City

Mr. Mark Atefi, President
Atlas Development
991C Lomas Santa Fe Drive, Suite 115
Solana Beach, CA 92075
P. 619-200-0902 F. 858-350-9337

CONTRACTOR'S NAME:
ADDRESS:
TELEPHONE NO.:
CITY CONTACT: Claudia Abarca, Contract Specialist, Email: Cabarca@sandiego.gov
Phone No. 619-533-3439, Fax No. (619) 533-3633
C.Ritter/NB/egz

ORIGINAL

COPY

CONTRACT DOCUMENTS

FOR

ALLIED GARDENS POOL ADA IMPROVEMENTS

VOLUME 1 OF 2

BID NO.:	L-14-5648-DBB-2-A
SAP NO. (WBS/IO/CC):	B-10167
CLIENT DEPARTMENT:	1714
COUNCIL DISTRICT:	7
PROJECT TYPE:	BE

THIS CONTRACT IS SUBJECT TO THE FOLLOWING:

- THE CITY'S SUBCONTRACTING PARTICIPATION REQUIREMENTS FOR SLBE PROGRAM.
- COMPETITION RESTRICTED TO: SLBE-ELBE ☒ FIRMS ONLY.

PROPOSAL DUE:

1:30 PM
AUGUST 27, 2013
CITY OF SAN DIEGO
PUBLIC WORKS CONTRACTING GROUP
1010 SECOND AVENUE, SUITE 1400, MS 614C
SAN DIEGO, CA 92101

ENGINEER OF WORK

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

7/18/13

For City Engineer — Date — Seal:

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CITY OF SAN DIEGO, CALIFORNIA

NOTICE INVITING BIDS

1. **LIMITED COMPETITION:** This contract may only be bid by the Contractors on the City's approved SLBE-ELBE Construction Contractors List. For information regarding the SLBE-ELBE Construction Program and registration visit the City's web site: http://www.sandiego.gov.

2. **RECEIPT AND OPENING OF BIDS:** Bids will be received at the Public Works Contracting Group at the location, time, and date shown on the cover of these specifications for performing work on **Allied Gardens Pool ADA Improvements** (Project).

3. **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:

ADA/accessibility barrier removal for Allied Gardens pool building, and path of travel improvements.

3.1. The Work shall be performed in accordance with:

3.1.1. This Notice Inviting Bids and Plans numbered **36588-01-D** thru **36588-17-D**, inclusive.

4. **EQUAL OPPORTUNITY**

4.1. To The WHITEBOOK, Chapter 10, Sections D and E, DELETE in their entirety and SUBSTITUTE with the following:

D. CITY'S EQUAL OPPORTUNITY COMMITMENT.

1. Nondiscrimination in Contracting Ordinance.

1. The Contractor, Subcontractors and Suppliers shall comply with requirements of the City's Nondiscrimination in Contracting Ordinance, San Diego Municipal Code §§22.3501 through 22.3517.

   The Contractor shall not discriminate on the basis of race, gender, religion, national origin, ethnicity, sexual orientation, age, or disability in the solicitation, selection, hiring, or treatment of subcontractors, vendors, or suppliers. The Contractor shall provide equal opportunity for subcontractors to participate in subcontracting opportunities. The Contractor understands and agrees that violation of this clause shall be considered a material breach of the contract and may result in contract termination, debarment, or other sanctions.

   The Contractor shall include the foregoing clause in all contracts between the Contractor and Subcontractors and Suppliers.

2. Disclosure of Discrimination Complaints. As part of its Bid or Proposal, the Bidder shall provide to the City a list of all instances within the past 10 years where a complaint was filed or pending

against 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.

3. Upon the City's request, the Contractor agrees to provide to the City, within 60 days, a truthful and complete list of the names of all Subcontractors and Suppliers that the Contractor has used in the past 5 years on any of its contracts that were undertaken within San Diego County, including the total dollar amount paid by the Contractor for each subcontract or supply contract.

4. The Contractor further agrees to fully cooperate in any investigation conducted by the City pursuant to the City's Nondiscrimination in Contracting Ordinance, Municipal Code §§22.3501 through 22.3517. The Contractor understands and agrees that violation of this clause shall be considered a material breach of the Contract and may result in remedies being ordered against the Contractor up to and including contract termination, debarment and other sanctions for violation of the provisions of the Nondiscrimination in Contracting Ordinance. The Contractor further understands and agrees that the procedures, remedies and sanctions provided for in the Nondiscrimination in Contracting Ordinance apply only to violations of the Ordinance.

E. EQUAL EMPLOYMENT OPPORTUNITY OUTREACH PROGRAM.

1. The Contractor, Subcontractors and Suppliers shall comply with the City's Equal Employment Opportunity Outreach Program, San Diego Municipal Code §§22.2701 through 22.2707.

   The Contractor shall not discriminate against any employee or applicant for employment on any basis prohibited by law. Contractor shall provide equal opportunity in all employment practices. Prime Contractor shall ensure their subcontractors comply with this program. Nothing in this section shall be interpreted to hold a prime contractor liable for any discriminatory practice of its subcontractors.

   The Contractor shall include the foregoing clause in all contracts between the Contractor and Subcontractors and Suppliers.

2. If the Contract is competitively solicited, the selected Bidder shall submit a Work Force Report (Form BB05), 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. If a Work Force Report is submitted, and the City determines there are under-representations when compared to County Labor Force Availability data, the selected Bidder shall submit an Equal Employment Opportunity Plan.

4. If the selected Bidder submits an Equal Employment Opportunity Plan, it shall include the following assurances:

1. The Contractor shall maintain a working environment free of discrimination, harassment, intimidation and coercion at all sites and in all facilities at which the Contractor's employees are assigned to work.

2. The Contractor reviews its EEO Policy, at least annually, with all on-site supervisors involved in employment decisions.

3. The Contractor disseminates and reviews its EEO Policy with all employees at least once a year, posts the policy statement and EEO posters on all company bulletin boards and job sites, and documents every dissemination, review and posting with a written record to identify the time, place, employees present, subject matter, and disposition of meetings.

4. The Contractor reviews, at least annually, all supervisors' adherence to and performance under the EEO Policy and maintains written documentation of these reviews.

5. The Contractor discusses its EEO Policy Statement with subcontractors with whom it anticipates doing business, includes the EEO Policy Statement in its subcontracts, and provides such documentation to the City upon request.

6. The Contractor documents and maintains a record of all bid solicitations and outreach efforts to and from subcontractors, contractor associations and other business associations.

7. The Contractor disseminates its EEO Policy externally through various media, including the media of people of color and women, in advertisements to recruit, maintains files documenting these efforts, and provides copies of these advertisements to the City upon request.

8. The Contractor disseminates its EEO Policy to union and community organizations.

9. The Contractor provides immediate written notification to the City when any union referral process has impeded the Contractor's efforts to maintain its EEO Policy.

10. The Contractor maintains a current list of recruitment sources, including those outreaching to people of color and women, and provides written notification of employment opportunities to these recruitment sources with a record of the organizations' responses.

11. The Contractor maintains a current file of names, addresses and phone numbers of each walk-in applicant, including people of color and women, and referrals from unions, recruitment sources, or community organizations with a description of the employment action taken.

12. The Contractor encourages all present employees, including people of color and women employees, to recruit others.

13. The Contractor maintains all employment selection process information with records of all tests and other selection criteria.

14. The Contractor develops and maintains documentation for on-the-job training opportunities, participates in training programs, or both for all of its employees, including people of color and women, and establishes apprenticeship, trainee, and upgrade programs relevant to the Contractor's employment needs.

15. The Contractor conducts, at least annually, an inventory and evaluation of all employees for promotional opportunities and encourages all employees to seek and prepare appropriately for such opportunities.

16. The Contractor ensures the company's working environment and activities are non-segregated except for providing separate or single-user toilets and necessary changing facilities to assure privacy between the sexes.

5. SUBCONTRACTING PARTICIPATION PERCENTAGES.

5.1. The City has incorporated voluntary subcontractor participation percentage to enhance competition and maximize subcontracting opportunities as follows.

5.2. The following voluntary subcontractor participation percentage for DBE, DVBE, WBE, MBE, SLBE, and ELBE certified Subcontractors shall apply to this contract:

Total voluntary subcontractor participation percentage for this project is 16.1%.

6. PRE-BID MEETING:

6.1. There will be a Pre-Bid Meeting to discuss the scope of the Project, bidding requirements, pre-qualification process and Equal Opportunity Contracting Program requirements and reporting procedures in the Public Works Contracting Group, Conference Room at 1010 Second Avenue, Suite 1400, San Diego, CA 92101 at **10:00 AM, on AUGUST 8, 2013.**

6.2. All potential bidders are **encouraged** to attend.

6.3. 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) 533-3450, at least 5 Working Days prior to the Pre-Bid Meeting to ensure availability.

7. CONTRACTOR REGISTRATION AND ELECTRONIC REPORTING SYSTEM:

7.1. **Prior** to the Award of the Contract or each Task Order, you and your Subcontractors and Suppliers **must** register with Prism®, the City's web-based contract compliance portal at:

https://pro.prismcompliance.com/default.aspx.

7.2. The City may not award the contract until registration of all subcontractors and suppliers is complete. In the event this requirement is not met within the time frame specified in the Notice of Intent to Award letter, the City reserves the right to rescind the Notice of Award / Intent to Award and to make the award to the next responsive and responsible bidder / proposer.

8. **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) 533-3450 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:	**11:30 AM**
Date:	**AUGUST 8, 2013**
Location:	**Allied Gardens Pool**
	6707 Glenroy Street
	San Diego, CA 92120

9. **CONSTRUCTION COST:** The City's estimated construction cost for this contract is **$331,000.00**.

10. **LOCATION OF WORK:** The location of the Work is as follows:

Allied Gardens Pool, 6707 Glenroy Street, San Diego, CA 92120

11. **CONTRACT TIME:** The Contract Time for completion of the Work shall be **88 Working Days**.

12. **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.

12.1. The City has determined the following licensing classification for this contract:

- **CLASS B**

13. **JOINT VENTURE CONTRACTORS.** Provide a copy of the Joint Venture agreement and the Joint Venture license to the City within 10 Working Days after receiving the Contract forms. See 2-1.1.2, "Joint Venture Contractors" in The WHITEBOOK for details.

14. **WAGE RATES:** Prevailing wages are not applicable to this contract.

15. **INSURANCE REQUIREMENTS:**

15.1. All certificates of insurance and endorsements required by the contract are to be provided upon issuance of the City's Notice of Intent to Award letter.

15.2. 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.

16. PREQUALIFICATION OF CONTRACTORS:

16.1. Contractors submitting Bid or Proposal must be pre-qualified for the total amount proposed, inclusive of all alternate items or specified Task Order limits prior to the date of 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/cip/bidopps/prequalification.shtml

16.2. 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 - Public Works Contracting Group, Prequalification Program, 1010 Second Avenue, Suite 1400, San Diego, CA 92101. For additional information or the answer to questions about the prequalification program, contact David Stucky at 619-533-3474 or dstucky@sandiego.gov.

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

Title	Edition	Document Number
Standard Specifications for Public Works Construction ("The GREENBOOK")	2012	PITS070112-01
City of San Diego Standard Specifications for Public Works Construction ("The WHITEBOOK")*	2012	PITS070112-02
City of San Diego Standard Drawings*	2012	PITS070112-03
Caltrans Standard Specifications	2010	PITS070112-04
Caltrans Standard Plans	2010	PITS070112-05
California MUTCD	2012	PITS070112-06
City Standard Drawings - Updates Approved For Use*	Varies	Varies
Standard Federal Equal Employment Opportunity Construction Contract Specifications and the Equal Opportunity Clause Dated 09-11-84	1984	769023
NOTE: *Available online under Engineering Documents and References at: http://www.sandiego.gov/publicworks/edocref/index.shtml.		

18. 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.

19. **CITY'S RIGHTS RESERVED:** The City reserves the right to cancel the Invitations to Bid 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 Invitations to Bid shall be the sole responsibility of each bidder. The Invitations to Bid creates or imposes no obligation upon the City to enter a contract.

20. **CONTRACT PRICING FORMAT:** This solicitation is for a Lump Sum and Unit Price contract as set forth in the Bid Proposal Form(s), Volume 2 unless specified otherwise, such as as-needed contracts e.g., JOC in the Contract Documents.

21. **SUBMITTAL OF "OR EQUAL" ITEMS:** See Section 4-1.6, "Trade Names or Equals" in The WHITEBOOK and as amended in the SSP.

22. **AWARD PROCESS:**

22.1. The Award of this contract is contingent upon the Contractor's compliance with all conditions precedent to Award.

22.2. Upon acceptance of a Bid, the City will prepare contract documents for execution within approximately 21 days of the date of the Bid opening and award the Contract approximately within 7 days of receipt of properly executed Contract, bonds, and insurance documents.

22.3. This contract will be deemed executed, and effective, only upon the signing of the Contract by the Mayor or designee of the City.

23. **SUBCONTRACT LIMITATIONS:** The Bidder's attention is directed to Standard Specifications for Public Works Construction, Section 2-3, "SUBCONTRACTS" in The WHITEBOOK and as amended in the SSP which requires the Contractor to self perform the amount therein stipulated. Failure to comply with these requirements may render the Bid **non-responsive** and ineligible for award.

24. **AVAILABILITY OF PLANS AND SPECIFICATIONS:** Contract Documents may be obtained by visiting the City's website: http://www.sandiego.gov/cip/. Plans and Specifications for this contract are also available for review in the office of the City Clerk or Public Works Contracting Group.

25. **QUESTIONS:**

25.1. The Director (or designee), of the Public Works Department is the officer responsible for opening, examining, and evaluating the competitive Bids submitted to the City for the acquisition, construction and completion of any public improvement except when otherwise set forth in these documents. All questions related to this procurement action shall be addressed to the Public Works Contracting Group, Attention Contract Specialist, 1010 Second Avenue, Suite 1400, San Diego, California, 92101, Telephone No. (619) 533-3450.

25.2. Questions received less than 14 days prior to the date for opening of Bids may not be answered.

25.3. Interpretations or clarifications considered necessary by the City in response to such questions will be issued by Addenda which will be uploaded to the City's online bidding service.

25.4. 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.

26. ELIGIBLE BIDDERS: No person, firm, or corporation shall be allowed to make, file, or be interested in **more** than one (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. Any Bidder who submits more than one bid will result in the rejection of all bids submitted.

27. SAN DIEGO BUSINESS TAX CERTIFICATE: The Contractor and 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 and submit to the Contract Specialist upon request or as specified in the Contract Documents. Tax Identification numbers for both the Bidder and the listed Subcontractors must be submitted on the City provided forms with the Notice Inviting Bids and Contract forms.

28. 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.

28.1. Bidder shall complete and submit 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 entire specifications for the bid package do not need to be submitted with the bid.

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

28.3. Bids and certain other forms and documents as specified in the Volume 2 of 2 of the Contract 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.

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

29. BIDDERS' GUARANTEE OF GOOD FAITH (BID SECURITY):

29.1. With the exception of the contracts valued $5,000 or less, JOC 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.

29.2. 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.

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

30. AWARD OF CONTRACT OR REJECTION OF BIDS:

30.1. This contract may be awarded to the lowest responsible and reliable Bidder.

30.2. Bidders shall complete the entire Bid schedule (also referred to as "schedule of prices" or Proposal form). Incomplete price schedules will be rejected as being non-responsive.

30.3. 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.

30.4. 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.

30.5. 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-responsible in accordance with San Diego Municipal Code Chapter 2, § 22.3029, "Protests of Contract Award."

30.6. 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.

30.7. 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 Proposal.

30.8. 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 that will be disclosed in the Volume 2 of 2.

31. BID RESULTS:

31.1. 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: http://www.sandiego.gov/cip/index.shtml, with the name of the newly designated Apparent Low Bidder.

31.2. 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. Bid results cannot be given over the telephone.

32. THE CONTRACT:

32.1. 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 14 days after receipt by Bidder of a form of contract for execution unless an extension of time is granted to the Bidder in writing.

32.2. If the Bidder takes longer than 14 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.

32.3. 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.

32.4. 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 14 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.

32.5. 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.

33. EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE OF WORK: The Bidder shall examine carefully the Project Site, the Plans and Specifications, other materials as described in the Special Provisions, Section 2-7, and the proposal forms (e.g., Bidding Documents). The submission of a Bid 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.

34. CITY STANDARD PROVISIONS. This contract is subject to the following standard provisions. See The WHITEBOOK for details.

34.1. The City of San Diego Resolution No. R-277952 adopted on May 20, 1991 for a Drug-Free Workplace.

34.2. The City of San Diego Resolution No. R-282153 adopted on June 14, 1993 related to the Americans with Disabilities Act.

34.3. The City of San Diego Municipal Code §22.3004 for Pledge of Compliance. The City of San Diego's Labor Compliance Program and the State of California Labor Code §§1771.5(b) and 1776 (Stats. 1978, Ch. 1249).

34.4. Sections 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.

34.5. The City's Equal Benefits Ordinance (EBO), Chapter 2, Article 2, Division 43 of The San Diego Municipal Code (SDMC).

34.6. The City's Information Security Policy (ISP) as defined in the City's Administrative Regulation 90.63.

35. PRE-AWARD ACTIVITIES:

35.1. The selected contractor by the City to execute a contract for this Work 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.**

35.2. If the Bid is rejected as non-responsive, the selected contractor by the City to execute a contract for this Work shall forfeit the required Bid. The decision that the selected contractor by the City to execute a contract for this Work is non-responsive for failure to provide the information required within the time specified shall be at the sole discretion of the City.

36. REQUIRED DOCUMENT SCHEDULE:

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

36.2. The specified Equal Opportunity Contracting Program (EOCP) forms are available for download from the City's web site at:

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

ITEM	WHEN DUE	FROM	DOCUMENT TO BE SUBMITTED
1.	BID SUBMITTAL DATE/TIME	ALL BIDDERS	Bid
2.	BID SUBMITTAL DATE/TIME	ALL BIDDERS	Bid Bond
3.	BID SUBMITTAL 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 SUBMITTAL DATE/TIME	ALL BIDDERS	Contractors Certification of Pending Actions
5.	BID SUBMITTAL DATE/TIME	ALL BIDDERS	Equal Benefits Ordinance Certification of Compliance
6.	BID SUBMITTAL DATE/TIME	ALL BIDDERS	Form AA35 - List of Subcontractors
7.	BID SUBMITTAL DATE/TIME	ALL BIDDERS	Form AA40 - Named Equipment/Material Supplier List
8.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Names of the principal individual owners of the Apparent Low Bidder
9.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	If the Contractor is a Joint Venture: • Joint Venture Agreement • Joint Venture License
10.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Form BB05 - Work Force Report
11.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Contract Forms - Agreement
12.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Contract Forms - Payment and Performance Bond
13.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Certificates of Insurance and Endorsements
14.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Contractor Certification - Drug-Free Workplace
15.	WITHIN 10 WORKING DAYS AFTER RECEIPT BY BIDDER OF CONTRACT FORMS	APPARENT LOW BIDDER	Contractor Certification - American with Disabilities Act

CONTRACT FORMS

AGREEMENT

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 ATLAS DEVELOPMENT, herein called "Contractor" for construction of **Allied Gardens Pool ADA Improvements**; Bid No. **L-14-5648-DBB-2-A**; in the amount of TWO HUNDRED NINETEEN THOUSAND THREE HUNDRED TWENTY FIVE DOLLARS AND ZERO CENTS ($219,325.00), 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) Reference Standards listed in the Notice Inviting Bids and the Supplementary Special Provisions (SSP).

