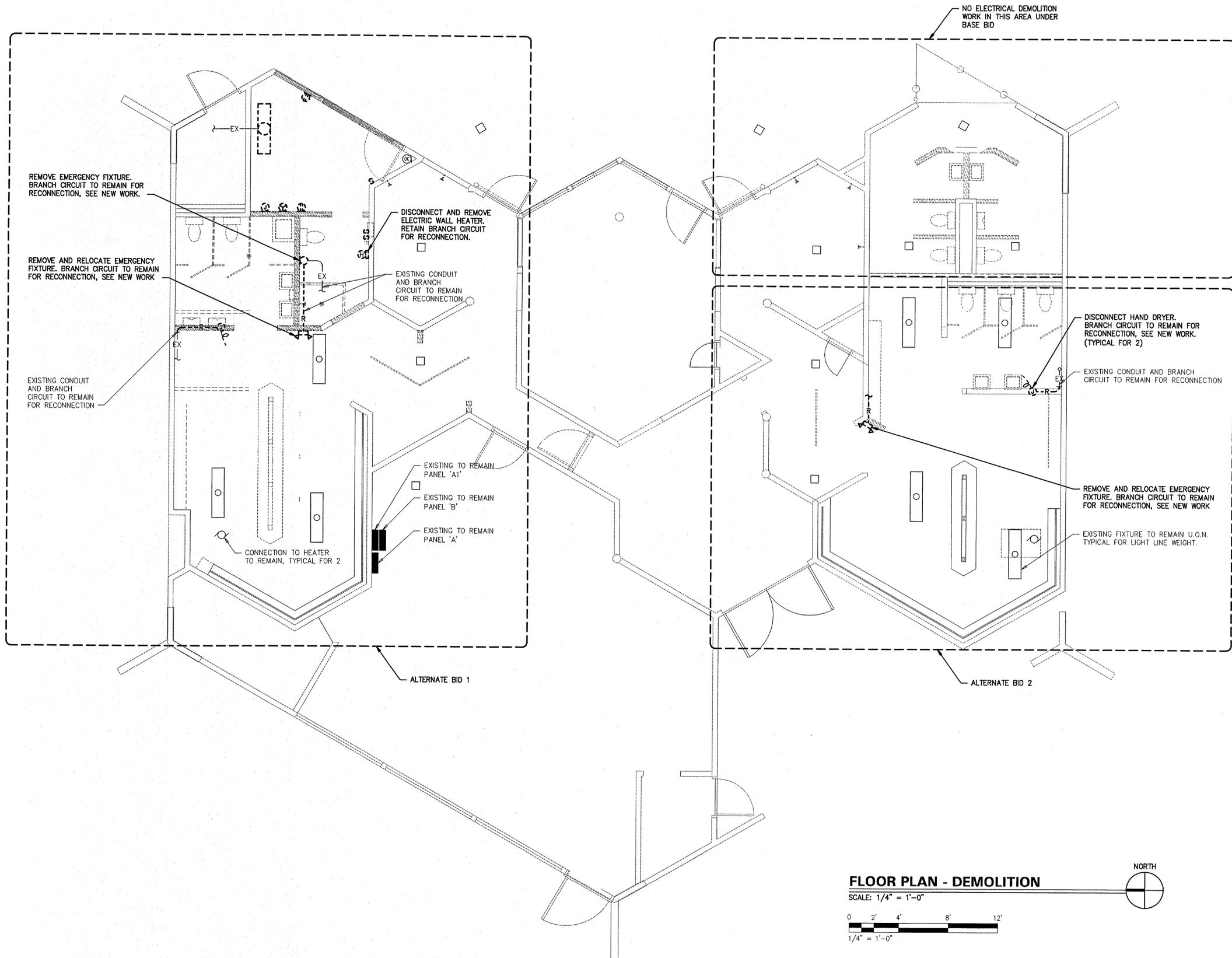
CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT WBS: B-00933

FOR CITY ENGINEER: *[Signature]* DATE: 3/9/12 PROJECT MANAGER: *[Signature]*

CONTRACTOR: _____ DATE STARTED: _____
INSPECTOR: _____ DATE COMPLETED: _____

146-1753
CCS27 COORDINATE
1787-6312
CCS63 COORDINATE
35609-43D

VISTA TERRACE POOL



FLOOR PLAN - DEMOLITION

SCALE: 1/4" = 1'-0"