   (d) That certain documents entitled **Allied Gardens Pool ADA Improvements**, on file in the office of the Public Works Department as Document No. **B-10167**, as well as all matters referenced therein.

2. The 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 **Allied Gardens Pool ADA Improvements**, Bid Number **L-14-5648-DBB-2-A,** 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 the 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.

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(1)(d) authorizing such execution.

THE CITY OF SAN DIEGO

By Tony Heinrichs

Print Name: Tony Heinrichs
Director, Department of Public Works

Date: 9/30/13

APPROVED AS TO FORM AND LEGALITY

Jan I. Goldsmith, City Attorney

By Mark M. Mercer

Print Name: Mark M. Mercer
Deputy City Attorney

Date: 10/1/13

CONTRACTOR

By M Atefi

Print Name: Mark Atefi

Title: President

Date: 9/4/13

City of San Diego License No.:

State Contractor's License No.: 858038

CONTRACT/AGREEMENT

ATTACHMENTS

Executed in Triplicate

Bond No. 2115709
Premium:$4,101.00

CONTRACT ATTACHMENT
PERFORMANCE BOND AND LABOR AND MATERIALMEN'S BOND

FAITHFUL PERFORMANCE BOND AND LABOR AND MATERIALMEN'S BOND:

ATLAS DEVELOPMENT, a corporation, as principal, and Great American 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 TWO HUNDRED NINETEEN THOUSAND THREE HUNDRED TWENTY FIVE DOLLARS AND ZERO CENTS ($219,325.00) for the faithful performance of the annexed contract, and in the sum of TWO HUNDRED NINETEEN THOUSAND THREE HUNDRED TWENTY FIVE DOLLARS AND ZERO CENTS ($219,325.00) for the benefit of laborers and materialmen designated below.

Conditions:

If the Principal shall faithfully perform the annexed contract **Allied Gardens Pool ADA Improvements**, Bid Number **L-14-5648-DBB-2-A**, 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 ATTACHMENT (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 September 5, 2013

Approved as to Form and Legality

Jan I. Goldsmith, City Attorney

By _____
Deputy City Attorney

Approved:

By _____
Tony Heinrichs
Director, Department of Public Works

Atlas Development Corporation
Principal

By _____

Mark Atefi
Printed Name of Person Signing for Principal

Great American Insurance Company
Surety

By _____
Tara Bacon, Attorney-in-fact

750 The City Drive South, Suite 470
Local Address of Surety

Orange, CA 92868
Local Address (City, State) of Surety

(714) 740-3117
Local Telephone No. of Surety

Premium $ 4,101.00

Bond No. 2115709

ACKNOWLEDGMENT

State of California
County of San Diego

On September 5, 2013 before me, Maria Hallmark, Notary Public, personally appeared Tara Bacon, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person 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 _____

MARIA HALLMARK
Commission # 1986082
Notary Public - California
San Diego County
My Comm. Expires Aug 22, 2016

(Seal)

GREAT AMERICAN INSURANCE COMPANY®

Administrative Office: 301 E 4TH STREET • CINCINNATI, OHIO 45202 • 513-369-5000 • FAX 513-723-2740

The number of persons authorized by
this power of attorney is not more than FIVE

No. 0 14839

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the GREAT AMERICAN INSURANCE COMPANY, a corporation organized and existing under and by virtue of the laws of the State of Ohio, does hereby nominate, constitute and appoint the person or persons named below, each individually if more than one is named, its true and lawful attorney-in-fact, for it and in its name, place and stead to execute on behalf of the said Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; provided that the liability of the said Company on any such bond, undertaking or contract of suretyship executed under this authority shall not exceed the limit stated below.

Name		Address	Limit of Power
DALE G. HARSHAW	KYLE KING	ALL OF	ALL
GEOFFREY SHELTON	JOHN R. QUALIN	SAN DIEGO,	$75,000,000.00
TARA BACON		CALIFORNIA	

This Power of Attorney revokes all previous powers issued on behalf of the attorney(s)-in-fact named above.

IN WITNESS WHEREOF the GREAT AMERICAN INSURANCE COMPANY has caused these presents to be signed and attested by its appropriate officers and its corporate seal hereunto affixed this 22ND day of APRIL , 2013 .

Attest GREAT AMERICAN INSURANCE COMPANY

Assistant Secretary

Divisional Senior Vice President

DAVID C. KITCHIN (877-377-2405)

STATE OF OHIO, COUNTY OF HAMILTON - ss:

On this 22ND day of APRIL , 2013 , before me personally appeared DAVID C. KITCHIN, to me known, being duly sworn, deposes and says that he resides in Cincinnati, Ohio, that he is a Divisional Senior Vice President of the Bond Division of Great American Insurance Company, the Company described in and which executed the above instrument; that he knows the seal of the said Company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed by authority of his office under the By-Laws of said Company, and that he signed his name thereto by like authority.

KAREN L. GROSHEIM
NOTARY PUBLIC, STATE OF OHIO
MY COMMISSION EXPIRES 02-20-16

This Power of Attorney is granted by authority of the following resolutions adopted by the Board of Directors of Great American Insurance Company by unanimous written consent dated June 9, 2008.

RESOLVED: That the Divisional President, the several Divisional Senior Vice Presidents, Divisional Vice Presidents and Divisonal Assistant Vice Presidents, or any one of them, be and hereby is authorized, from time to time, to appoint one or more Attorneys-in-Fact to execute on behalf of the Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; to prescribe their respective duties and the respective limits of their authority; and to revoke any such appointment at any time.

RESOLVED FURTHER: That the Company seal and the signature of any of the aforesaid officers and any Secretary or Assistant Secretary of the Company may be affixed by facsimile to any power of attorney or certificate of either given for the execution of any bond, undertaking, contract of suretyship, or other written obligation in the nature thereof, such signature and seal when so used being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

CERTIFICATION

I, STEPHEN C. BERAHA, Assistant Secretary of Great American Insurance Company, do hereby certify that the foregoing Power of Attorney and the Resolutions of the Board of Directors of June 9, 2008 have not been revoked and are now in full force and effect.

Signed and sealed this 5th day of September , 2013.

Assistant Secretary

CONTRACTOR CERTIFICATION

DRUG-FREE WORKPLACE

PROJECT TITLE: **Allied Gardens Pool ADA 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;

Atlas Development

(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 M Atefi

Printed Name Mark Atefi

Title President

CONTRACTOR CERTIFICATION

AMERICAN WITH DISABILITIES ACT (ADA) COMPLIANCE CERTIFICATION

PROJECT TITLE: **Allied Gardens Pool ADA 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;

Atlas Development
(Name under which business is conducted)

has in place a 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 M Atefi

Printed Name Mark Atefi

Title President

CONTRACTOR CERTIFICATION

CONTRACTOR STANDARDS – PLEDGE OF COMPLIANCE

PROJECT TITLE: **Allied Gardens Pool ADA Improvements**

I declare under penalty of perjury that I am authorized to make this certification on behalf of Atlas Development, 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 7 Day of September 2013.

Signed M Ath.

Printed Name Mark Atefi

Title President

AFFIDAVIT OF DISPOSAL

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

Allied Gardens Pool ADA Improvements
(Name of Project)

as particularly described in said contract and identified as Bid No. **L-14-5648-DBB-2-A**; SAP No. (WBS/IO/CC) **B-10167**; and **WHEREAS**, the specification 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 _____, _____.

_____ 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)

SUPPLEMENTARY SPECIAL PROVISIONS

The following Supplementary Special Provisions (SSP) modifies the following documents:

1) Standard Specifications for Public Works Construction (The GREENBOOK) currently in effect.

2) The City of San Diego Standard Specifications for Public Works Construction (The WHITEBOOK).

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

1-2 TERMS AND DEFINITIONS.

Normal Working Hours. To the City Supplements, ADD the following:

The Normal Working Hours are 7:00 AM to 3:00 PM. See Appendix G.

SECTION 2 – SCOPE AND CONTROL OF WORK

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

1. You must perform, with your own organization, Contract work amounting to at least 50% 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 award.

2. The self performance percentage requirement will be waived for contracts when a "B" License is required or allowed.

2-9.2 Survey Service. 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.

SECTION 4 – CONTROL OF MATERIALS

4-1.6 Trade Names or Equals. ADD the following:

You must submit your list of proposed substitutions for "an equal" ("or equal") item(s) **no less than 15 Working Days prior to Bid due date** and on a City form when provided by the City.

SECTION 6 – PROSECUTION, PROGRESS, AND ACCEPTANCE OF WORK

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

Construction shall start after September 30, 2013

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 the Contract.

7-3.1 Policies and Procedures.

1. You must procure the insurance described below, at its 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.

2. Insurance coverage for property damage resulting from your operations is on a replacement cost valuation. The market value will not be accepted.

3. 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 the Contract, e.g., your indemnity obligations, is not deemed limited to the insurance coverage required by this contract.

4. 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.

5. 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 the Contract. Your failure to maintain or renew coverage or to provide evidence of renewal during the term of the Contract may be treated by the City as a material breach of the Contract.

7-3.2 Types of Insurance.

7-3.2.1 Commercial General Liability Insurance.

1. 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.

2. 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).

3. 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.

4. All costs of defense must be outside the policy limits. Policy coverage must be in liability limits of not less than the following:

General Annual Aggregate Limit	Limits of Liability
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.

1. 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").

2. All costs of defense must be outside the limits of the policy.

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 Approved Surplus Lines Insurers (LASLI 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.

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.

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.

c) 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.

d) 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 your 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.

7-3.6 **Deductibles and Self-Insured Retentions.** You must pay for all deductibles and self-insured retentions. You must disclose deductibles and self-insured retentions to the City at the time the evidence of insurance is provided.

7-3.7 **Reservation of Rights.** The City reserves 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. The City 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.

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.

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.

1. In accordance with the provisions of §3700 of the California Labor Code, you must provide at your 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.

2. Limits for this insurance must be not less than the following:

Workers' Compensation	Statutory Employers Liability
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

3. By signing and returning the 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 must 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.

7-8.6 Water Pollution Control. ADD the following:

Based on a preliminary assessment by the City, the Contract is subject to WPCP

7-15 INDEMNIFICATION AND HOLD HARMLESS AGREEMENT. To the City Supplements, fourth paragraph, last sentence, DELETE in its entirety and SUBSTITUTE with the following:

Your duty to indemnify and hold harmless does not include any claims or liability arising from the established active or sole negligence, or willful misconduct of the City, its officers, or employees.

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)

SUPPLEMENTARY SPECIAL PROVISIONS

APPENDICES

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.: B –10167. 02.06 PROJECT TITLE: **ALLIED GARDENS SWIMMING POOL ADA UPGRADES**

PROJECT LOCATION-SPECIFIC: The project site is located at 6707 Glenroy Street within the Navajo Community Planning area.

PROJECT LOCATION-CITY/COUNTY: San Diego -San Diego

DESCRIPTION OF NATURE AND PURPOSE OF THE PROJECT: **ALLIED GARDENS SWIMMING POOL ADA UPGRADES**
The project involves providing accessible paths of travel, replacing existing ramps with ADA compliant ramps, and upgrading of existing parking, restrooms, drinking fountain, counters and offices to comply with ADA requirements.

NAME OF PUBLIC AGENCY APPROVING PROJECT: City of San Diego

NAME OF PERSON OR AGENCY CARRYING OUT PROJECT: Clark Ritter, Public Works Department/ Engineering and Capital Projects
600 B Street, San Diego, CA 92101
Phone: 619-533-4601

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- Existing Facilities, 15303- New Construction or Conversion of Small Structures,
( ) STATUTORY EXEMPTIONS:

REASONS WHY PROJECT IS EXEMPT: The City of San Diego conducted an environmental review which determined that since the project is located at an existing community pool it will not result in any significant environmental impacts. Furthermore, the project meets the criteria set forth in CEQA Section 15301 which allows for the operation, repair maintenance, or minor alteration of existing public or private structures, facilities and 15303 which allows for New Construction or conversion of small structures for utilities/facilities and where the exception listed in CEQA section 15300.2 would not apply.

LEAD AGENCY CONTACT PERSON: Myra Herrmann TELEPHONE: (619) 446-5372

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

Myra L Herrmann, SENIOR PLANNER
SIGNATURE/TITLE

August 21, 2012
DATE

CHECK ONE:
(X) SIGNED BY LEAD AGENCY
( ) SIGNED BY APPLICANT

DATE RECEIVED FOR FILING WITH COUNTY CLERK OR OPR:

Revised August 21, 2012mjh

APPENDIX B

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.)

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.

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.

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.

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

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

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

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.

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. Theses 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.

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).

Larry Gardner
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)

City of San Diego PUBLIC UTILITIES Water & Wastewater

(For Office Use Only)

NS REQ	FAC#
DATE	BY

METER SHOP (619) 527-7449

Application Date	Requested Install Date:

Meter Information

Fire Hydrant Location: (Attach Detailed Map//Thomas Bros. Map Location or Construction drawing.) Zip:	T.B.	G.B. (CITY USE)
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:	Phone: ( )
*Business license#	*Contractor license#		
A Copy of the Contractor's license OR Business License is required at the time of meter issuance.			
Name and Title of Billing Agent: (PERSON IN ACCOUNTS PAYABLE)			Phone: ( )
Site Contact Name and Title:			Phone: ( )
Responsible Party Name:			Title:
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	Requested Removal Date:	
Provide Current Meter Location if Different from Above:		
Signature:	Title:	Date:
Phone: ( )	Pager: ( )	

☐ City Meter	☐ Private Meter		
Contract Acct #:	Deposit Amount: $ 936.00	Fees Amount: $ 62.00	
Meter Serial #	Meter Size: 05	Meter Make and Style: 6-7	
Backflow #	Backflow Size:	Backflow Make and Style:	
Name:	Signature:	Date:	

WATER USES WITHOUT ANTICIPATED CHARGES FOR 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 Seeing
Irrigation (for establishing irrigation only; not continuing irrigation)
Mixing Concrete
Mobile Car Washing
Special Events
Street Sweeping
Water Tanks
Water Trucks
Window Washing

Note:

1. If there is any return to sewer or storm drain, then sewer and/or storm drain fees will be charges.

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 contact the Water Department, or mail your request for an extension to:

City of San Diego
Water Department
Attention: Meter Services
2797 Caminito Chollas
San Diego, CA 92105-5097

Should you have any questions regarding this matter, please call the Fire Hydrant Hotline at (619)_____-_____.

Sincerely,

Water Department

APPENDIX C

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

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

Hydrostatic Discharge Form

APPENDIX

Hydrostatic Discharge Requirements Certification (Discharge Events < 500,000 gpd)

All discharge activities related to this project comply with the Regional Water Quality Control Board (RWQCB) Order No. 2002-0020, General Permit for Discharges of Hydrostatic Test Water and Potable Water to Surface Water and Storm Drains as referenced by (http://www.swrcb.ca.gov/rwqcb9/board_decisions/adopted_orders/2002/2002_0020.shtml), and as follows:

Discharged water has been dechlorinated to below **0.1** *(mg/l)* level; and effluent has been maintained between **6** and **9** *(PH)* based on:							***is discharge within acceptable limits?***		***Comment***
Event #	**Discharge Date & Amount (GAL)**	**Discharge Time**	**Meter Readings (at source)**	**Test Results (Chlorine / PH)**	**Name of Personnel Conducting Tests (print)**	***signature of personnel**	***yes***	***no***	
	Date	Start:	Start:						
	Amt:	End:	End:						
	Date	Start:	Start:						
	Amt:	End:	End:						
	Date	Start:	Start:						
	Amt:	End:	End:						
	Date	Start:	Start:						
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	Date	Start:	Start:						
	Amt:	End:	End:						
	Date	Start:	Start:						
	Amt:	End:	End:						

***By signing, I certify that all of the statements and conditions for hydrostatic discharge events are correct.**

Project Name: ____ ***Work Order No.(s):***________________________

Have any thresholds have been exceeded? Per Order No. 2002-0020, would this be a reportable discharge and must be reported **within 24 hours** of the event? [Reportable discharge would include violation of maximum gallons per day, any upset which exceeds any effluent limit]

APPENDIX F

Hazardous Labels/Forms

INCIDENT/RELEASE ASSESSMENT FORM [1]

If you have an emergency, Call 911

Handlers of hazardous materials are required to report releases. The following is a tool to be used for assessing if a release is reportable. Additionally, a non-reportable release incident form is provided to document why a release is not reported (see back).

Questions for Incident Assessment:	YES	NO
1. Was anyone killed or injured, or did they require medical care or admitted to a hospital for observation?	❒	❒
2. Did anyone, other than employees in the immediate area of the release, evacuate?	❒	❒
3. Did the release cause off-site damage to public or private property?	❒	❒
4. Is the release greater than or equal to a reportable quantity (RQ)?	❒	❒
5. Was there an uncontrolled or unpermitted release to the air?	❒	❒
6. Did an uncontrolled or unpermitted release escape secondary containment, or extend into any sewers, storm water conveyance systems, utility vaults and conduits, wetlands, waterways, public roads, or off site?	❒	❒
7. Will control, containment, decontamination, and/or clean up require the assistance of federal, state, county, or municipal response elements?	❒	❒
8. Was the release or threatened release involving an unknown material or contains an unknown hazardous constituent?	❒	❒
9. Is the incident a threatened release (a condition creating a substantial probability of harm that requires immediate action to prevent, reduce, or mitigate damages to persons, property, or the environment)?	❒	❒
10. Is there an increased potential for secondary effects including fire, explosion, line rupture, equipment failure, or other outcomes that may endanger or cause exposure to employees, the general public, or the environment?	❒	❒

If the answer is YES to any of the above questions – report the release to the California Office of Emergency Services at 800-852-7550 and the local CUPA daytime: (619) 338-2284, after hours: (858) 565-5255. Note: other state and federal agencies may require notification depending on the circumstances.

Call 911 in an emergency

If all answers are NO, complete a Non Reportable Release Incident Form (page 2 of 2) and keep readily available. Documenting why a "no" response was made to each question will serve useful in the event questions are asked in the future, and to justify not reporting to an outside regulatory agency.

If in doubt, report the release.

[1] This document is a guide for accessing when hazardous materials release reporting is required by Chapter 6.95 of the California Health and Safety Code. It does not replace good judgment, Chapter 6.95, or other state or federal release reporting requirements.

NON REPORTABLE RELEASE INCIDENT FORM

1. RELEASE AND RESPONSE DESCRIPTION Incident #_____

Date/Time Discovered	Date/Time Discharge	Discharge Stopped ☐ Yes ☐ No
Incident Date / Time:		
Incident Business / Site Name:		
Incident Address:		
Other Locators (Bldg, Room, Oil Field, Lease, Well #, GIS)		
Please describe the incident and indicate specific causes and area affected. Photos Attached?: ☐Yes ☐No		
Indicate actions to be taken to prevent similar releases from occurring in the future.		

2. ADMINISTRATIVE INFORMATION

Supervisor in charge at time of incident:	Phone:
Contact Person:	Phone:

3. CHEMICAL INFORMATION

Chemical	Quantity ☐ GAL ☐ LBS ☐ FT^3
Chemical	Quantity ☐ GAL ☐ LBS ☐ FT^3
Chemical	Quantity ☐ GAL ☐ LBS ☐ FT^3
Clean-Up Procedures & Timeline:	
Completed By:	Phone:
Print Name:	Title:

EMERGENCY RELEASE FOLLOW - UP NOTICE REPORTING FORM

A

BUSINESS NAME	FACILITY EMERGENCY CONTACT & PHONE NUMBER ( ) -

B

INCIDENT DATE MO DAY YR	TIME OES NOTIFIED (use 24 hr time)	OES CONTROL NO.

C

INCIDENT ADDRESS LOCATION	CITY / COMMUNITY	COUNTY ZIP

D

CHEMICAL OR TRADE NAME (print or type)	CAS Number

CHECK IF CHEMICAL IS LISTED IN 40 CFR 355, APPENDIX A ☐	CHECK IF RELEASE REQUIRES NOTIFI - CATION UNDER 42 U.S.C. Section 9603 (a) ☐

PHYSICAL STATE CONTAINED ☐ SOLID ☐ LIQUID ☐ GAS	PHYSICAL STATE RELEASED ☐ SOLID ☐ LIQUID ☐ GAS	QUANTITY RELEASED

ENVIRONMENTAL CONTAMINATION ☐ AIR ☐ WATER ☐ GROUND ☐ OTHER	TIME OF RELEASE	DURATION OF RELEASE ___DAYS ___HOURS ___MINUTES

E

ACTIONS TAKEN

F

KNOWN OR ANTICIPATED HEALTH EFFECTS (Use the comments section for addition information)

☐ ACUTE OR IMMEDIATE (explain) _____

☐ CHRONIC OR DELAYED (explain) _____

☐ NOTKNOWN (explain)

G

ADVICE REGARDING MEDICAL ATTENTION NECESSARY FOR EXPOSED INDIVIDUALS

H

COMMENTS (INDICATE SECTION (A - G) AND ITEM WITH COMMENTS OR ADDITIONAL INFORMATION)

I

CERTIFICATION: I certify under penalty of law that I have personally examined and I am familiar with the information submitted and believe the submitted information is true, accurate, and complete.

REPORTING FACILITY REPRESENTATIVE (print or type) _____

SIGNATURE OF REPORTING FACILITY REPRESENTATIVE _____ DATE: _____

EMERGENCY RELEASE FOLLOW-UP NOTICE
REPORTING FORM INSTRUCTIONS

GENERAL INFORMATION:

Chapter 6.95 of Division 20 of the California Health and Safety Code requires that written emergency release follow-up notices prepared pursuant to 42 U.S.C. § 11004, be submitted using this reporting form. Non-permitted releases of reportable quantities of Extremely Hazardous Substances (listed in 40 CFR 355, appendix A) or of chemicals that require release reporting under section 103(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 [42 U.S.C. § 9603(a)] must be reported on the form, as soon as practicable, but no later than 30 days, following a release. The written follow-up report is required in addition to the verbal notification.

BASIC INSTRUCTIONS:

- The form, when filled out, reports follow-up information required by 42 U.S.C § 11004. Ensure that all information requested by the form is provided as completely as possible.
- If the incident involves reportable releases of more than one chemical, prepare one report form for each chemical released.
- If the incident involves a series of separate releases of chemical(s) at different times, the releases should be reported on separate reporting forms.

SPECIFIC INSTRUCTIONS:

Block A: Enter the name of the business and the name and phone number of a contact person who can provide detailed facility information concerning the release.

Block B: Enter the date of the incident and the time that verbal notification was made to OES. The OES control number is provided to the caller by OES at the time verbal notification is made. Enter this control number in the space provided.

Block C: Provide information pertaining to the location where the release occurred. Include the street address, the city or community, the county and the zip code.

Block D: Provide information concerning the specific chemical that was released. Include the chemical or trade name and the Chemical Abstract Service (CAS) number. Check all categories that apply. Provide best available information on quantity, time and duration of the release.

Block E: Indicate all actions taken to respond to and contain the release as specified in 42 U.S.C. § 11004(c).

Block F: Check the categories that apply to the health effects that occurred or could result from the release. Provide an explanation or description of the effects in the space provided. Use Block H for additional comments/information if necessary to meet requirements specified in 42 U.S.C. § 11004(c).

Block G: Include information on the type of medical attention required for exposure to the chemical released. Indicate when and how this information was made available to individuals exposed and to medical personnel, if appropriate for the incident, as specified in 42 U.S.C. § 11004(c).

Block H: List any additional pertinent information.

Block I: Print or type the name of the facility representative submitting the report. Include the official signature and the date that the form was prepared.

MAIL THE COMPLETED REPORT TO:

State Emergency Response Commission (SERC)
Attn: Section 304 Reports
Hazardous Materials Unit
3650 Schriever Avenue
Mather, CA 95655

NOTE: Authority cited: Sections 25503, 25503.1 and 25507.1, Health and Safety Code. Reference: Sections 25503(b)(4), 25503.1, 25507.1, 25518 and 25520, Health and Safety Code.

APPENDIX G

Technical Specifications

ALLIED GARDENS POOL ADA IMPROVEMENTS
TECHNICAL SPECIFICATIONS

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Access to site.
4. Coordination with occupants.
5. Work restrictions.
6. Specification and drawing conventions.
7. Miscellaneous provisions.

1.2 PROJECT INFORMATION

A. Project Identification: Allied Gardens Pool ADA Improvements.

1. Project Location: 6707 Glenroy Street, San Diego, CA 92120.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:

1. Voluntary barrier removal improvements to the existing Pool Facility including but not limited to parking, path of travel, restrooms, doors and signage.

1.4 ACCESS TO SITE

A. General: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.

B. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

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

a. Schedule deliveries to minimize use of driveways and entrances by construction operations.

b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

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

1.5 COORDINATION WITH OCCUPANTS

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

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.

2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

1.6 WORK RESTRICTIONS

A. Work Restrictions, General: Comply with restrictions on construction operations.

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

B. On-Site Work Hours: Limit work in the existing building to normal business working hours of 7 a.m. to 3 p.m., Monday through Friday, unless otherwise indicated.

1. Weekend Hours: Only with approval of Resident Engineer.

2. Early Morning Hours: Only with approval of Resident Engineer.

3. Hours for Utility Shutdowns: Coordinate with Resident Engineer.

4. Hours for Demolition or noisy activity: Coordinate with Resident Engineer.

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

1. Notify Resident Engineer not less than two days in advance of proposed utility interruptions.

2. Obtain Resident Engineer’s written permission before proceeding with utility interruptions.

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

1. Notify Resident Engineer not less than two days in advance of proposed disruptive operations.

2. Obtain Resident Engineer’s written permission before proceeding with disruptive operations.

E. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor-air intakes.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

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

1. Construction layout.
2. Field engineering and surveying.
3. Installation of the Work.
4. Cutting and patching.
5. Progress cleaning.
6. Starting and adjusting.
7. Protection of installed construction.
8. Correction of the Work.

B. Related Requirements:

1. Section 011000 "Summary" for limits on use of Project site.
2. Section 024119 "Selective Structure Demolition" for demolition and removal of selected portions of the building.

1.2 DEFINITIONS

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

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

1.3 QUALITY ASSURANCE

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

1. Structural Elements: When cutting and patching structural elements, notify Resident Engineer of locations and details of cutting and await directions from Resident Engineer before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection
2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operational elements include the following:
    a. Primary operational systems and equipment.
    b. Fire-suppression systems.
    c. Mechanical systems piping and ducts.
    d. Control systems.

e. Communication systems.

f. Fire-detection and -alarm systems.

g. Electrical wiring systems.

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

PART 2 - PRODUCTS

2.1 MATERIALS

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

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

PART 3 - EXECUTION

3.1 EXAMINATION

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.

1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.

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

1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.

2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.

3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

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

3.2 PREPARATION

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

B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, notify the Resident Engineer

3.3 CONSTRUCTION LAYOUT

A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Resident Engineer promptly.

B. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.

3.4 INSTALLATION

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

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

2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.

3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.

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

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

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

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

F. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

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

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

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Resident Engineer.

2. Allow for building movement, including thermal expansion and contraction.

3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

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

J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.5 CUTTING AND PATCHING

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

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

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

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

D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

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

F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.

G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.

1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.

3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.

4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.

5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.

6. Proceed with patching after construction operations requiring cutting are complete.

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

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.

2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.

    a. Clean piping, conduit, and similar features before applying paint or other finishing materials.

    b. Restore damaged pipe covering to its original condition.

3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.

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

4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.

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

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

3.6 PROGRESS CLEANING

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

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.

2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.

3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

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

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

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

1. Remove liquid spills promptly.

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

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

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

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

G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways.

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

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

3.7 PROTECTION OF INSTALLED CONSTRUCTION

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

END OF SECTION 017300

SECTION 024119 - SELECTIVE STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure.

2. Demolition and removal of selected site elements.

B. Related Requirements:

1. Division 31 Section "Site Clearing" for site clearing and removal of above- and below-grade improvements.

1.2 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.

1.3 MATERIALS OWNERSHIP

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

1.4 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.

1.5 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. Predemolition Photographs or Video: Submit before Work begins.

1.6 FIELD CONDITIONS

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

B. Notify Resident Engineer of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

C. 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. Hazardous materials will be removed by Owner under a separate contract.

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

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

PART 2 - PRODUCTS

2.1 PEFORMANCE 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 3 - EXECUTION

3.1 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.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

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

1. Comply with requirements for existing services/systems interruptions specified in Division 01 Section "Summary."

3.3 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. Provide temporary enclosures, and dust control, heating.

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

Retain first two subparagraphs below if required. Revise construction to a fire-rated partition if necessary.

Retain first subparagraph below if containment of airborne particles and dust generated by construction activities is critical to occupants of other spaces in building, e.g., occupied healthcare facilities.

1. Construct dustproof partitions with two layers of 6-mil polyethylene sheet on each side. Cover floor with two layers of 6-mil polyethylene sheet, extending sheets 18 inches up the sidewalls. Overlap and tape full length of joints. Cover floor with fire-retardant-treated plywood.

2. Insulate partitions to control noise transmission to occupied areas.

3. Protect air-handling equipment.

4. Provide walk-off mats at each entrance through temporary partition.

3.4 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.

3.5 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.

3.6 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 033053 - MISCELLANEOUS CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes cast-in-place concrete, including reinforcement, concrete materials, mixture design, placement procedures, and finishes.

B. Related Sections:

1. Division 32 Section "Concrete Paving" for concrete pavement and walks.

1.3 ACTION SUBMITTALS

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

B. Other Action Submittal:

1. Design Mixtures: For each concrete mixture.

1.4 QUALITY ASSURANCE

A. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

B. Comply with the following sections of ACI 301, unless modified by requirements in the Contract Documents:

1. "General Requirements."
2. "Formwork and Formwork Accessories."
3. "Reinforcement and Reinforcement Supports."
4. "Concrete Mixtures."
5. "Handling, Placing, and Constructing."

C. Comply with ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

PART 2 - PRODUCTS

2.1 FORMWORK

A. Furnish formwork and formwork accessories according to ACI 301.

2.2 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.

B. Plain-Steel Wire: ASTM A 82/A 82M, as drawn.

C. Plain-Steel Welded Wire Reinforcement: ASTM A 185/A 185M, fabricated from as-drawn steel wire into flat sheets.

D. Deformed-Steel Welded Wire Reinforcement: ASTM A 497/A 497M, flat sheet.

2.3 CONCRETE MATERIALS

A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source throughout Project:

1. Portland Cement: ASTM C 150, Type II.

B. Normal-Weight Aggregate: ASTM C 33, graded, 1inch nominal maximum aggregate size.

C. Water: ASTM C 94/C 94M.

2.4 ADMIXTURES

A. Air-Entraining Admixture: ASTM C 260.

B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.

2. Retarding Admixture: ASTM C 494/C 494M, Type B.

3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.

2.5 RELATED MATERIALS

A. Vapor Retarder: Plastic sheet, ASTM E 1745, Class A or B.

B. Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber, or ASTM D 1752, cork or self-expanding cork.

2.6 CURING MATERIALS

A. Evaporation Retarder: Waterborne, monomolecular film forming; manufactured for application to fresh concrete.

B. Absorptive Cover: AASHTO M 182, Class 3, burlap cloth or cotton mats.

C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

D. Water: Potable.

2.7 CONCRETE MIXTURES

A. Comply with ACI 301 requirements for concrete mixtures.

B. Normal-Weight Concrete: Prepare design mixes, proportioned according to ACI 301, as follows:

1. Minimum Compressive Strength: 3000 psi at 28 days.

2. Slump Limit: 4 inches, plus or minus 1 inch.

3. Air Content: Maintain within range permitted by ACI 301. Do not allow air content of trowel-finished floor slabs to exceed 3 percent.

2.8 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M, and furnish batch ticket information.

1. When air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

B. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Mix concrete materials in appropriate drum-type batch machine mixer.

1. For mixer capacity of 1 cu. yd. or smaller, continue mixing at least 1-1/2 minutes, but not more than 5 minutes after ingredients are in mixer, before any part of batch is released.

2. For mixer capacity larger than 1 cu. yd, increase mixing time by 15 seconds for each additional 1 cu. yd..

3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mix type, mix time, quantity, and amount of water added. Record approximate location of final deposit in structure.

PART 3 - EXECUTION

3.1 FORMWORK

A. Design, construct, erect, brace, and maintain formwork according to ACI 301.

3.2 EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining work attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

3.3 VAPOR RETARDERS

A. Install, protect, and repair vapor retarders according to ASTM E 1643; place sheets in position with longest dimension parallel with direction of pour.

1. Lap joints 6 inches and seal with manufacturer's recommended adhesive or joint tape.

3.4 STEEL REINFORCEMENT

A. Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

3.5 JOINTS

A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.

B. Construction Joints: Locate and install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Resident Engineer.

C. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness, as follows:

1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint with groover tool to a radius of 1/8 inch. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover marks on concrete surfaces.

2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.

D. Isolation Joints: Install joint-filler strips at junctions with slabs-on-grade and vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.

1. Extend joint fillers full width and depth of joint, terminating flush with finished concrete surface, unless otherwise indicated.

3.6 CONCRETE PLACEMENT

A. Comply with ACI 301 for placing concrete.

B. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301.

C. Do not add water to concrete during delivery, at Project site, or during placement.

D. Consolidate concrete with mechanical vibrating equipment.

3.7 FINISHING UNFORMED SURFACES

A. General: Comply with ACI 302.1R for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Screed surfaces with a straightedge and strike off. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane before excess moisture or bleedwater appears on surface.

1. Do not further disturb surfaces before starting finishing operations.

C. Nonslip Broom Finish: Apply a nonslip broom finish to surfaces indicated and to exterior concrete platforms, steps, and ramps. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route.

3.8 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and with ACI 301 for hot-weather protection during curing.

B. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

C. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.

D. Curing Methods: Cure formed and unformed concrete for at least seven days by one or a combination of the following methods:

1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:

a. Water.

b. Continuous water-fog spray.

c. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.

2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

3.9 FIELD QUALITY CONTROL

A. Testing Agency: Contractor will engage a qualified testing agency to perform tests and inspections.

B. Tests: Perform according to ACI 301.

1. Testing Frequency: One composite sample shall be obtained for each 100 cu. yd. or fraction thereof of each concrete mix placed each day.

3.10 REPAIRS

A. Remove and replace concrete that does not comply with requirements in this Section.

END OF SECTION 033053

SECTION 064116 - PLASTIC-LAMINATE-FACED ARCHITECTURAL CABINETS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Plastic-laminate-faced architectural cabinets.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product, including high-pressure decorative laminate adhesive for bonding plastic laminate and 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 details full size.

C. Samples for Initial Selection:

1. Plastic laminates.

2. PVC edge material.

3. Thermoset decorative panels.

D. Samples for Verification:

1. Plastic laminates, 8 by 10 for each color, pattern, and surface finish.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For fabricator.

B. Product Certificates: For each type of product.

C. Woodwork Quality Standard Compliance Certificates: WI Certified Compliance Program certificates.

1.4 QUALITY ASSURANCE

A. Fabricator Qualifications: Shop that employs skilled workers who custom fabricate products similar to those required for this Project and whose products have a record of successful in-service performance Shop is a licensee of WI's Certified Compliance Program.

1.5 DELIVERY, STORAGE, AND HANDLING

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

1.6 FIELD CONDITIONS

A. Field Measurements: Where cabinets are 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.

1.7 COORDINATION

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

PART 2 - PRODUCTS

2.1 PLASTIC-LAMINATE-FACED ARCHITECTURAL CABINETS

A. Quality Standard: Unless otherwise indicated, comply with the "Architectural Woodwork Standards" for grades of architectural plastic-laminate cabinets indicated for construction, finishes, installation, and other requirements.

1. Provide certificates from WI certification program indicating that woodwork complies with requirements of grades specified.

B. Grade: Custom.

C. Type of Construction: Frameless, or to match adjacent cabinets.

D. Cabinet, Door, and Drawer Front Interface Style: Flush overlay.

E. Reveal Dimension: 1/2 inch.

F. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated or if not indicated, as required by woodwork quality standard.

1. 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:

a. Formica Corporation.

b. Lamin-Art, Inc.

c. Wilsonart International; Div. of Premark International, Inc.

G. Laminate Cladding for Exposed Surfaces:

1. Horizontal Surfaces: Grade HGS.

2. Postformed Surfaces: Grade HGP.

3. Vertical Surfaces: Grade HGS.

4. Edges: Grade HGS, matching laminate in color, pattern, and finish.

H. Concealed Backs of Panels with Exposed Plastic-Laminate Surfaces: High-pressure decorative laminate, NEMA LD 3, Grade BKL.

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

1. As selected by Architect from laminate manufacturer's full range in the following categories:

a. Solid colors, matte finish.

b. Patterns, matte finish.

2.2 WOOD MATERIALS

A. Wood Products: Provide materials that comply with requirements of referenced quality standard for each type of woodwork and quality grade specified unless otherwise indicated.

1. Wood Moisture Content: 8 to 13 percent.

B. Composite Wood and Agrifiber Products: Provide materials that comply with requirements of referenced quality standard for each type of woodwork and quality grade specified unless otherwise indicated.