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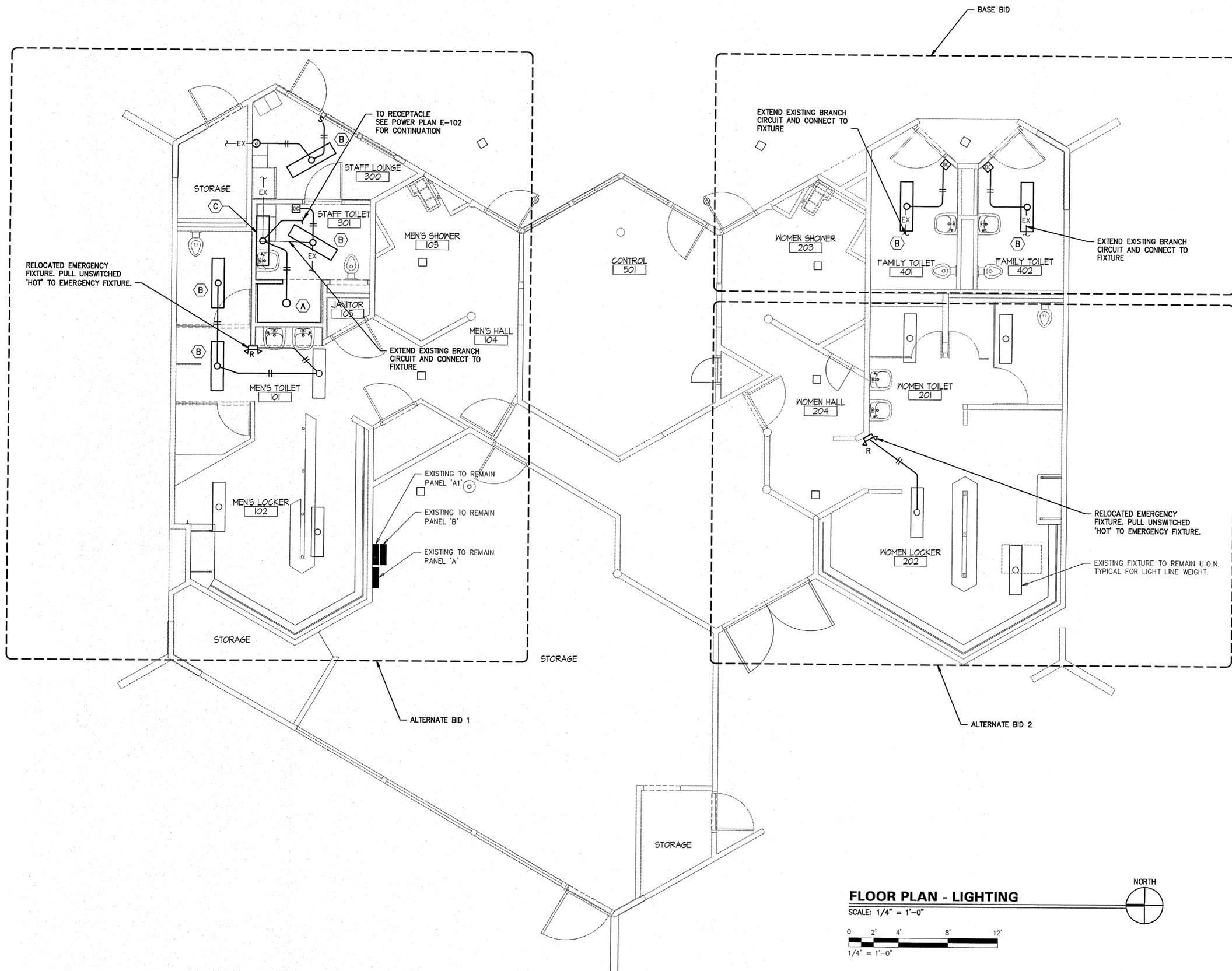
REGISTERED PROFESSIONAL ENGINEER
STEPHEN J. KURTJAN
13554
Exp. 9-30-12

09/27/11

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PROJECT		VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS	
SHEET TITLE:		SHEET NUMBER:	
FLOOR PLAN - DEMOLITION		E-100	
CITY OF SAN DIEGO, CALIFORNIA		SHEET 44 OF 47	
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT		WBS B-00933	
SUBMITTED BY: <i>[Signature]</i> 3/9/12		SUBMITTED BY: <i>[Signature]</i>	
FOR CITY ENGINEER		DATE	
DATE		DATE	
APPROVED		APPROVED	
BY		BY	
DATE		DATE	
SCANNED		SCANNED	
ORIGINAL PERMIT		ORIGINAL PERMIT	
CONTRACTOR		DATE STARTED	
INSPECTOR		DATE COMPLETED	
		146-1753	
		CCS27 COORDINATE	
		1787-6312	
		CCS83 COORDINATE	
		35609.44-D	