1. Particleboard: ANSI A208.1, Grade M-2, made with binder containing no urea formaldehyde.

2. Softwood Plywood: DOC PS 1, medium-density overlay.

2.3 MISCELLANEOUS MATERIALS

A. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide metal expansion sleeves or expansion bolts for post-installed anchors. Use nonferrous-metal or hot-dip galvanized anchors and inserts at inside face of exterior walls and at floors.

B. Adhesives: Do not use adhesives that contain urea formaldehyde.

2.4 FABRICATION

A. Fabricate cabinets to dimensions, profiles, and details indicated.

B. Complete fabrication, including assembly 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.

PART 3 - EXECUTION

3.1 PREPARATION

A. Before installation, condition cabinets to average prevailing humidity conditions in installation areas.

B. Before installing cabinets, examine shop-fabricated work for completion and complete work as required.

3.2 INSTALLATION

A. Grade: Install cabinets to comply with same grade as item to be installed.

B. Assemble cabinets and complete fabrication at Project site to the extent that it was not completed in the shop.

C. Install cabinets level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches.

D. Anchor cabinets to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing. Use fine finishing nails[or finishing screws] for exposed fastening, countersunk and filled flush with woodwork.

1. Use filler matching finish of items being installed.

E. 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.

1. Install cabinets with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line.

3.3 ADJUSTING AND CLEANING

A. Repair damaged and defective cabinets, 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 cabinets on exposed and semiexposed surfaces.

END OF SECTION 064116

SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 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 walls.

b. Joints between plumbing fixtures and adjoining walls, floors, and counters.

c. Other joints as indicated.

2. Interior joints in the following horizontal traffic surfaces:

a. Control and expansion joints in concrete flooring.

b. Other joints as indicated.

1.2 PERFORMANCE REQUIREMENTS

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

1.3 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.

1.4 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.

1.5 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.

B. 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.

C. 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.

2.6 MISCELLANEOUS MATERIALS

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

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

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

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting 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. 864; Pecora Corporation.

   d. 890; Pecora Corporation.

   e. 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 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. Sanitary 1700; GE Silicones.

   c. 898 Silicone Sanitary Sealant; Pecora Corporation.

   d. 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. AC-20; Pecora Corporation.

c. Sonolac; Sonneborn Building Products Div., ChemRex, Inc.

d. Tremflex 834; Tremco.

2. Applications:

a. Interior non-moving vertical joints.

END OF SECTION 079200

SECTION 087100 -- FINISH HARDWARE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Door Hardware, including electric hardware.
2. Cylinders for doors fabricated with locking hardware.

B. Related Sections:

1. Section 079200 - Joint Sealers – for exterior thresholds.

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

1. Windows.
2. Rough hardware.
3. Access doors and panels, except cylinders where detailed.

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 copies of schedule per Greenbook. 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 Division 1. 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, Architect 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. Pre-Installation Meetings: 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 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 Architect'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.

ITEM:	MANUFACTURER:	ACCEPTABLE SUB:
Hinges	(IVE) Ives	Bommer, Stanley
Key System	(BES) Best	Owner's Standard
Closers	(LCN) LCN	Norton 7500
Kickplates	(IVE) Ives	Hager, Rockwood
Stops & Holders	(IVE)Ives	Trimco, Rockwood
Thresholds	(NGP) National Guard	Pemko, Reese
Seals & Bottoms	(NGP) National Guard	Pemko, Reese
Weldable Gate Box	(KBX) Keedex	Owner's Standard

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 EXIT DEVICES:

A. Exit devices: as scheduled.

1. Lever Trim: through-bolted, Schlage 06A. Filled hollow tube design unacceptable.

2. Strikes: 16 gage. Scheduled Lock Series and Design: Schlage L series, Schlage ND series.

3. Type: Von Duprin surface vertical rod with protection plates for the bottom latch case, full with the of door, and protection plates for the bottom rod.

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: Automatic, low operating force design with stainless steel fasteners. Provide full width coordinator with fill bars and closer brackets.

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.

2.6 FINISH:

A. 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 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..

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.

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

VON Von Duprin

KBX Keedex

SPECWORKS # 116802-B83F43VGY

Heading 001

1 SGL DOOR 002 EXTERIOR / HALL 107-WOMEN'S

1 SGL DOOR 003 EXTERIOR / HALL 114-MEN'S

3'0" x 7'0" x 1-3/4" x XWDD x XWDF x NON-RTD

Each Assembly to have:

1	EA	MORTISE DEADBOLT	45H7RHB14M	626	BES
1	EA	PUSH PLATE	8200 3.5" X 15" CUT FOR TURN PIECE	630	IVE
1	EA	PULL PLATE	8303-0 4" X 16" CUT FOR CYLINDER	630	IVE
1	EA	SURFACE CLOSER	4041 H TRANSOM MOUNT	689	LCN
1	EA	MOUNTING PLATE	4040-18TJ	689	LCN
1	EA	WALL STOP & HOLDER	WS40	626	IVE
1	EA	THRESHOLD	653 MS/LA	AL	NGP
			BALANCE OF EXISTING HARDWARE TO REMAIN		

REMOVE EXISTING WALL STOP.
REUSE EXISTING CYLINDER REMOVABLE CORE.
SET THRESHOLD IN A SEALANT AS INDICATED IN THE SPECIFICATION ANCHORED WITH MACHINE SCREWS AND LEAD ANCHORS.

Heading 002

1 SGL DOOR 004 EXTERIOR / OFFICE 110

3'0" x 7'0" x 1-3/4" x XWDD x XWDF x NON-RTD

Opening Remark: DUTCH DOOR

Each Assembly to have:

1	EA	THRESHOLD	653 MS/LA	AL	NGP
			BALANCE OF EXISTING HARDWARE TO REMAIN		

SET THRESHOLD IN A SEALANT AS INDICATED IN THE SPECIFICATION ANCHORED WITH MACHINE SCREWS AND LEAD ANCHORS.

Heading 003

1 SGL DOOR 001

3'0" x 7'0" x 1-3/4" x XWDD x XWDF x NON-RTD

Each Assembly to have:

1	EA	SURFACE CLOSER	4041 PULL SIDE MOUNT	689	LCN
1	EA	THRESHOLD	653 MS/LA	AL	NGP

SET THRESHOLD IN A SEALANT AS INDICATED IN THE SPECIFICATION ANCHORED WITH MACHINE SCREWS AND LEAD ANCHORS.

Heading 004

1 SGL GATE 008 EXTERIOR / EXTERIOR POOL AREA

1 SGL GATE 009 EXTERIOR / EXTERIOR POOL AREA

3'0" x 7'0" x 1-3/4" x MTL x MTL x NON-RTD

Each Assembly to have:

1	EA	PASSAGE SET	93K6N14	626	BES

BALANCE OF EXISTING HARDWARE TO REMAIN

Heading 005

1 SGL DOOR 006 EXTERIOR / EXTERIOR POOL EQUIPMENT

3'0" x 7'0" x 1-3/4" x MTL x MTL x NON-RTD

Each Assembly to have:

1	EA	MORTISE LOCKSET	45H7R14M	626	BES
1	EA	CYLINDER	REUSE EXISTING CYLINDER		

Heading 005A

1 SGL DOOR 005 EXTERIOR / EXTERIOR POOL EQUIPMENT

3'0" x 7'0" x 1-3/4" x XWDD x XWDF x NON-RTD

Each Assembly to have:

1	EA	MORTISE LOCKSET	45H7R14M	626	BES
1	EA	CYLINDER	REUSE EXISTING CYLINDER	626	
1	EA	THRESHOLD	653 MS/LA	AL	NGP

SET THRESHOLD IN A SEALANT AS INDICATED IN THE SPECIFICATION ANCHORED WITH MACHINE SCREWS AND LEAD ANCHORS.

Heading 006

1 SGL GATE 007 EXTERIOR / GATE

3'0" x 7'0" x 1-3/4" x XWDD x XWDF x NON-RTD

Each Assembly to have:

1	EA	MORTISE LOCKSET	45H7IND14M	626	BES
2	EA	MORTISE CYLINDER	KEY TO THE EXISTING SYSTEM	626	BES
1	EA	WELDABLE GATE BOX	K-BXMOR1-10G		KBX
1	EA	FULL HEIGHT ASTRAGAL	1392SP THROUGH BOLTED	STE	NGP
			SECURITY MESH BY OTHERS		

END OF SECTION 087100

SECTION 093000 - TILING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Ceramic tile at exterior shower walls.

B. Related Sections:

1. Division 07 Section "Joint Sealants" for sealing of expansion, contraction, control, and isolation joints in tile surfaces.

1.2 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.

1.3 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.

1.4 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.

1.5 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.

1.6 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.

1.7 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.

1.8 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. Ceramic porcelain 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.

f. Lone Star Ceramics Company.

g. Grupo Porcelanite.

h. Portobello America, Inc.

2. Composition: Porcelain.

3. Module Size: Shown on drawings.

4. Thickness: 1/4 inch.

5. Face: Plain with cushion edges.

6. Surface: Smooth, without abrasive admixture for walls.

7. Finish: Polished.

8. Tile Color and Pattern: As selected by Architect from manufacturer's full range. Color selection will include tiles from Price Groups 2 or 3.

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

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

a. Wainscot Cap for Thin-Set Mortar Installations: Surface bullnose, module size 4 x 12 inches

b. External Corners for Thin-Set Mortar Installations: Surface bullnose.

c. Internal Corners: Cove.

2.3 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.

2.4 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.

2.5 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.

2.6 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.

f. Summitville Tiles, Inc.; SL-15, Invisible Seal Penetrating Grout and Tile Sealer.

g. TEC; a subsidiary of H. B. Fuller Company; TA-256 Penetrating Silicone Grout Sealer.

2.7 MIXING MORTARS AND GROUT

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

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

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

PART 3 - EXECUTION

3.1 EXAMINATION

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

3.5 INTERIOR TILE INSTALLATION SCHEDULE

A. Exterior Wall Installations, Wood Studs or Furring:

1. Tile Installation W202: Thin-set mortar on cementitious backer units or fiber cement underlayment; TCA W202.

a. Tile Type: Ceramic porcelain.

b. Thin-Set Mortar: Latex- portland cement mortar.

c. Membrane: ANSI A118.10

d. Grout: Standard sanded cement grout.

END OF SECTION 093000

SECTION 099600 - HIGH-PERFORMANCE COATINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes surface preparation and application of high-performance coating systems on the following substrates:

1. Interior Substrates:

a. Concrete, horizontal floor surfaces.

b. Concrete masonry units (CMU) and metal ceiling surfaces.

2. Exterior Substrates:

a. Concrete masonry units (CMU) and plaster.

1.2 SUBMITTALS

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

B. Samples for Verification: For each type of coating system and in each color and gloss of topcoat indicated.

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. VOC content.

1.3 WARRANTY

A. Manufacturer's Material Warranty for Concrete Masonry Unit Application: Manufacturer agrees to repair or replace coatings that fail in materials within specified warranty period. Recommended cleaning products must be used during this period.

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

a. Yellowing.

b. Shadowing.

c. Ghosting.

d. Chemical Staining.

2. Warranty Period:

a. 10 years from date of Substantial Completion.

1.4 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.

1.5 FIELD CONDITIONS

A. Apply coatings only when temperature of surfaces to be coated and surrounding air temperatures are between 50 and 95 deg F.

B. Do not apply coatings when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Basis-of-Design Manufacturer: Subject to compliance with requirements, provide products by Monopole, Inc., or comparable products by one of the following:

1. Rainguard.

2. America Polymers.

B. Products: Subject to compliance with requirements, provide products equal to those listed in other Part 3 coating schedule for the paint category indicated.

2.2 HIGH-PERFORMANCE COATINGS, GENERAL

A. Material Compatibility:

1. Provide materials for use within each coating 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 coating system, provide products recommended in writing by manufacturers of topcoat for use in coating system and on substrate indicated.

3. Provide products of same manufacturer for each coat in a coating system.

B. VOC Content: Products shall comply with VOC limits of authorities having jurisdiction and, for interior coatings applied at project site, the following VOC limits, exclusive of colorants added to a tint base, when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

1. Prime Coatings: 90 g/L.

2. Intermediate and Top Coatings: 0 g/L.

C. Low-Emitting Materials: Interior coatings shall 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."

D. Sheen: As indicated, or if not indicated as selected by Resident Engineer from manufacturer’s full range.

E. Colors: As indicated in color schedule, or if not indicated as selected by Resident Engineer from manufacturer's full range.

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.

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

    a. Concrete: 12 percent.

B. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

C. Proceed with coating application only after unsatisfactory conditions have been corrected.

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

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations.

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 coatings, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce coating systems indicated.

D. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.

E. Masonry Substrates: Remove efflorescence and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces or if alkalinity of mortar joints exceed that permitted in manufacturer's written instructions.

F. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied coatings.

G. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.

H. Steel Substrates: Remove rust, and loose mill scale. Clean using methods recommended in writing by paint manufacturer.

3.3 APPLICATION, GENERAL

A. Apply high-performance coatings according to manufacturer's written instructions and recommendations.

1. Use applicators and techniques suited for coating and substrate indicated.

2. Coat surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, coat surfaces behind permanently fixed equipment or furniture with prime coat only.

3. Do not apply coatings over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.

B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of the same material are to be applied. Tint undercoats to match color of finish coat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.

C. If undercoats or other conditions show through final coat, apply additional coats until cured film has a uniform coating finish, color, and appearance.

D. Apply coatings to produce surface films without cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections. Produce sharp glass lines and color breaks.

3.4 CONCRETE FLOOR APPLICATION

A. Prepare concrete surfaces in accordance with manufacturer's instructions, SSPC-SP 13/NACE 6 – Level 3 Commercial Blast Cleaning, and ICRI 03732

B. Apply per manufacturer's instructions using recommended applicator devices.

C. Apply prime coat using a short nap foam roller at coverage rates as follow:

1. Smooth surfaces: 275-300 sq.ft./gallon.

2. Rough surfaces: 175-225 sq.ft./gallon.

D. Allow prime coat to cure for 4-6 hours; then apply intermediate coat at approximate spread rate of 230 sq.ft./gallon.

E. Broadcast sand into wet intermediate coat at approximate rate of 8-10 lbs per 100 sq.ft.

F. Apply topcoat at approximate spread rate of 175 sq.ft./gallon.

3.5 INTERIOR CONCRETE MASONRY UNIT APPLICATION

A. Apply per manufacturer's instructions using recommended applicator devices.

B. Apply prime coat using a short nap foam roller at coverage rates as follow:

1. Smooth surfaces: 275-300 sq.ft./gallon.

2. Rough surfaces: 175-225 sq.ft./gallon.

C. After required cure time, apply two intermediate coats of acrylic paint . Allow paint to fully cure (up to 2 weeks) before applying topcoat.

1. Test sample topcoat prior to final application.

2. Allow test sample to cure 4 days in direct sunlight before proceeding with final topcoat application.

3. Topcoat sample shall exhibit no amber color change in order to proceed with final topcoat application.

4. If amber appearance occurs on topcoat sample, repeat sampling process as required until no "ambering" is evident before proceeding with final topcoat application.

D. Apply two topcoats at approximate rate of 200-250 sq.ft./gallon.

3.6 EXTERIOR CONCRETE MASONRY UNIT OR PLASTER APPLICATION

A. Apply per manufacturer's instructions using recommended applicator devices.

B. Apply the specified minimum number of coats or more as recommended by manufacturer's published instructions, in the quantity of coatings and coverage rates per coat established by preliminary tests. Total quantity shall not be less than the rate recommended for the involved surface in manufacturer's technical data.

C. Install each coat by airless spray with nominal 20 psi nozzle pressure. Obtain complete coverage of each coat. Indicate areas that are coated when application is stopped for lunch or at the end of the day.

3.7 CLEANING AND PROTECTION

A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

B. After completing coating application, clean spattered surfaces. Remove spattered coatings by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

C. Protect work of other trades against damage from coating operation. Correct damage by cleaning, repairing, replacing, and recoating, 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 coated surfaces.

3.8 INTERIOR HIGH-PERFORMANCE COATING SCHEDULE

A. Concrete Substrates, Horizontal Floor Surfaces.

1. Prime Coat: Monochem 21
2. Intermediate Coat: Permashield 200
3. While still wet, broadcast across floor surface 30 mesh silica sand.
4. Topcoat: Permashield 200

B. CMU:

1. Prime Coat: Monochem 21
2. First Intermediate Coat: Acrylic paint, fully cured.
3. Second Intermediate Coat: Acrylic paint, fully cured.
4. Topcoat: Permashield 200.

3.9 EXTERIOR HIGH-PERFORMANCE COATING SCHEDULE

A. CMU or Plaster Substrates:

1. Prime Coat: Monochem 21
2. First Intermediate Coat: Acrylic paint, fully cured.
3. Second Intermediate Coat: Acrylic paint, fully cured.
4. Topcoat: Permashield 200.

END OF SECTION 099600

SECTION 101400 - SIGNAGE

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following types of signs:

1. Panel signs.

B. Related Sections: The following Sections contain requirements that relate to this Section:

1. Division 10 Section "Panel Signs" for freestanding exterior signs.

1.2 SUBMITTALS

A. General: Submit the following according to the Conditions of the Contract.

B. Product data for each type of sign specified, including details of construction relative to materials, dimensions of individual components, profiles, and finishes.

C. Shop drawings showing fabrication and erection of signs. Include plans, elevations, and large-scale sections of typical members and other components. Show anchors, grounds, layout, reinforcement, accessories, and installation details.

1. Provide message list for each sign required, including large-scale details of wording and lettering layout.

2. Furnish full-size rubbings for metal plaques.

D. Samples: Provide the following samples of each sign component for initial selection of color, pattern and surface texture as required and for verification of compliance with requirements indicated.

1. Samples for selection of color, pattern, and texture:

a. Cast Acrylic Sheet: Manufacturer's color charts consisting of actual sections of material including the full range of colors available for each material required.

1.3 QUALITY ASSURANCE

A. Single-Source Responsibility: For each separate sign type required, obtain signs from one source of a single manufacturer.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Manufacturers of Panel Signs:

a. Andco Industries Corp.

b. ASI Sign Systems, Inc.

c. Best Manufacturing Company.

d. Mohawk Sign Systems.

e. Poblocki & Sons, Inc.

f. Spanjer Brothers, Inc.

g. The Supersine Company.

h. Vomar Products, Inc.

2.2 MATERIALS

A. Cast Acrylic Sheet: Provide cast (not extruded or continuous cast) methyl methacrylate monomer plastic sheet, in sizes and thicknesses indicated, with a minimum flexural strength of 16,000 psi when tested according to ASTM D 790, with a minimum allowable continuous service temperature of 176 deg F (80 deg C), and of the following general types:

1. Opaque Sheet: Provide colored opaque acrylic sheet in colors and finishes as selected from the manufacturer's standards.

B. Fasteners: Use concealed fasteners fabricated from metals that are not corrosive to the sign material and mounting surface.

C. Anchors and Inserts: Use nonferrous metal or hot-dipped 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.

D. Colored Coatings for Acrylic Plastic Sheet: Use colored coatings, including inks and paints for copy and background colors, that are recommended by acrylic manufacturers for optimum adherence to acrylic surface and are nonfading for the application intended.

2.3 PANEL SIGNS

A. Panel Signs: Comply with requirements indicated for materials, thicknesses, finishes, colors, designs, shapes, sizes, and details of construction.

1. Produce smooth, even, level sign panel surfaces, constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally.

B. Unframed Panel Signs: Fabricate signs with edges mechanically and smoothly finished to conform with the following requirements:

1. Edge Condition: Beveled.

2. Corner Condition: Corners rounded to 3/8 inch radius.

C. Graphic Content and Style: Provide sign copy that complies with the requirements indicated for size, style, spacing, content, position, material, finishes, and colors of letters, numbers, and other graphic devices.

D. Raised Copy: Machine-cut copy characters from matte-finished opaque acrylic sheet and chemically weld onto the acrylic sheet forming sign panel face. Produce precisely formed characters with square cut edges free from burrs and cut marks.

1. Panel Material: Matte-finished opaque acrylic sheet.

2. Raised Copy Thickness: Not less than 1/32 inch.

3. Braille Symbols: Contracted Grade 2 Braille shall be used wherever Braille symbols are required. Dots shall be 1/10 inch on centers in each cell with 2/10 inch space between cells. Dots shall be raised a minimum of 1/40 inch above the background.

2.4 FINISHES

A. Colors and Surface Textures: For exposed sign material that requires selection of materials with integral or applied colors, surface textures or other characteristics related to appearance, provide color matches indicated, or if not indicated, as selected by the Architect from the manufacturer's standards.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Locate sign units and accessories where indicated, using mounting methods of the type described and in compliance with the manufacturer's instructions.

1. Install signs level, plumb, and at the height indicated, with sign surfaces free from distortion or other defects in appearance.

B. Wall-Mounted Panel Signs: Attach panel signs to wall surfaces using both methods indicated below:

1. Mechanical and Adhesive Mounting: Use liquid silicone adhesive recommended by the sign manufacturer to attach sign units. Provide predrilled and countersunk holes. Attach the panel signs with fasteners and anchors suitable for secure attachment to the substrate.

3.2 CLEANING AND PROTECTION

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

END OF SECTION 101400

SECTION 10426 - POST AND PANEL SIGNS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Post and panel signs.

B. Related Sections include the following:

1. Division 10 Section "Signs" for wall-mounted signs.

1.2 PERFORMANCE REQUIREMENTS

A. Design Criteria: Design, fabricate, and install exterior post and panel signs to withstand a wind velocity of 100 mph on the total sign area, in all directions.

1.3 SUBMITTALS

A. Product Data: For each type of post and panel sign specified. Include details of construction relative to materials, dimensions of individual components, profiles, and finishes.

B. Shop Drawings: For each type of post and panel sign indicated.

1. Provide plans and elevations. Show layout and installation details.

2. Provide message list, including details of wording and lettering layout, at least half size.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Galvanized Steel Sheet: ASTM A653, G90 coating, mill phosphatized.

B. Steel Tubing: Cold-formed steel tubing conforming to ASTM A 500, Grade B, hot-dip galvanized after fabrication with a minimum of 2.0 oz. of zinc/sq. ft. of surface area conforming to ASTM A 123.

C. Vinyl Film: Opaque, non-reflective vinyl film, 0.0035-inch minimum thickness, with pressure-sensitive adhesive backing, suitable for exterior applications.

D. Concrete for Post Holes: Mix portland cement complying with ASTM C 150, aggregates complying with ASTM C 33, and clean water to obtain concrete with a minimum 28-day compressive strength of 2500 psi. Use at least 4 sacks of cement/cu. yd., 1-inch maximum-size aggregate, maximum 3-inch slump, and 2 to 4 percent entrained air.

2.2 COMPONENTS

A. Steel Posts: 0.120-inch-, galvanized, seamless, square steel posts in length adequate for mounting method specified. Include post caps, fillers, spacers, and related accessories required for a complete installation.

1. Post Size: 2 by 2 inches square.

B. Sign Panels: Provide smooth, even, level 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.

1. Single-Sheet Panels: Provide single-sheet sign panels with edges mechanically and smoothly finished to conform to the following:

a. Panel Material: 16 gage galvanized steel sheet.

b. Edge Condition: Square cut.

c. Corner Condition: Corners rounded.

C. Graphic Content and Style: Provide sign copy to comply with requirements indicated for sizes, styles, spacing, content, positions, materials, finishes, and colors of letters, numbers, symbols, and other graphic devices.

1. Surface-Applied, Die-Cut Vinyl Copy: Provide die-cut characters from nonreflective vinyl film with pressure-sensitive adhesive backing. Apply copy to exposed face of sign panel.

2.3 ACCESSORIES

A. Fasteners: Use exposed fasteners fabricated from non-corrosive metals that are noncorrosive to sign material.

2.4 FINISHES

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

B. Baked-Enamel Finish: Apply baked enamel complying with paint manufacturer's specifications for cleaning and painting.

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

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Locate sign units where indicated, using mounting methods of type described and complying with manufacturer's written instructions.

B. Excavation: In firm, undisturbed or compacted soil, drill or (using a post-hole digger) hand-excavate holes for posts to diameters and spacing indicated.

1. Excavate hole depths approximately 3 inches lower than required post bottom, with bottom of posts set at least 36 inches below finished grade.

C. Setting Posts: Center and align posts in holes 3 inches above bottom of excavation.

1. Protect portion of posts aboveground from concrete splatter. Place concrete around posts and vibrate or tamp for consolidation. Check posts for vertical and top alignment and hold in position until concrete has achieved its initial set.

D. Install signs level, plumb, and at height indicated, with surfaces free from distortion or other defects in appearance.

3.2 CLEANING AND PROTECTING

A. At completion of installation, clean soiled surfaces of sign units according to manufacturer's written instructions.

B. Protect installed sign units from damage until acceptance by Resident Engineer.

END OF SECTION 101426

SECTION 102113 - TOILET COMPARTMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Solid-polymer toilet compartments configured as toilet enclosures and urinal screens.

2. Phenolic-core toilet compartments configured as shower screen.

3.

B. Related Sections:

1. Section 102800 "Toilet Accessories" for toilet tissue dispensers, grab bars, and similar accessories.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: For toilet compartments. Include plans, elevations, sections, details, and attachments to other work.

1. Show locations of cutouts for compartment-mounted toilet accessories.

2. Show locations of reinforcements for compartment-mounted grab bars.

3. Show locations of centerlines of toilet fixtures.

C. Samples for Initial Selection: For each type of unit indicated. Include Samples of hardware and accessories involving material and color selection.

1.3 INFORMATIONAL SUBMITTALS

A. Product Certificates: For each type of toilet compartment, from manufacturer.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance Data: For toilet compartments to include in maintenance manuals.

1.5 QUALITY ASSURANCE

A. Comply with requirements in GSA's CID-A-A-60003, "Partitions, Toilets, Complete."

B. Regulatory Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities" for toilet compartments designated as accessible.

1.6 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of toilet fixtures, walls, columns, ceilings, and other construction contiguous with toilet compartments by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Aluminum Castings: ASTM B 26/B 26M.

B. Aluminum Extrusions: ASTM B 221.

C. Stainless-Steel Castings: ASTM A 743/A 743M.

D. Adhesives: Manufacturer's standard product that complies 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."

2.2 SOLID-POLYMER UNITS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Accurate Partitions Corporation.
2. Ampco, Inc.
3. Bobrick Washroom Equipment, Inc.
4. Bradley Corporation; Mills Partitions.
5. Comtec Industries/Capitol Partitions.
6. Hadrian Manufacturing Inc.
7. Metpar Corp.
8. Weis-Robart Partitions, Inc.

B. Toilet-Enclosure Style: Overhead braced, Floor anchored.

C. Urinal-Screen Style: Wall hung.

D. Door, Panel, and Pilaster Construction: Solid, high-density polyethylene (HDPE) panel material, not less than 1 inch thick, seamless, with eased edges and with homogenous color and pattern throughout thickness of material.

1. Integral Hinges: Configure doors and pilasters to receive integral hinges.
2. Heat-Sink Strip: Manufacturer's standard continuous, extruded-aluminum or stainless-steel strip fastened to exposed bottom edges of solid-polymer components to prevent burning.
3. Color and Pattern: One color and pattern in each room as selected by Architect from manufacturer's full range.

E. Pilaster Shoes and Sleeves (Caps): Manufacturer's standard design; stainless steel.

F. Brackets (Fittings):

1. Stirrup Type: Ear or U-brackets, stainless steel.
2. Full-Height (Continuous) Type: Manufacturer's standard design; stainless steel.

G. Overhead Cross Bracing for Ceiling-Hung Units: As recommended by manufacturer and fabricated from solid polymer.

2.3 PHENOLIC-CORE UNITS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Accurate Partitions Corporation.
2. Ampco, Inc.
3. Bobrick Washroom Equipment, Inc.
4. Bradley Corporation; Mills Partitions.
5. Comtec Industries/Capitol Partitions.

6. Hadrian Manufacturing Inc.

7. Metpar Corp.

8. Weis-Robart Partitions, Inc.

B. Shower-Screen Style: Wall hung and Floor anchored.

C. Screen Construction: Solid phenolic-core panel material with melamine facing on both sides fused to substrate during panel manufacture (not separately laminated), and with eased and polished edges. Provide minimum 3/4-inch- thick panels.

D. Pilaster Shoes: Fabricated from stainless-steel sheet, not less than 0.031-inch nominal thickness and 3 inches high.

E. Shower-Screen Post: Manufacturer's standard post design of stainless steel; with shoe matching that on the pilaster.

F. Brackets (Fittings):

1. Full-Height (Continuous) Type: Manufacturer's standard design; stainless steel.

G. Phenolic-Panel Finish:

1. Facing Sheet Finish: One color and pattern.

2. Color and Pattern: As selected by Architect from manufacturer's full range, with manufacturer's standard through-color core matching face sheet.

2.4 ACCESSORIES

A. Hardware and Accessories: Manufacturer's standard design, heavy-duty operating hardware and accessories.

1. Material: Stainless steel.

2. Hinges: Manufacturer's standard paired, self-closing type that can be adjusted to hold doors open at any angle up to 90 degrees.

3. Latch and Keeper: Manufacturer's standard recessed latch unit designed for emergency access and with combination rubber-faced door strike and keeper. Provide units that comply with regulatory requirements for accessibility at compartments designated as accessible.

4. Door Bumper: Manufacturer's standard rubber-tipped bumper at out-swinging doors.

5. Door Pull: Manufacturer's standard unit at out-swinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at compartments designated as accessible.

B. Overhead Bracing: Manufacturer's standard continuous, extruded-aluminum head rail with antigrip profile and in manufacturer's standard finish.

C. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel or chrome-plated steel or brass, finished to match the items they are securing, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use stainless steel, hot-dip galvanized steel, or other rust-resistant, protective-coated steel.

2.5 FABRICATION

A. Overhead-Braced Units: Provide manufacturer's standard corrosion-resistant supports, leveling mechanism, and anchors at pilasters to suit floor conditions. Provide shoes at pilasters to conceal supports and leveling mechanism.

B. Floor-Anchored Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment nuts at pilasters for structural connection to floor. Provide shoes at pilasters to conceal anchorage.

C. Urinal-Screen Posts: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment at[tops and] bottoms of posts. Provide shoes and sleeves (caps) at posts to conceal anchorage.

D. Door Size and Swings: 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 designated as accessible.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position with manufacturer's recommended anchoring devices.

1. Maximum Clearances:

a. Pilasters and Panels: 1/2 inch.

b. Panels and Walls: 1 inch.

2. Stirrup Brackets: Secure panels to walls and to pilasters with no fewer than three brackets attached at midpoint and near top and bottom of panel.

a. Locate wall brackets so holes for wall anchors occur in masonry or tile joints.

b. Align brackets at pilasters with brackets at walls.

B. Overhead-Braced Units: Secure pilasters to floor and level, plumb, and tighten. Set pilasters with anchors penetrating not less than 1-3/4 inches into structural floor unless otherwise indicated in manufacturer's written instructions. Secure continuous head rail to each pilaster with no fewer than two fasteners. Hang doors to align tops of doors with tops of panels, and adjust so tops of doors are parallel with overhead brace when doors are in closed position.

C. Floor-Anchored Units: Set pilasters with anchors penetrating not less than 2 inches into structural floor unless otherwise indicated in manufacturer's written instructions. Level, plumb, and tighten pilasters. Hang doors and adjust so tops of doors are level with tops of pilasters when doors are in closed position.

D. Urinal Screens: Attach with anchoring devices to suit supporting structure. Set units level and plumb, rigid, and secured to resist lateral impact.

3.2 ADJUSTING

A. Hardware Adjustment: Adjust and lubricate hardware according to hardware manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doors to return doors to fully closed position.

END OF SECTION 102113

SECTION 102800 – TOILET AND BATH ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Public-use washroom accessories.

2. Public-use shower room 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

Stainless Steel: ASTM A 666, Type 304, 0.031-inch minimum nominal thickness unless otherwise indicated.

A. Steel Sheet: ASTM A 1008/A 1008M, Designation CS (cold rolled, commercial steel), 0.036-inch minimum nominal thickness.

B. Galvanized-Steel Sheet: ASTM A 653/A 653M, with G60 hot-dip zinc coating.

C. Galvanized-Steel Mounting Devices: ASTM A 153/A 153M, hot-dip galvanized after fabrication.

D. Fasteners: Screws, bolts, and other devices of same material as accessory unit and tamper-and-theft resistant where exposed, and of galvanized steel where concealed.

E. Mirrors: ASTM C 1503, Mirror Glazing Quality, clear-glass mirrors, nominal 6.0 mm thick.

2.2 PUBLIC-USE WASHROOM ACCESSORIES

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:

B. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings 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.

C. Toilet Tissue (Roll) Dispenser :

1. Basis-of-Design Product: Bobrick Washroom Equipment, Inc. B-2730.
2. Description: Single-roll dispenser.
3. Mounting: Surface mounted.
4. Operation: No controlled delivery.
5. Capacity: Designed for up to 6-inch- diameter tissue rolls.
6. Material and Finish: Heavy-duty cast aluminum, satin-finish.

D. Sanitary-Napkin Disposal Unit:

1. Basis-of-Design Product: Bobrick 254.
2. Mounting: Surface mounted.
3. Door or Cover: Self-closing, disposal-opening cover and hinged face panel with tumbler lockset.
4. Receptacle: Removable.
5. Material and Finish: Stainless steel, No. 4 finish (satin).

E. 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.

5. Lockset: Tumbler type.

F. Grab Bar:

1. Basis-of-Design Product: Bobrick 6861.

2. Mounting: Flanges with concealed fasteners.

3. Material: Stainless steel, 0.05 inch thick.

a. Finish: Smooth, No. 4 finish (satin) on ends and slip-resistant texture in grip area.

4. Outside Diameter: 1-1/2 inches.

5. Configuration and Length: 16” w x 31” deep.

G. Folding Shower Seat:

1. Basis-of-Design Product: Bobrick B-5181.

2. Configuration: L-shaped seat, designed for wheelchair access.

3. Seat: Phenolic or polymeric composite of slat-type or one-piece construction.

4. Mounting Mechanism: Stainless steel, No. 4 finish (satin).

5. Capacity: Maximum static load of 360 lbs.

H. Warm-Air Dryer:

1. Basis-of-Design Product: World Dryer Corp, model RA5-Q974.

2. Mounting: Recessed.

3. Operation: Touch-button activated with timed power cut-off switch.

a. Operation Time: 30 to 40 seconds.

4. Cover Material and Finish: Cast iron, with enamel finish in color selected by Architect.

5. Electrical Requirements: 115 V, 20 A, 2300 W.

I. Mirror Unit:

1. Basis-of-Design Product: Bobrick 165.

2. Frame: Stainless-steel channel.

a. Corners: Manufacturer's standard.

3. Hangers: Produce rigid, tamper- and theft-resistant installation, using method indicated below.

a. One-piece, galvanized-steel, wall-hanger device with spring-action locking mechanism to hold mirror unit in position with no exposed screws or bolts.

4. Size: 18x36.

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 Resident Engineer.

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 144200 - POOL LIFT

PART 1 – GENERAL

1.1 SUMMARY

A. A vertical lifting device, designed to provide access from the pool deck to the water for mobility impaired persons.

1.2 REFERENCES

A. Lift shall be designed, manufactured and installed in accordance with the following standards:

1. American National Standards Institute (ANSI).
2. ADA Accessibility Guidelines (ADAAG).
3. Underwriters Laboratories (UL).
4. International Building Code (IBC).

1.3 SYSTEM DESCRIPTION

A. The Lift is designed for use on in and above ground swimming pools and spas. The user-operated unit requires no assistance from an attendant to operate the lifting device. Operation of the lift handset requires a constant pressure no greater than 2-lbf (8.9N) to operate the directional control buttons. There are two handset control points one located independent of the lift, the other on the lift's seat arm.

B. The lift is powered by a low voltage (24-VDC) rechargeable battery, and is rated for a 500-pound (226.79kg) operating load capacity with a 1.5-safety factor.

C. Components of the lift include an armrest, adjustable footrest and an overhead transfer assist device. The armrest provides stability to the user during lift movement and is structurally capable of supporting the user during transfer from a wheelchair onto the lift's seat. The adjustable footrest is 10-inches (25.4cm) wide with a surface area of 67in² (1.7M²). The detachable overhead transfer assist device allows lifting during transfer from a wheelchair to the lift seat, and consists of a support arm, two stainless steel chains and a stainless steel, 1.50-inch (3.81cm) O. D. tube handle coated with a patented coating to increase grip. The overhead arm, chains and tube support the full load capacity of the lift.

1.4 QUALITY ASSURANCE

A. Manufacturer: Provide lift manufactured by a firm with a minimum of 20 years experience in fabrication of lifts equivalent to those specified.

B. All designs, clearances, workmanship and material, unless specifically accepted, shall be in accordance with all codes having legal jurisdiction.

C. All load ratings and safety factors shall meet or exceed those specified by all governing agencies with jurisdiction and shall be certified by a professional engineer.

D. Lift shall be subject to applicable state, local and city approval prior to installation and subject to inspection after installation. Determination of and adherence to these regulations is the responsibility of the lift contractor.

1.5 WARRANTY

A. Warranty: Manufacturer shall warrant the vertical platform lift's drive system for a period of two years after installation and all other components for one year after installation.

1.6 MAINTENANCE

A. The vertical platform lift must be maintained in accordance with manufacturer's instructions.

PART 2 - PRODUCT

2.1 MANUFACTURER

A. Basis of Design Product: Provide Spectrum Products Traveler II XRC 500 or equal.

1. Contact: 7100 Spectrum Lane Missoula, Montana 59808 Phone: 800-791-8056

B. Manufacturers: Subject to compliance with requirements, provide product indicated or comparable product by one of the following:

1. Global Lift Corp.
2. Aqua Creek Products
3. S. R. Smith

2.2 FINISHES

A. The Lift's superstructure and component parts are fabricated of 304 stainless steel, electro-polished followed by passivation ensuring maximum corrosion resistance. This process shall be performed in compliance with ASTM A967 guidelines.