VISTA TERRACE POOL



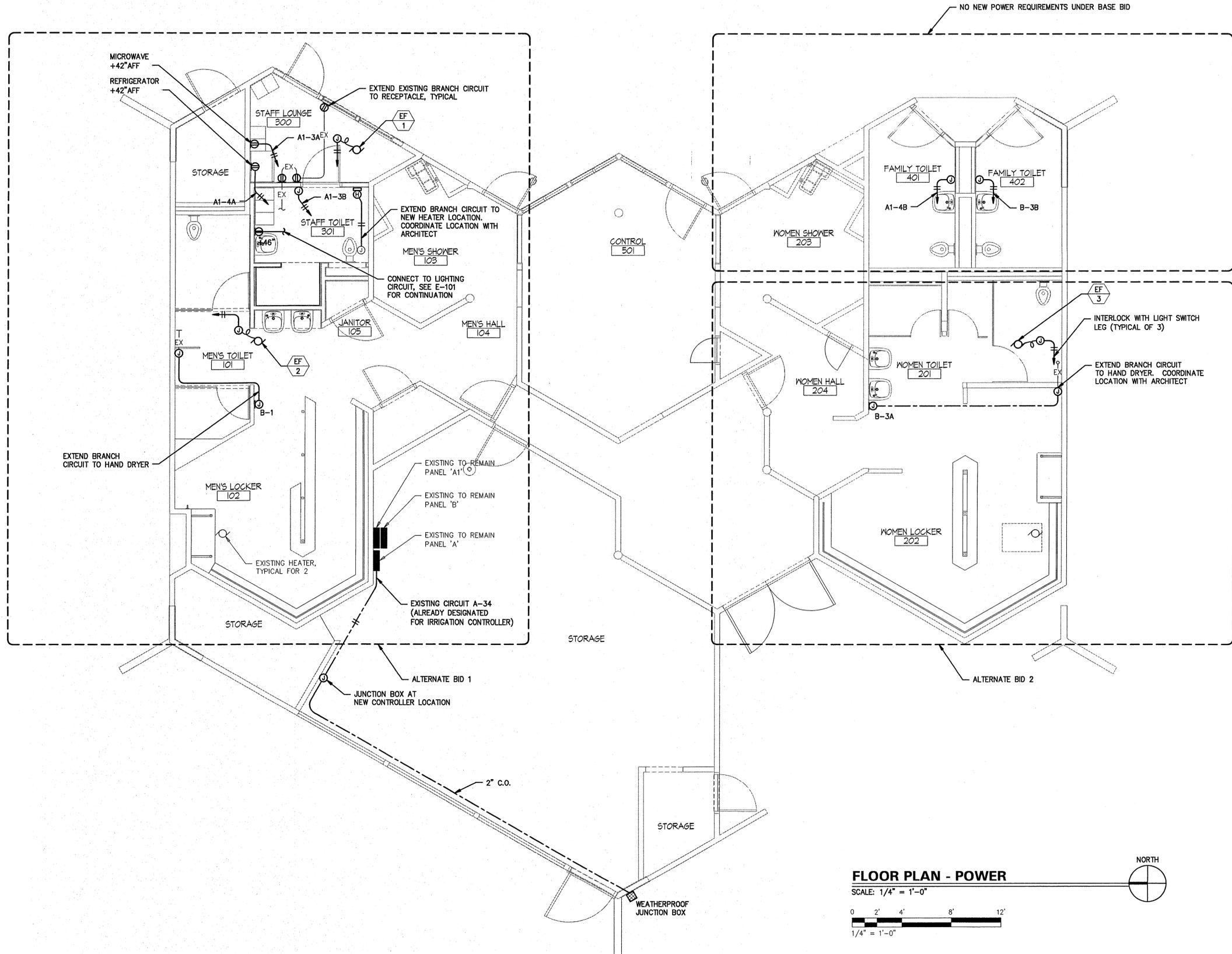
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09/27/11

REGISTERED PROFESSIONAL ENGINEER
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13554
Exp. 9-30-12

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PROJECT VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS					
SHEET TITLE: FLOOR PLAN - LIGHTING	SHEET NUMBER: E-101 SHEET 45 OF 47				
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT					
FOR CITY ENGINEER: <i>[Signature]</i> 3/9/12	WBS: B-00933				
DATE: 3/9/12	PROJECT MANAGER: <i>[Signature]</i>				
DESCRIPTION	BY	APPROVED	DATE	SCANNED	
ORIGINAL PERMIT					
CONTRACTOR		DATE STARTED	DATE COMPLETED		
INSPECTOR		146-1753 CCS27 COORDINATE 1787-6312 CCS83 COORDINATE 35609.45-D			

VISTA TERRACE POOL



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TREI # 09006.00
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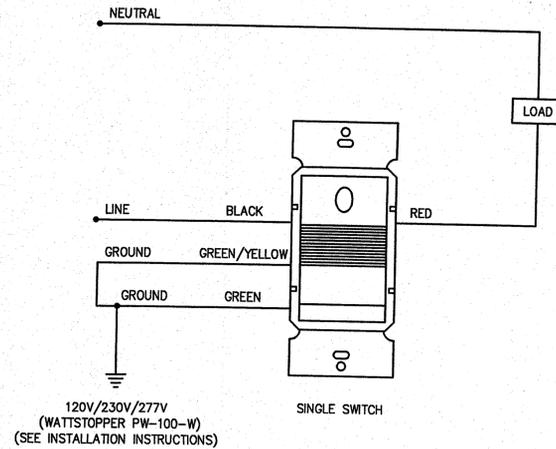
REGISTERED PROFESSIONAL ENGINEER
STEPHEN J. KURTZMAN
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09/27/11

Platt/Whitelaw Architects, Inc.
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PROJECT VISTA TERRACE POOL ACCESSIBILITY IMPROVEMENTS	
SHEET TITLE FLOOR PLAN - POWER	SHEET NUMBER E-102 SHEET 46 OF 47
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT	
WBS B-00933	SUBMITTED BY J. H. H. PROJECT MANAGER
DESCRIPTION	BY
APPROVED	DATE
SCANNED	
ORIGINAL PERMIT	
CONTRACTOR	DATE STARTED
INSPECTOR	DATE COMPLETED
146-1753 CCS27 COORDINATE 1787-6312 CCS83 COORDINATE	35609-46-D

VISTA TERRACE POOL



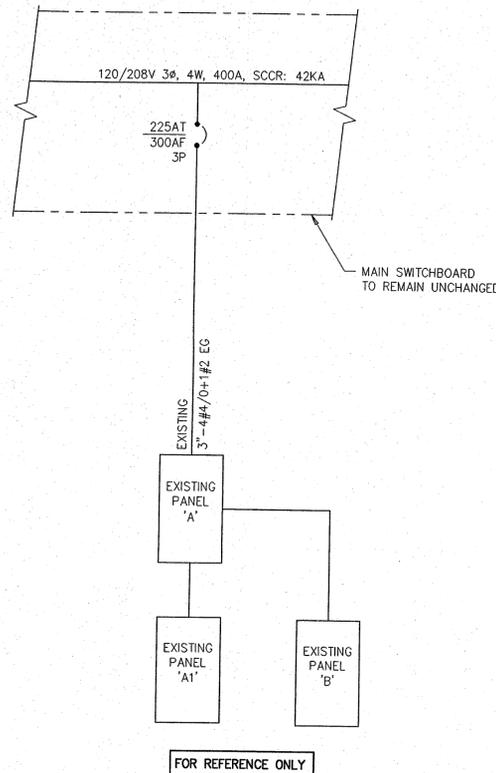
120V/230V/277V
(WATTSTOPPER PW-100-W)
(SEE INSTALLATION INSTRUCTIONS)

SINGLE SWITCH

NOTE

ADJUST FOR 15 MINUTE OFF DELAY.

1 STANDARD OCCUPANCY SENSOR
NO SCALE



EXISTING PARTIAL SINGLE LINE DIAGRAM
NO SCALE

MOUNTING: SURFACE
ENTER CABINET AT: BOTTOM
VOLTAGE: 120/208V 3φ 4W

EXISTING PANEL 'A'