2.3 OPERATING SYSTEM

A. A four-channel radio frequency receiver/transmitter controls the operation of the lift. Two handsets are provided to allow operation from pool deck, water and seat. The handsets are operable by either left or right hand and are ergonomically designed for ease of use. The handsets are sealed to prevent water damage. Four control buttons provide directional control, i.e., rotational travel-left or right and vertical travel-up or down. A 24-VDC rechargeable battery powers the lift's drive motors and radio frequency control receiver. A battery charger is provided; complete with a mounting bracket and electrical power cord, for remote installation.

2.4 ACCESSORIES

A. Transport Cart

1. The optional four-wheel transport cart allows one individual to easily remove and transport the lift to storage when not in use.

B. Protective Safety Cover

1. The optional polyethylene safety cover protects the lift from unauthorized use and from environmental elements. The cover includes a warning sign clearly visible from the pool/spa deck.

C. Extra Battery

1. Provide an extra battery; allowing one battery to be charging while the other is in use.

PART 3 - EXECUTION

3.1 ACCEPTABLE INSTALLERS

A. Installers shall be experienced in performing work of this section who have specialized in work comparable to that required for this project.

B. Installers shall be certified and trained by the manufacturer.

3.2 EXAMINATION

A. Use field dimensions and approved manufacturer's shop drawings to examine substrates, supports and other conditions under which this work is to be performed. Do not proceed with work until unsatisfactory conditions are corrected.

3.3 INSTALLATION

A. The lift shall be installed in accordance with manufacturer's instructions and as specified and approved by Resident Engineer.

3.4 DEMONSTRATION

A. The lift contractor shall make a final check of the lift's operation with the Owner or Owner's representative present prior to turning the lift over for use. The lift contractor shall determine that operating and safety devices are functioning properly.

END OF SECTION 144200

SECTION 220500 - BASIC PLUMBING REQUIREMENTS, MATERIALS AND METHODS

PART 1 - GENERAL

1.1 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 or contractor's negotiations with the Owner. The Division 22 drawings and specifications prepared by the Engineer are not Construction Documents.

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 Resident Engineer.

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 Resident Engineer 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 preferred these contract documents. All questions, submittals, etc. of this division shall be routed to the Engineer (through proper contractual channels).

1.2 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 Resident Engineer 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 Resident Engineer 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 Resident Engineer 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 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 Resident Engineer.

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 Resident Engineer immediately if discrepancies are found.

4. Coordinate mechanical utility interruptions one week in advance in writing with the Resident Engineer and the Utility Company.

a. Plan work so that duration of the interruption is kept to a minimum.

1.3 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. Cutting and Patching: Refer Part 3 of this section.

C. 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.

D. 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.

1.4 COORDINATION WITH EXISTING OCCUPIED AREAS

A. Minimize disruptions to operation of existing plumbing systems in occupied areas.

B. Coordinate any required disruptions with the Resident Engineer, one week in advance, in writing.

C. Provide temporary connections to prevent long disruptions.

1.5 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.

1.6 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.

1.7 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:

C. City of San Diego Municipal Code, Ordinances and Regulations.

1. The City of San Diego Fire-Rescue Department Regulations and Requirements.

2. California Codes of Regulations, (CCR), Title 24, Latest Edition.

3. California Building Code (CBC), Latest Edition.

4. California Mechanical Code (CMC), Latest Edition.

5. California Plumbing Code (CPC), Latest Edition.

6. California Electric Code (CEC), Latest Edition.

7. California Fire Code (CFC), Latest Edition.
8. The City of San Diego Department of Health Services Regulations and Requirements.
9. City of San Diego Public Works Department Regulations and Requirements.
10. City of San Diego Industrial Waste Division Regulations and Requirements.
11. National Electric Code (NEC), Latest Edition.
12. California Energy Commission, Title 24.
13. State Elevator Safety Regulations (SESR).
14. National Fire Protection Association NFPA-101, Life Safety Code, Latest Edition for JCAHO accreditation.
15. Occupational Safety and Health Administration Regulations and Requirements (OSHA).
16. California Occupational Safety and Health Administration Regulations and Requirements (CAL-OSHA).
17. South Coast Air Quality Management District Regulations and Requirements (SCAQMD).
18. American Disability Act Regulations and Requirements (ADA).
19. State of California Water Resources Control

D. 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).

E. 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.

F. Additional Regulations: Follow additional regulations which appear in individual Sections of these Specifications.

G. Contradictions: Where codes are contradictory, follow the most stringent, unless otherwise indicated in Plans or Specifications. The Resident Engineer shall determine which is most stringent.

H. 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 Resident Engineer 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.

I. 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.

J. Inspections and Tests:

1. Arrange for all required inspections and tests.
2. Pay all charges.
3. Notify the Resident Engineer in writing 72 hours before tests.
4. Submit one copy for Owners record of permits. Licenses, inspection reports and test reports.

1.8 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 Resident Engineer.

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 Resident Engineer 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. All substitutions must meet the recommendations of the 2010 Consultant's Guide to Park Design and Development.

4. 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.

5. 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.

6. 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.

7. Coordinate the installation of the product with all trades.

8. 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".

9. 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.

10. 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.

11. 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.

12. Failure to comply with these requirements will result in immediate rejection of the request for substitution.

1.9 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 Resident Engineer "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: Unless otherwise indicated in Greenbook, 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 Resident Engineer 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 Resident Engineer 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 incompletion, 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.

1.10 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 Resident Engineer, required date to receive submittal from the Resident Engineer and schedule order date.

1.11 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.

1.12 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 Resident Engineer 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 Resident Engineer and obtain a receipt.

1.13 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, as specified in Greenbook.

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.

1.14 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.).

1.15 SPARE PARTS, SPECIAL TOOLS

A. Deliver spare parts to the Resident Engineer and obtain receipts at the time operating instructions are given to the Owner's personnel.

B. Include the Following:

1. Fuses: each type used for all equipment utilizing fuses. Quantity 10%, but not less than two.

2. 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.

3. 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.

4. 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.

1.16 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.

1.17 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.

1.18 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.

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. 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 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 conductive 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 Resident Engineer 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 Resident Engineer 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 Resident Engineer 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:

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 Resident Engineer 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 Resident Engineer.

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 Resident Engineer 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 Resident Engineer 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 Resident Engineer, 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 Resident Engineer. 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. Piping joints to be clear and free of dirt, 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 Resident Engineer'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 Resident Engineer. 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 Concrete Block Walls	Schedule 10 or heavier, black steel pipe.
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 ¼" 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
loors	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.
Walls	Schedule 40 black steel sleeves in concrete or concrete block walls equal to depth of construction. Extend sheetmetal sleeves in gypsum walls ½" beyond both sides of the wall assembly. Equal to depth of construction. Extend sleeves for non-metallic piping beyond walls or construction as required.

END OF SECTION 220500

SECTION 220529 - HANGERS AND SUPPORTS FOR PLUMBING

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Work included shall be as indicated on the drawings, including but not limited to the following:

1. Pipe Hangers
2. Supports

PART 2 - PRODUCTS

1.2 PIPE HANGERS AND SUPPORTS

A. All pipe hangers and supports installed in exterior location shall be galvanized.

B. Split ring hangers with swivel adjuster, solid rods and rod sockets: Steel pipe Fee and Mason Fig. 212, or Super-Strut M-718OT.

C. Adjustable Beam Clamps: Fee and Mason Fig. 246 or Super-Strut Fig. CM-754 (where this type is not adaptable, an approved top beam, side beam, or channel clamp by Fee and Mason or Super-Strut, will be acceptable).

D. Trapeze Hangers: Super-Strut A-1200 or Unistrut P-1000 channel with pipe clamps and guides as required (include type to be used in submittal).

E. Riser Clamps: Fee and Mason Fig. 241 or Super-Strut C-720. Over 4", Fee and Mason Fig 238, or Super-Strut C-720.

F. Offset Pipe Clamps: Fee and Mason Fig. 366, or Super-Strut C-767.

G. Pipe Isolation: All piping shall be isolated from dissimilar metals, other piping, any part of the building, framing, conduit, supports etc., with Elmdor/Stoneman Series 500 trisolator or approved equal.

PART 3 - EXECUTION

1.3 PIPE HANGERS AND SUPPORTS

A. Horizontal piping shall be supported as follows: Use beam clamps for attachment to structural steel surfaces and expansion type inserts for attachment to concrete surfaces. Clamps and inserts shall be sized for the required hanger rod and comply with all applicable codes and safety regulations. The use of "C" clamps designed to attach threaded rod to one side of a steel beam flange shall not be used unless they are provided with a restraining strap, or hook to the opposite beam flange.

B. Piping shall be firmly held in place by adjustable split ring malleable iron hangers, supports and pipe rests, located adjacent to fittings at each offset or change of direction, at the ends of branches over 5' long, at riser pipes and along piping where necessary to prevent sags, bends, or vibration. All hangers and supports shall be of a design that will support the combined weight of pipe, fluid and insulation.

C. Pipe straps shall be heavy gauge galvanized iron factory fabricated to fit against supporting surface when installed. Makeshift devices will not be acceptable. No plumbing tape is allowed.

D. Lateral bracing shall be provided at every fourth hanger where hanger rods are more than 18" in length.

E. Hangers supported by concrete structure shall be attached by cast iron manufactured concrete inserts installed at the time concrete is poured and each insert shall be provided with through rods lapped over structural reinforcing.

F. Hangers supported by structural steel shapes shall be attached by cast-iron clamps designed for use on the specific steel shape and equipped with retainers.

G. All hangers shall be attached to halter rod by means of adjustable swivel, turnbuckle or double nut to allow height adjustment.

H. Vertical piping shall be suitably supported from the building structure where required by means of malleable iron or steel pipe clamps of ample size, either bolted or welded to the pipe and supported at the floor slab. Supports where indicated on the drawings shall also act as anchors to allow for expansion and contraction of the piping. Provide rubber isolators for clamps where required for elimination of vibration and sound to the structure.

I. Vents shall penetrate through the roof with water-tight flashing and shall terminate no less than 7" above the roof and at least 1'-6" from vertical walk and parapets. Coordinate with ventilation plans. Locate all terminations at least 10'-0" from air intakes or windows.

J. Miscellaneous Supports: Wall brackets, etc., shall be provided where required in accordance with the best standard practice of the trade in a manner as approved by the Resident Engineer.

K. In the event additional structural steel is required to transmit loads to main structure, same shall be provided at no additional cost to the Owner.

L. Soil, Waste, Vent and Down Spouts: Hanger rod sizes shall be as follows:

1-1/2" to 2" Pipe	3/8" Rod
2-1/2" to 3-1/2" Pipe	1/2" Rod
4" to 5" Pipe	5/8" Rod

M. For horizontal installations, hangers or supports shall be provided for at least every other joint except when the developed length between supports exceeds 4'. If the developed length exceeds 4', hangers or supports shall be provided at each joint. Supports shall also be provided at each horizontal branch connection. Hangers, supports, or blocks shall be adequate to maintain alignment and prevent sagging or joint separation. Hangers, supports or blocks shall be placed on, or immediately adjacent to, the coupling, not to exceed 18". Adequate provisions shall be made to prevent "shear."

N. Vertical "no-hub" components shall be secured at each stack base, and at sufficiently close intervals to keep system in alignment and to adequately support the weight of the pipe and its contents.

O. Trap arms and similar branches must be firmly secured against movement in any direction. Closet bends shall be stabilized by firmly strapping and blocking. Where vertical closet stubs are used, they must be completely stabilized against all horizontal movement.

P. Domestic Water:

1. Hanger Spacing shall be as Follows for Copper Tubing:

1/2" to 3/4" Pipe	5'-0"
1" Pipe	6'-0"
1-1/4" Pipe	7'-0"
1-1/2" to 2" Pipe	8'-0"
3" and larger Pipe	10'-0"

2. Hanger Rod Sizes shall be as Follows:

3/4" to 2" Pipe	3/8"	Rod
2-1/2" to 3-1/2" Pipe	1/2"	Rod
4" to 5" Pipe	5/8"	Rod
6" to 8" Pipe	3/4"	Rod

END OF SECTION 220529

SECTION 220700 - PLUMBING INSULATION

PART 1 – GENERAL

1.1 DESCRIPTION

A. Provide all plumbing insulation as indicated on the Drawings and as specified, complete.

1.2 SUBMITTALS

A. Refer to 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. 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: 1-1/2½” 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 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.
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 DESCRIPTION

A. Provide potable water and sanitary 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 hot water system with controls, piping, valves, 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.

1.2 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.

1.3 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.

2. NFPA No. 54 National Fuel Gas Code.

3. NFPA No. 110 Emergency and Standby Power Systems.

F. Sheet Metal and Air Conditioning Contractors' National Association, Inc.:

1. SMACNA GFSR Guidelines for Seismic Restraints of Mechanical Systems and Plumbing Piping Systems.

G. Underwriters Laboratory (UL) Applicable requirements and labeling.

H. 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.

1.4 SUBMITTALS

A. Shop Drawings and Product Data:

1. The Following List Includes the Required Shop Drawings That Shall Be Submitted:

a. Plastic piping products.

b. Plumbing fixtures, accessories and trim.

c. Piping.

2. Shop Drawings: The 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. 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.

   a. 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.

   b. 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 replaced after 1 and 3 years of service, with current unit prices and sources of supply.

1.5 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.

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 arresters 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:

2. All no hub piping.

3. Provide standard duty couplings on the following:

4. Vent piping.

5. Coordinate vent terminations with HVAC Contractor to maintain clearance around equipment and a minimum of 15’ clearance from outside air intakes.

6. 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”.

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.

B. Disinfection of Domestic Hot/Cold Water Systems:

1. 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.

2. 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.

3. 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.

4. 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.

5. 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.

6. 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.

7. 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.

8. 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

1.1 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 fixtures are wall 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. Cover fixture bolts with china bolt caps of the same color as the fixture and set in place with plaster of paris.

G. 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.

H. Fixture mounting heights:

1. Refer to Architectural drawings.

I. Floor Drains:

1. Refer to Architectural 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.

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. At 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. 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.

3. 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.

END OF SECTION 224000

SECTION 225000 - PLUMBING SPECIALTIES

PART 1 - GENERAL

1.1 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.

1.2 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.

1.3 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 and hose bibbs.
3. Cleanouts and floor drains.
4. Sleeve penetration systems.

B. Field test reports.

C. Maintenance Data: For plumbing specialties to include in maintenance manuals. Include the following:

1. Trap seal primer valves and systems.

1.4 QUALITY ASSURANCE

A. Plumbing specialties shall bear label, stamp, or other markings of specified testing agency.

B. 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.

C. ASME Compliance: Comply with ASME B31.9, "Building Services Piping," for piping materials and installation.

D. 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

2.1 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.

2.2 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.

B. Trap Seal Primer System: Factory-fabricated, automatic-operation assembly for wall mounting with the following:

1. Manufacturers:

a. Precision Plumbing Products, Inc.

2. Piping: NPS 3/4, ASTM B 88, Type L; copper, water tubing inlet and manifold with number of NPS 1/2 outlets as indicated.

3. Cabinet: Steel box with stainless-steel cover.

4. Electric Controls: 24-hour timer, solenoid valve, and manual switch for 120-V ac power.

5. Water Hammer Arrester: ASSE 1010.

6. Vacuum Breaker: ASSE 1001.

2.3 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. Manufacturers:

a. Josam Co.

b. Smith, Jay R. Mfg. Co.

c. Tyler Pipe; Wade Div.

d. Zurn Industries, Inc.; Specification Drainage Operation.

B. 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.

C. Fixed Air-Gap Fittings: Manufactured cast-iron or bronze drainage fitting with semi-open top with threads or device to secure drainage inlet piping in top and bottom spigot or threaded outlet larger than top inlet. Include design complying with ASME A112.1.2 that will provide fixed air gap between installed inlet and outlet piping.

D. Stack Flashing Fittings: Counterflashing-type, cast-iron fitting, with bottom recess for terminating roof membrane, and with threaded or hub top for extending vent pipe.

E. 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.

F. 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 (25-mm) enclosed air space between outside of pipe and inside of flashing collar extension, with counterflashing.

G. 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.

2.4 SLEEVE PENETRATION SYSTEMS

A. Manufacturers:

1. ProSet Systems, Inc.

B. 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.

2.5 FLASHING MATERIALS

A. Lead Sheet: ASTM B 749, Type L51121, copper bearing, with the following minimum weights and thickness, unless otherwise indicated:

1. Vent Pipe Flashing: 3-lb/sq. ft., 0.0469-inch thickness.

B. Fasteners: Metal compatible with material and substrate being fastened.

C. Metal Accessories: Sheet metal strips, clamps, anchoring devices, and similar accessory units required for installation; matching or compatible with material being installed.

D. Solder: ASTM B 32, lead-free alloy.

E. Bituminous Coating: SSPC-Paint 12, solvent-type, bituminous mastic.

2.6 CLEANOUTS

A. Cleanouts: Comply with ASME A112.36.2M.

1. Application: Floor cleanout, wall cleanout and for installation in exposed piping.

2. 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

PART 3 - EXECUTION

3.1 INSTALLATION

A. 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.

B. 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.

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.

4. Locate at base of each vertical waste stack.

C. Install cleanout deck plates with top flush with finished floor, for floor cleanouts for piping below floors.

D. Install cleanout wall access covers, of types indicated, with frame and cover flush with finished wall, for cleanouts located in concealed piping.

E. Install flashing flange and clamping device with each stack and cleanout passing through floors with waterproof membrane.

F. Install vent flashing sleeves on stacks passing through roof. Secure over stack flashing according to manufacturer's written instructions.

G. 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.

H. 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.

I. Install air vents at piping high points. Include ball, gate, or globe valve in inlet.

J. Install traps on plumbing specialty drain outlets. Omit traps on indirect wastes unless trap is indicated.

K. 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.

3.2 CONNECTIONS

A. Install piping adjacent to equipment to allow service and maintenance.

3.3 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.

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.

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. Extend flashing up vent pipe passing through roofs and turn down into pipe, or secure flashing into cast-iron sleeve having calking recess.

3.4 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.

3.5 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.

3.6 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.

3.7 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 311000 - SITE CLEARING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Protecting existing vegetation to remain.
2. Removing existing vegetation.
3. Clearing and grubbing.
4. Stripping and stockpiling topsoil.
5. Removing above- and below-grade site improvements.
6. Disconnecting, capping or sealing site utilities.
7. Temporary erosion- and sedimentation-control measures.

1.2 MATERIAL OWNERSHIP

A. Except for stripped topsoil and other materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.3 PROJECT CONDITIONS

A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.

B. Salvable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises where indicated on plans.

C. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.

D. Do not commence site clearing operations until temporary erosion- and sedimentation-control and plant-protection measures are in place.

E. The following practices are prohibited within protection zones:

1. Storage of construction materials, debris, or excavated material.
2. Parking vehicles or equipment.
3. Foot traffic.
4. Erection of sheds or structures.
5. Impoundment of water.
6. Excavation or other digging unless otherwise indicated.
7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Division 31 Section "Earth Moving."

1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect and maintain benchmarks and survey control points from disturbance during construction.

B. Locate and clearly identify trees, shrubs, and other vegetation to remain or to be relocated.

C. Protect existing site improvements to remain from damage during construction.

1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

A. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings and requirements of authorities having jurisdiction.

B. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.

C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.

D. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.3 TREE AND PLANT PROTECTION

A. General: Protect trees and plants remaining on-site.

B. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Resident Engineer.

3.4 EXISTING UTILITIES

A. Locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place.

1. Arrange with utility companies to shut off indicated utilities.

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

1. Notify Resident Engineer not less than two days in advance of proposed utility interruptions.

2. Do not proceed with utility interruptions without Resident Engineer's written permission.

C. Removal of underground utilities is included in other Sections.

3.5 CLEARING AND GRUBBING

A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.

1. Grind down stumps and remove roots, obstructions, and debris to a depth of 18 inches below exposed subgrade.

2. Use only hand methods for grubbing within protection zones.

B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.

1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches, and compact each layer to a density equal to adjacent original ground.

3.6 TOPSOIL STRIPPING

A. Remove sod and grass before stripping topsoil.

B. Strip topsoil in a manner to prevent intermingling with underlying subsoil or other waste materials.

C. Stockpile topsoil away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.

3.7 SITE IMPROVEMENTS

A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.

3.8 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.

Separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities. Do not interfere with other Project work.

END OF SECTION 311000

SECTION 312000 - EARTH MOVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Preparing subgrades for slabs-on-grade, walks, pavements, turf and grasses, and plants.
2. Excavating and backfilling for buildings and structures.
3. Drainage course for concrete slabs-on-grade.
4. Subbase course for concrete walks, pavements.
5. Subbase course and base course for asphalt paving.
6. Excavating and backfilling for utility trenches.

1.2 DEFINITIONS

A. Backfill: Soil material used to fill an excavation.

1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
2. Final Backfill: Backfill placed over initial backfill to fill a trench.

B. Base Course: Aggregate layer placed between the subbase course and hot-mix asphalt paving.

C. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.

D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.

E. Drainage Course: Aggregate layer supporting the slab-on-grade that also minimizes upward capillary flow of pore water.

F. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.

1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Resident Engineer. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
2. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Resident Engineer. Unauthorized excavation, as well as remedial work directed by Resident Engineer, shall be without additional compensation.

G. Fill: Soil materials used to raise existing grades.

H. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

I. Subbase Course: Aggregate layer placed between the subgrade and base course for hot-mix asphalt pavement, or aggregate layer placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.

J. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.

K. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.3 QUALITY ASSURANCE

A. Preexcavation Conference: Conduct conference at Project site.

1.4 PROJECT CONDITIONS

A. Utility Locator Service: Notify utility locator service for area where Project is located before beginning earth moving operations.

B. Do not commence earth moving operations until plant-protection measures are in place.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

Revise first two paragraphs below and identify soil materials according to geotechnical engineer's written recommendations. Revise soil groups and size of stone to suit Project. Most soils are classified according to ASTM D 2487. Heavy civil or highway projects may use AASHTO M 145.

B. Satisfactory Soils: Soil Classification Groups GW, GP, GM, SW, SP, and SM according to ASTM D 2487, or a combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.

Retain subparagraphs below if required to further qualify satisfactory soil groups.

1. Liquid Limit:

2. Plasticity Index:

C. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D 2487, or a combination of these groups.

1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.

Terms, descriptions, and gradations of granular soil materials in remaining paragraphs are examples only. Revise to comply with local practices and to suit Project. For example, granular materials may be referenced by state or local highway designations rather than by ASTM classifications.

D. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.

E. Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 95 percent passing a 1-1/2-inch sieve and not more than 8 percent passing a No. 200 sieve.

F. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.

G. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve.

H. Drainage Course: Narrowly graded mixture of washed crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2-inch sieve and 0 to 5 percent passing a No. 8 sieve.

2.2 ACCESSORIES

Retain one or both paragraphs in this article to suit Project. Use of warning tapes may be mandatory for underground hazardous utilities.

A. Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility; colored to comply with local practice or requirements of authorities having jurisdiction.

B. Detectable Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored to comply with local practice or requirements of authorities having jurisdiction.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth moving operations.

B. Protect and maintain erosion and sedimentation controls during earth moving operations.

C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

3.2 EXCAVATION, GENERAL

A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.

1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.

3.3 EXCAVATION FOR STRUCTURES

A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch. If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.

1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.

B. Excavations at Edges of Tree- and Plant-Protection Zones:

1. Excavate by hand to indicated lines, cross sections, elevations, and subgrades. Use narrow-tine spading forks to comb soil and expose roots. Do not break, tear, or chop exposed roots. Do not use mechanical equipment that rips, tears, or pulls roots.

3.4 EXCAVATION FOR WALKS AND PAVEMENTS

A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.5 EXCAVATION FOR UTILITY TRENCHES

A. Excavate trenches to indicated gradients, lines, depths, and elevations.

B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe or conduit unless otherwise indicated.

1. Clearance: 12 inches each side of pipe or conduit.

C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade.

1. Excavate trenches 6 inches deeper than elevation required in rock or other unyielding bearing material, 4 inches deeper elsewhere, to allow for bedding course.

D. Trenches in Tree- and Plant-Protection Zones:

1. Hand-excavate to indicated lines, cross sections, elevations, and subgrades. Use narrow-tine spading forks to comb soil and expose roots. Do not break, tear, or chop exposed roots. Do not use mechanical equipment that rips, tears, or pulls roots.

2. Do not cut main lateral roots or taproots; cut only smaller roots that interfere with installation of utilities.

3.6 SUBGRADE INSPECTION

A. Proof-roll subgrade below the building slabs and pavements with a pneumatic-tired dump truck to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.

B. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Resident Engineer, without additional compensation.

3.7 UNAUTHORIZED EXCAVATION

A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 2500 psi, may be used when approved by Resident Engineer.

1. Fill unauthorized excavations under other construction, pipe, or conduit as directed by Resident Engineer.

3.8 STORAGE OF SOIL MATERIALS

A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.

1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.9 UTILITY TRENCH BACKFILL

A. Place backfill on subgrades free of mud, frost, snow, or ice.

B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.

C. Place and compact initial backfill of satisfactory soil, free of particles larger than 1 inch in any dimension, to a height of 12 inches over the pipe or conduit.

1. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.

D. Place and compact final backfill of satisfactory soil to final subgrade elevation.

Revise tape depths in paragraph below to suit office practice if applicable.

E. Install warning tape directly above utilities, 12 inches below finished grade, except 6 inches below subgrade under pavements and slabs.

3.10 SOIL FILL

A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.

B. Place and compact fill material in layers to required elevations as follows:

1. Under grass and planted areas, use satisfactory soil material.

2. Under walks and pavements, use satisfactory soil material.

3. Under steps and ramps, use engineered fill.

4. Under building slabs, use engineered fill.

5. Under footings and foundations, use engineered fill.

3.11 SOIL MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.

1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.

2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.12 COMPACTION OF SOIL BACKFILLS AND FILLS

A. Place backfill and fill soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.

B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.

C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 1557:

1. Under structures, building slabs, steps, and pavements, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent.
2. Under walkways, scarify and recompact top 12 inches below subgrade and compact each layer of backfill or fill soil material at 95 percent.
3. Under turf or unpaved areas, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 85 percent.
4. For utility trenches, compact each layer of initial and final backfill soil material at 85percent.

3.13 GRADING

A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.

B. Site Rough Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:

1. Turf or Unpaved Areas: Plus or minus 1 inch.
2. Walks: Plus or minus 1 inch.
3. Pavements: Plus or minus 1/2 inch.

C. Grading inside Building Lines: Finish subgrade to a tolerance of 1/2 inch when tested with a 10-foot straightedge.

3.14 SUBBASE AND BASE COURSES UNDER PAVEMENTS AND WALKS

A. Place subbase course and base course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place subbase course and base course under pavements and walks as follows:

1. Shape subbase course and base course to required crown elevations and cross-slope grades.
2. Place subbase course and base course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
3. Compact subbase course and base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.

3.15 FIELD QUALITY CONTROL

A. Testing Agency: Contractor will engage a qualified geotechnical engineering testing agency to perform tests and inspections.

B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.

C. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Resident Engineer.

D. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained.

3.16 PROTECTION

A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.

B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.

C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.

1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.17 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 312000

SECTION 321313 - CONCRETE PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Driveways.
2. Curbs and gutters.
3. Walks.

1.2 SUBMITTALS

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

B. Samples: For each exposed product and for each color and texture specified.

C. Other Action Submittals:

1. Design Mixtures: For each concrete paving mixture. Include alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1.3 QUALITY ASSURANCE

A. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

B. ACI Publications: Comply with ACI 301 unless otherwise indicated.

PART 2 - PRODUCTS

2.1 STEEL REINFORCEMENT

A. Recycled Content: Provide steel reinforcement with an average recycled content of steel so postconsumer recycled content plus one-half of preconsumer recycled content is not less than 25 percent.

B. Plain-Steel Welded Wire Reinforcement: ASTM A 185/A 185M, fabricated from as-drawn steel wire into flat sheets.

C. Deformed-Steel Welded Wire Reinforcement: ASTM A 497/A 497M, flat sheet.

D. Reinforcing Bars: ASTM A 615/A 615M, Grade 60; deformed.

E. Plain-Steel Wire: ASTM A 82/A 82M, as drawn.

F. Deformed-Steel Wire: ASTM A 496/A 496M.

G. Dowel Bars: ASTM A 615/A 615M, Grade 60 plain-steel bars; zinc coated (galvanized) after fabrication according to ASTM A 767/A 767M, Class I coating. Cut bars true to length with ends square and free of burrs.

H. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded wire reinforcement, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete specified.

2.2 CONCRETE MATERIALS

A. Cementitious Material: Use the following cementitious materials, of same type, brand, and source throughout Project:

1. Portland Cement: ASTM C 150, gray portland cement Type II. Supplement with the following:

    a. Fly Ash: ASTM C 618, Class F.

    b. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.

B. Normal-Weight Aggregates: ASTM C 33, Class 4S, uniformly graded. Provide aggregates from a single source.

C. Water: Potable and complying with ASTM C 94/C 94M.

D. Air-Entraining Admixture: ASTM C 260.

E. Chemical Admixtures: Admixtures certified by manufacturer to be compatible with other admixtures and to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material.

2.3 RELATED MATERIALS

A. Joint Fillers: ASTM D 1752, cork or self-expanding cork in preformed strips.

B. Slip-Resistive Aggregate Finish: Factory-graded, packaged, rustproof, nonglazing, abrasive aggregate of fused aluminum-oxide granules or crushed emery aggregate containing not less than 50 percent aluminum oxide and not less than 20 percent ferric oxide; unaffected by freezing, moisture, and cleaning materials.

2.4 CONCRETE MIXTURES

A. Prepare design mixtures, proportioned according to ACI 301, with the following properties:

1. Compressive Strength (28 Days): 3000 psi.

2. Maximum Water-Cementitious Materials Ratio at Point of Placement: 0.45.

3. Slump Limit: 4 inches, plus or minus 1 inch.

4. Air Content: 5-1/2 percent plus or minus 1.5 percent.

B. Chemical Admixtures: Use admixtures according to manufacturer's written instructions.

C. Synthetic Fiber: Uniformly disperse in concrete mixture at manufacturer's recommended rate, but not less than 1.0 lb/cu. yd.

D. Color Pigment: Add color pigment to concrete mixture according to manufacturer's written instructions.

2.5 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Furnish batch certificates for each batch discharged and used in the Work.

PART 3 - EXECUTION

3.1 EXAMINATION AND PREPARATION

A. Proof-roll prepared subbase surface below concrete paving to identify soft pockets and areas of excess yielding.

B. Remove loose material from compacted subbase surface immediately before placing concrete.

3.2 EDGE FORMS AND SCREED CONSTRUCTION

A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.

B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

3.3 STEEL REINFORCEMENT

A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

3.4 JOINTS

A. General: Form construction, isolation, and contraction joints and tool edges true to line, with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline unless otherwise indicated.

B. Construction Joints: Set construction joints at side and end terminations of paving and at locations where paving operations are stopped for more than one-half hour unless paving terminates at isolation joints.

C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, other fixed objects, and where indicated.

D. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness to match jointing of existing adjacent concrete paving:

E. Edging: After initial floating, tool edges of paving, gutters, curbs, and joints in concrete with an edging tool to a 1/4-inch radius. Repeat tooling of edges after applying surface finishes. Eliminate edging-tool marks on concrete surfaces.

3.5 CONCRETE PLACEMENT

A. Moisten subbase to provide a uniform dampened condition at time concrete is placed.

B. Comply with ACI 301 requirements for measuring, mixing, transporting, placing, and consolidating concrete.

C. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.

D. Screed paving surface with a straightedge and strike off.

E. Commence initial floating using bull floats or darbies to impart an open-textured and uniform surface plane before excess moisture or bleed water appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.

3.6 FLOAT FINISHING

A. General: Do not add water to concrete surfaces during finishing operations.

B. Float Finish: Begin the second floating operation when bleed-water sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.

1. Burlap Finish: Drag a seamless strip of damp burlap across float-finished concrete, perpendicular to line of traffic, to provide a uniform, gritty texture.

2. Medium-to-Fine-Textured Broom Finish: Draw a soft-bristle broom across float-finished concrete surface perpendicular to line of traffic to provide a uniform, fine-line texture.

3. Medium-to-Coarse-Textured Broom Finish: Provide a coarse finish by striating float-finished concrete surface 1/16 to 1/8 inch deep with a stiff-bristled broom, perpendicular to line of traffic.

C. Slip-Resistive Aggregate Finish: Before final floating, spread slip-resistive aggregate finish on paving surface according to manufacturer's written instructions.

1. Cure concrete with curing compound recommended by slip-resistive aggregate manufacturer. Apply curing compound immediately after final finishing.

2. After curing, lightly work surface with a steel wire brush or abrasive stone and water to expose nonslip aggregate.

3.7 CONCRETE PROTECTION AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.

B. Comply with ACI 306.1 for cold-weather protection.

C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete but before float finishing.

D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.

E. Curing Methods: Cure concrete by moisture curing, moisture-retaining-cover curing, curing compound or a combination of these.

3.8 PAVING TOLERANCES

A. Comply with tolerances in ACI 117 and as follows:

1. Elevation: 3/4 inch.

2. Thickness: Plus 3/8 inch, minus 1/4 inch.

3. Surface: Gap below 10-foot- long, unleveled straightedge not to exceed 1/2 inch.

4. Joint Spacing: 3 inches.

5. Contraction Joint Depth: Plus 1/4 inch, no minus.

6. Joint Width: Plus 1/8 inch, no minus.

3.9 REPAIRS AND PROTECTION

A. Remove and replace concrete paving that is broken, damaged, or defective or that does not comply with requirements in this Section. Remove work in complete sections from joint to joint unless otherwise approved by Resident Engineer.

B. Protect concrete paving from damage. Exclude traffic from paving for at least 14 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing surface stains and spillage of materials as they occur.

C. Maintain concrete paving free of stains, discoloration, dirt, and other foreign material. Sweep paving not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION 321313

SECTION 321373 - CONCRETE PAVING JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Cold-applied joint sealants.
2. Cold-applied, jet-fuel-resistant joint sealants.
3. Hot-applied joint sealants.
4. Hot-applied, jet-fuel-resistant joint sealants.

1.2 PRECONSTRUCTION TESTING

A. Preconstruction Compatibility and Adhesion Testing: Submit to joint-sealant manufacturers, eight, Samples of materials that will contact or affect joint sealants. Use ASTM C 1087 to determine whether priming and other specific joint-preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.

1.3 SUBMITTALS

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

B. Samples: For each kind and color of joint sealant required.

C. Pavement-Joint-Sealant Schedule: Include the following information:

1. Joint-sealant application, joint location, and designation.
2. Joint-sealant manufacturer and product name.
3. Joint-sealant formulation.
4. Joint-sealant color.

D. Product certificates.

E. Product test reports.

F. Preconstruction compatibility and adhesion test reports.

1.4 QUALITY ASSURANCE

A. Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021.

B. Preinstallation Conference: Conduct conference at Project site.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Compatibility: Provide joint sealants, backing materials, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer based on testing and field experience.

B. Colors of Exposed Joint Sealants: Match Architect's samples.

2.2 COLD-APPLIED JOINT SEALANTS

A. Single-Component, Self-Leveling, Silicone Joint Sealant for Concrete: ASTM D 5893, Type SL.

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. Crafco Inc., an ERGON company; RoadSaver Silicone SL.

    b. Dow Corning Corporation; 890-SL.

    c. Pecora Corporation; 300 SL.

2.3 JOINT-SEALANT BACKER MATERIALS

A. Round Backer Rods for Cold- and Hot-Applied Joint Sealants: ASTM D 5249, Type 1, of diameter and density required to control sealant depth and prevent bottom-side adhesion of sealant.

B. Round Backer Rods for Cold-Applied Joint Sealants: ASTM D 5249, Type 3, of diameter and density required to control joint-sealant depth and prevent bottom-side adhesion of sealant.

C. Backer Strips for Cold- and Hot-Applied Joint Sealants: ASTM D 5249; Type 2; of thickness and width required to control joint-sealant depth, prevent bottom-side adhesion of sealant, and fill remainder of joint opening under sealant.

2.4 PRIMERS

A. Primers: Product 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.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated unless more stringent requirements apply.

B. Cleaning of Joints: Clean out joints immediately before installing joint sealants.

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

D. Install joint-sealant backings of kind indicated to support joint 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 joint-sealant backings.

2. Do not stretch, twist, puncture, or tear joint-sealant backings.

3. Remove absorbent joint-sealant backings that have become wet before sealant application and replace them with dry materials.

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

1. Place joint sealants so they directly contact and fully wet joint substrates.

2. Completely fill recesses in each joint configuration.

3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

F. Tooling of Nonsag Joint Sealants: Immediately after joint-sealant application and before skinning or curing begins, tool sealants according to the following requirements 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 joint sealant from surfaces adjacent to joints.

2. Use tooling agents that are approved in writing by joint-sealant manufacturer and that do not discolor sealants or adjacent surfaces.

G. Provide joint configuration to comply with joint-sealant manufacturer's written instructions unless otherwise indicated.

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

END OF SECTION 321373

SECTION 323113 - CHAIN-LINK FENCES AND GATES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Galvanized steel chain-link fabric.