MAIN: M.L.O.
TYPE: BOLT-ON
BUSSING: 225 AMP AIC: 10K

LOCATION	VOLT-AMPERES			L T G	R E C S	M I S	BKR. #	A B C	BKR. #	M I S	R E C S	L T G	VOLT-AMPERES			LOCATION				
	#A	#B	#C										#A	#B	#C					
PANEL A1	8000						100	2	1							EXT. LIS NTH POOL				
		6100						3	4					2100						
SAND BOX LTS			1500				30	2	5						1500	SAND BOX LTS 2				
	1500							7	8							SPACE				
RECEPTACLE			1000				15	3	9						1500	POOL LTS 1				
		1000						11	12						1000	POOL LTS 2				
								13	14							POOL LTS WS				
RAD. HEAT CTL		1560					20	1	15					1500		POOL LTS WD				
EXT. LTS N.L.			1000				20	1	17							OFFICE LTS				
WOMEN DRESS SH LITS	1200						20	1	19					720		OFFICE CLK REC				
SHWR WET/DRY LTS		800					20	1	21						540	EMPLY. LNG REC				
WAITING LTS			950				20	1	23						540	WAITING ROOM				
EXT. CLASS LTS	1600						20	1	25					700		CONTROL SYST.				
DRESS LTG NTH		1200					20	1	27						1000	EMPLY. LNG LTS				
MEN #1 WET/DRY			1200				20	1	29						1000	VENDING MACH.				
MECH/CHOL LTS	1700						20	1	31					1000		POOL BOILER				
PUMP LTS/REC		860					20	1	33					1000		SPRINKLER CNTRL				
T.C. EXT. LTS			1500				20	1	35						1000	DEMEST. DRC. PUMP				
FLD LTS TOP ONL RM	1800						20	1	37						1000	POLE LTS				
SUB PANEL B		3560					70	2	38						1000	EXIT LTS				
			2480						41						300	EXIT/EMERG. LTS				
									42											
SUBTOTAL	16800	15400	9630											7020	8640	7120	SUBTOTAL			
TOTAL VOLT-AMPERES/PHASE													#A= 23820	VA	#B= 24040	VA	#C= 15950	VA		
TOTAL PANEL VOLT-AMPERES:													68810	VA + LCL	7707	VA=	71517	VA	AMPS=	199

MOUNTING: SURFACE
ENTER CABINET AT: SIDE
VOLTAGE: 120/208V 1φ 3W

EXISTING PANEL 'A1'

MAIN: M.L.O.
TYPE: BOLT-ON
BUSSING: 125 AMP AIC: 10K

LOCATION	VOLT-AMPERES		L T G	R E C S	M I S	BKR. #	A B	BKR. #	M I S	R E C S	L T G	VOLT-AMPERES		LOCATION						
	#A	#B										#A	#B							
PUMP	600					20	1	14						800	WATER HEATER					
MICROWAVE		1500				20	1	3A						1500	REFRIGERATOR					
STAFF HANDDRYER	1700					15	1	3B						1700	FAMILY HD					
PARKING LOT W		2400				40	2	5						700	PARKING LOT WEST					
	2400							7						700						
SUBTOTAL	4700	3900												3300	2200	SUBTOTAL				
TOTAL VOLT-AMPERES/PHASE													#A= 8000	VA	#B= 6100	VA				
TOTAL PANEL VOLT-AMPERES:													14100	VA + LCL	2600	VA=	16700	VA	AMPS=	80

* PROVIDE NEW SPLIT BREAKERS IN EXISTING SPACE. BREAKERS MUST MATCH EXISTING MANUFACTURER.

MOUNTING: SURFACE
ENTER CABINET AT: SIDE
VOLTAGE: 120/208V 1φ 3W

EXISTING PANEL 'B'

MAIN: M.L.O.
TYPE: BOLT-ON
BUSSING: 125 AMP AIC: 10K

LOCATION	VOLT-AMPERES		L T G	R E C S	M I S	BKR. #	A B	BKR. #	M I S	R E C S	L T G	VOLT-AMPERES		LOCATION						
	#A	#B										#A	#B							
HAND DRYER MEN	1500					20	1	1						180	TIME CLOCK 2					
HAND DRYER WOMEN		1500				20	1	3A						180	TIME CLOCK 1					
HAND DRYER FAMILY	1700					15	1	3B												
POOL LITES		800				20	1	5						180	CHEMTROL					
SPACE (DO NOT USE)								7							SPACE (DO NOT USE)					
SUBTOTAL	3200	2300												360	180	SUBTOTAL				
TOTAL VOLT-AMPERES/PHASE													#A= 3560	VA	#B= 2480	VA				
TOTAL PANEL VOLT-AMPERES:													6040	VA + LCL	750	VA=	6790	VA	AMPS=	33

* PROVIDE NEW SPLIT BREAKERS IN EXISTING SPACE. BREAKERS MUST MATCH EXISTING MANUFACTURER.

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PROJECT
VISTA TERRACE POOL
ACCESSIBILITY IMPROVEMENTS

SHEET TITLE: SINGLE LINE DIAGRAM, PANEL SCHEDULE, DETAILS
SHEET NUMBER: E-601
SHEET 47 OF 47

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT

WBS: B-00933

DATE: 3/9/12

CONTRACTOR: DATE STARTED: DATE COMPLETED:

INSPECTOR: DATE COMPLETED:

146-1753
CCS27 COORDINATE
1787-6312
CCS83 COORDINATE
35609-47-D

VISTA TERRACE POOL