2. Galvanized steel framework.

1.2 SUBMITTALS

A. Shop Drawings: Show locations of fence, each gate, posts, rails, and tension wires and details of gate swing, or other operation, hardware, and accessories. Indicate materials, dimensions, sizes, weights, and finishes of components. Include plans, elevations, sections, gate swing and other required installation and operational clearances, and details of post anchorage and attachment and bracing.

B. Product Certificates: Signed by manufacturers of chain-link fences and gates certifying that products furnished comply with requirements.

1.3 PROJECT CONDITIONS

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

PART 2 - PRODUCTS

2.1 CHAIN-LINK FENCE FABRIC

A. Carbon Steel Chain-Link Fence Fabric: Provide fabric fabricated in one-piece widths for fencing in height of 12 feet and less. Comply with CLFMI's "Product Manual" and with requirements indicated below:

B. Standard Fence Fabric:

1. Mesh and Wire Size: 2-inch mesh, 0.148-inch diameter (9 gauge).

2. Zinc-Coated Fabric: ASTM A 392, hot-dipped galvanized after weaving.

a. Class 2: Not less than 2.0 oz./sq. ft. of uncoated wire surface.

b. Class 1: Not less than 1.2 oz/sq. ft. of uncoated wire surface on 11 gauge fabric only.

C. Selvage: Knuckled at bottom and top.

2.2 FENCE FRAMING – See attached table

A. Round Steel Pipe: Standard weight, Nominal Pipe Size (NPS), Schedule 40, galvanized steel pipe, hot-dipped after fabrication, complying with ASTM F 1083 and ASTM A53. Comply with ASTM F 1043, Material Design Group IA, external and internal coating Type A, consisting of not less than 1.8-oz./sq. ft. zinc; and the following strength and stiffness requirements:

1. Line, End, Corner, and Pull Posts and Top Rail and gate frames: Per ASTM A53 requirements, Schedule 40 steel pipe, galvanized.

2. Thread protectors shall not be used as couplings under any circumstances.

B. Post Brace Rails: Provide brace rail with truss rod assembly for each gate, end, and pull post. Provide two brace rails extending in opposing directions, each with truss rod assembly, for each corner post and for pull posts. Provide rail ends and clamps for attaching rails to posts.

C. Top Rails (Provide at all chain-link fencing): Fabricate top rail from lengths 21 feet or longer, with wedged-end or fabricated for expansion-type coupling, forming a continuous rail along top of chain-link fabric.

1. Top rail which carries water: Assemble with threaded fittings. Provide full-size main and branch tees at 54 feet +/- O.C. with reducer bushings (for loose key hose bibs) and/or plug (for future irrigation water connections or where rail is cut for gates). Hose bibs shall be 4-feet above grade. Provide threaded elbow and drop where gate openings are installed. Connect and maintain continuity of top water rail where fence height changes.

D. Top rails, mid-rails, diagonal braces, and bottom rails shall be 1-¼ inches inside diameter by 2.27 lb/ft.

E. Fencing which will be supporting windscreen shall have posts designed for extra wind load.

F. All pipe used in chain link fencing shall be stamped by the manufacturer, either with indelible ink or incused, indicating the pipe wall thickness, inside diameter, ASTM standard to which it conforms, and the manufacturer's name.

G. Schedule of pipe sizes

Table 1
ASTM A53 Threaded and Coupled Pipe
Black and Galvanized ½" to 6"

Nominal Size	Outside Diameter		Wall Thickness			Weight		
In.	In.	Mm	In.	Mm	. No	lb/ft	Kg/m	Kg/ft
1/2"	0.084	21.3	0.109	2.77	40 (STD)	0.85	1.26	0.39
			0.147	3.73	80 (XS)	1.09	1.62	0.49
3/4"	1.050	26.7	0.113	2.87	40 (STD)	1.13	1.68	0.51
			0.154	3.91	80 (XS)	1.48	2.20	0.67
1"	1.315	33.4	0.133	3.38	40 (STD)	1.68	2.50	0.76
			0.179	4.55	80 (XS)	2.18	3.24	0.99
1 1/4"	1.660	42.2	0.140	3.56	40 (STD)	2.288	3.39	1.04
			0.191	4.85	80 (XS)	3.02	4.49	1.37
1 1/2"	1.900	48.3	0.145	3.68	40 (STD)	2.73	4.06	1.24
			0.200	5.08	80 (XS)	3.66	5.45	1.66
2"	2.375	60.3	0.154	3.91	40 (STD)	3.68	5.42	1.67
			0.208	5.54	80 (XS)	5.07	7.55	2.30

2 1/2"	2.875	73.0	0.203	5.16	40 (STD)	5.82	8.66	2.64
			0.276	7.01	80 (XS)	7.73	11.50	3.51
3"	3.500	88.9	0.216	5.49	40 (STD)	7.62	11.34	3.46
			0.300	7.62	80 (XS)	10.33	15.37	4.69
3 1/2"	4.000	101.6	0.226	5.74	40 (STD)	9.2	13.69	4.18
			0.318	8.08	80 (XS)	12.63	18.80	5.73
4"	4.500	114.3	0.237	6.02	40 (STD)	10.89	16.21	4.94
			0.337	8.56	80 (XS)	15.17	22.58	6.89
6”	6.625	168.3	0.280	7.11	40 (STD)	18.97	28.23	8.60
			0.312	7.92	80 (XS)	21.04	31.31	9.54

2.3 TENSION WIRE – Hot-dipped galvanized

A. General: Provide horizontal tension wire at the following locations:

1. Location: Extended along bottom of all fence fabric.

B. Metallic-Coated Steel Wire: 0.177-inch- diameter (7-gauge), marcelled tension wire complying with ASTM A 824 and the following:

1. Coating: Type II, zinc coated (galvanized) by the hot-dip process, with the following minimum coating weight:

a. Class 2: Not less than 1.2 oz./sq. ft. of uncoated wire surface.

b. Matching chain-link fabric coating weight.

2.4 SWING GATES - See Table 2

A. General: Comply with ASTM F 900 for swing-type gates.

B. Metal Pipe Tubing: Hot-dipped galvanized steel, Nominal Pips Size (NPS). Comply with ASTM F 1083, ASTM A53 and ASTM F 1043 for materials and protective coatings.

C. Frames and Bracing: Fabricate members from round hot-dipped galvanized steel pipe with inside dimension (1 ½ inches) and weight (Nominal Pipe size for gate frame @ 2.73 lb/l.f.).

D. Frame Corner Construction: As follows:

1. Welded, and 5/16-inch- diameter, adjustable truss rods for panels 5 feet wide or wider.

E. Gate Posts: Fabricate members from round hot-dipped galvanized steel pipe with inside dimension and weight according to Table 2 for the gate leaf widths required.

1. All gate posts shall be of sufficient strength so that the total deflection of the gate and the post at the end of the gate leaf shall not exceed the lesser of 2% of the gate leaf width or 4 inches.

2. When necessary to meet this requirement due to the total weight of the gate leaf, the next larger size posts required shall be used. Gates shall not be equipped with rollers or casters for support.

TABLE 2

SWING GATE MEMBER SIZES		
Gate opening	Nominal size	lb/ft.
Single leaf to 6 feet	2 1/2"	5.79
Double leaf to 12 feet opening		
Single leaf 6 to 13 feet	3 1/2"	9.11
Double leaf 12 to 26 feet opening		
Single leaf 13 to 18 feet	6"	18.97
Double leaf 26 to 36 feet opening		

F. Hardware: Latches permitting operation from both sides of gate, heavy-duty offset hinges, center gate stops and, for each gate leaf more than 5 feet wide, keepers. Fabricate latches with integral eye openings for padlocking; padlock accessible from both sides of gate.

1. Provide means of padlocking gates in the open position where indicated that gate must be locked in open position during activity hours.
2. In addition to bolts, spotweld hinges and latches to posts.
3. All screws and bolts shall be tamper-proof.
4. Chains: Provide each gate with 3-foot length of chain to secure gate to fence with a padlock when open. Install ¾ inch round eye, cadmium plated harness snap on one end of chain. Secure chain with spotweld.
5. Gates shall swing a minimum of 180 degrees.
6. Single latches shall be industrial gravity type gate latch with automatic stop.
7. Double latch shall be drop bar one-inch inside diameter by 1.68 lb/ft nominal pipe size securely bolted to gate frame and shall engage an iron gate stop. Drop bar shall engage 1-½" by 2.73 lb/ft. inside pipe diameter pipe sleeve set in concrete. Provide drop bar keeper on gate to secure it in lifted position.

2.5 FITTINGS - Hot-dipped galvanized

A. General: Provide fittings for a complete fence installation, including special fittings for corners. Comply with ASTM F 626.

B. Post and Line Caps: Hot-dip galvanized pressed steel or hot-dip galvanized cast iron. Provide weathertight closure cap for each post.

1. Provide line post caps with loop to receive top rail.

C. Rail and Brace Ends: Hot-dip galvanized pressed steel or hot-dip galvanized cast iron. Provide rail ends or other means for attaching rails securely to each gate, corner, pull, and end post.

D. Rail Fittings: Provide the following:

1. Top Rail Sleeves: Hot-dip galvanized pressed steel or round steel tubing. Not less than 6 inches long.

2. Rail Clamps: Hot-dip galvanized pressed steel. Provide line and corner boulevard clamps for connecting intermediate rails in the fence line to line posts.

E. Tension and Brace Bands: Hot-dip galvanized pressed steel.

F. Tension Bars: Hot-dip galvanized steel, length not less than 2 inches shorter than full height of chain-link fabric. Provide one bar for each gate and end post, and two for each corner and pull post, unless fabric is integrally woven into post.

G. Truss Rod Assemblies: Hot-dip galvanized steel rod and turnbuckle or other means of adjustment.

H. Tie Wires, Clips, and Fasteners: Provide the following types according to ASTM F 626:

1. Standard Round Wire Ties: For attaching chain-link fabric to posts, rails, and frames, complying with the following:

a. Hot-Dip Galvanized Steel: 0.148-inch- diameter (9-gauge) wire; galvanized coating thickness matching coating thickness of chain-link fence fabric.

2. Round Wire Hog Rings: Hot-dip galvanized steel for attaching chain-link fabric to horizontal tension wires.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for a verified survey of property lines and legal boundaries, site clearing, earthwork, pavement work, and other conditions affecting performance.

1. Do not begin installation before final grading is completed, unless otherwise permitted by Resident Engineer.

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

3.2 PREPARATION

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

3.3 INSTALLATION, GENERAL

A. General: Install chain-link fencing to comply with ASTM F 567 and more stringent requirements specified.

3.4 CHAIN-LINK FENCE INSTALLATION

A. Terminal Posts: Locate terminal end, corner, and gate posts per ASTM F 567 and terminal pull posts at changes in horizontal or vertical alignment of 15 degrees or more

B. Line Posts: Space line posts uniformly as follows:

1. Standard fencing: 10 feet o.c.

2. Tennis court fencing: 10 feet o.c.

3. Handball court fencing: 5 to 6 feet o.c., based on bay size.

4. High Security fencing: 8 feet o.c.

C. Post Bracing Assemblies: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Install braces at end and gate posts and at both sides of corner and pull posts. Locate horizontal braces at mid-height of fabric on fences with top rail and at two-thirds fabric height on fences without top rail. Install so posts are plumb when diagonal rod is under proper tension.

D. Tension Wire: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Pull wire taut, without sags. Fasten fabric to tension wire with 0.120-inch- diameter hog rings of same material and finish as fabric wire, spaced a maximum of 24 inches o.c. Install tension wire in locations indicated before stretching fabric.

1. Bottom Tension Wire: Install tension wire within 6 inches of bottom of fabric and tie to each post with not less than same gage and type of wire.

E. Top Rail: Where indicated, install according to ASTM F 567, maintaining plumb position and alignment of fencing. Run rail continuously through line post caps, bending to radius for curved runs and terminating into rail end attached to posts or post caps fabricated to receive rail at terminal posts. Provide expansion couplings as recommended by fencing manufacturer.

F. Chain-Link Fabric: Apply fabric to outside of enclosing framework. Leave 2 inches between finish grade or surface and bottom selvage, except leave one inch at tennis court fabric. Pull fabric taut and tie to posts, rails, and tension wires. Anchor to framework so fabric remains under tension after pulling force is released.

1. Do not allow fabric to be in contact with finish grade.

G. Tension or Stretcher Bars: Thread through fabric and secure to end, corner, pull, and gate posts with tension bands spaced not more than 15 inches o.c.

H. Tie Wires: Use wire of proper length to firmly secure fabric to line posts and rails. Attach wire at one end to chain-link fabric, wrap wire around post a minimum of 180 degrees, and attach other end to chain-link fabric per ASTM F 626. Bend ends of wire to minimize hazard to individuals and clothing.

1. Maximum Spacing: Tie fabric to line posts 12 inches o.c. and to braces 24 inches o.c.

I. Fasteners: Install nuts for tension bands and carriage bolts on the side of the fence opposite the fabric side.

3.5 GATE INSTALLATION

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

3.6 ADJUSTING

A. Gate: Adjust gate to operate smoothly, easily, and quietly, free from binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.

B. Lubricate hardware and other moving parts.

3.7 GALVANIZE REPAIR

A. Touch-up welds and damaged galvanized surfaces with “Galvicon” by Galvicon Corp., or “Drygalv” by Anchor Brand Co., or approved equal.

END OF SECTION 323113

SECTION 329200 - TURF AND GRASSES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Sodding.

2. Turf renovation.

1.2 QUALITY ASSURANCE

A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful turf establishment.

1. Experience: Three years' experience in turf installation."

1.3 DELIVERY, STORAGE, AND HANDLING

A. Sod: Harvest, deliver, store, and handle sod according to requirements in "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" sections in TPI's "Guideline Specifications to Turfgrass Sodding." Deliver sod within 24 hours of harvesting and in time for planting promptly. Protect sod from breakage and drying.

B. Bulk Materials:

1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.

2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.

3. Accompany each delivery of bulk materials with appropriate certificates.

1.4 FIELD CONDITIONS

A. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 TURFGRASS SOD

A. Turfgrass Sod: Certified, complying with "Specifications for Turfgrass Sod Materials" in TPI's "Guideline Specifications to Turfgrass Sodding." Furnish viable sod of uniform density, color, and texture that is strongly rooted and capable of vigorous growth and development when planted.

B. Turfgrass Species: Provide Turf Sod acceptable to the City of San Diego Park and Rec Department. Furnish Tifway Bermuda; or Tifway II Bermuda, or GN-1 Bermuda. Hybrid Bermuda sods that do not contain perennial rye shall be over seeded with “Grand Slam” or ‘Turfstar’ Perennial Rye, at a rate of 5 lbs./1,000 square feet.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to be planted for compliance with requirements and other conditions affecting installation and performance of the Work.

1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.

2. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.

3. Uniformly moisten excessively dry soil that is not workable or which is dusty.

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

C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Architect and replace with new planting soil.

3.2 PREPARATION

A. Protect structures; utilities; sidewalks; pavements; and other facilities, trees, shrubs, and plantings from damage caused by planting operations.

1. Protect grade stakes set by others until directed to remove them.

B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.3 TURF AREA PREPARATION

A. General: Prepare planting area for soil placement and mix planting soil according to generally accepted practices.

B. Placing Planting Soil: Reduce elevation of planting soil to allow for soil thickness of sod.

C. Moisten prepared area before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

D. Before planting, obtain Resident Engineer’s acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.4 SODDING

A. Lay sod within 24 hours of harvesting unless a suitable preservation method is accepted by Resident Engineer prior to delivery time. Do not lay sod if dormant or if ground is frozen or muddy.

B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to soil or sod during installation. Tamp and roll lightly to ensure contact with soil, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.

1. Lay sod across slopes exceeding 1:3.

C. Saturate sod with fine water spray within two hours of planting. During first week after planting, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches below sod.

3.5 TURF RENOVATION

A. Renovate existing turf where removed or damaged by construction activities.

B. Renovate turf damaged by Contractor's operations, such as storage of materials or equipment and movement of vehicles.

1. Reestablish turf where settlement or washouts occur or where minor regrading is required.

2. Install new planting soil as required.

C. Remove sod and vegetation from diseased or unsatisfactory turf areas; do not bury in soil.

D. Remove topsoil containing foreign materials, such as oil drippings, fuel spills, stones, gravel, and other construction materials resulting from Contractor's operations, and replace with new planting soil.

E. Mow, dethatch, core aerate, and rake existing turf.

F. Remove weeds before seeding. Where weeds are extensive, apply selective herbicides as required. Do not use pre-emergence herbicides.

G. Remove waste and foreign materials, including weeds, soil cores, grass, vegetation, and turf, and legally dispose of them off Owner's property.

H. Till stripped, bare, and compacted areas thoroughly to a soil depth of 6 inches.

I. Apply initial fertilizer required for establishing new turf and mix thoroughly into top 4 inches of existing soil. Install new planting soil to fill low spots and meet finish grades.

1. Initial Fertilizer: Commercial fertilizer applied according to manufacturer's recommendations.

J. Apply sod as required for new turf.

K. Water newly planted areas and keep moist until new turf is established.

3.6 TURF MAINTENANCE

A. General: Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.

1. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and turf damaged or lost in areas of subsidence.

2. Apply treatments as required to keep turf and soil free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.

B. Watering: Install and maintain temporary piping, hoses, and turf-watering equipment to convey water from sources and to keep turf uniformly moist to a depth of 4 inches.

1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.

2. Water turf with fine spray at a minimum rate of 1 inch per week unless rainfall precipitation is adequate.

C. Mow turf as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than one-third of grass height. Remove no more than one-third of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain the following grass height:

3.7 SATISFACTORY TURF

A. Turf installations shall meet the following criteria as determined by Resident Engineer:

1. Satisfactory Sodded Turf: At end of maintenance period, a healthy, well-rooted, even-colored, viable turf has been established, free of weeds, open joints, bare areas, and surface irregularities.

B. Use specified materials to reestablish turf that does not comply with requirements, and continue maintenance until turf is satisfactory.

3.8 CLEANUP AND PROTECTION

A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.

B. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.

C. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after plantings are established.

D. Remove nondegradable erosion-control measures after grass establishment period.

3.9 MAINTENANCE SERVICE

A. Turf Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in "Turf Maintenance" Article. Begin maintenance immediately after each area is planted and continue until acceptable turf is established, but for not less than the following periods:

1. Sodded Turf: 90 days from date of Substantial Completion.

END OF SECTION 329200

v valid (CA)

City of San Diego

CONTRACTOR'S NAME: Atlas Development
ADDRESS: 9916 Lomas Santa Fe Dr #115 Solana Beach
TELEPHONE NO.: 619-200-0902 FAX NO.: 858-350-9337
CITY CONTACT: Claudia Abarca, Contract Specialist, Email: Cabarca@sandiego.gov
Phone No. 619-533-3439, Fax No. (619) 533-3633
C.Ritter/NB/egz

CONTRACT DOCUMENTS

FOR

ALLIED GARDENS POOL ADA IMPROVEMENTS

VOLUME 2 OF 2

BID NO.:	**L-14-5648-DBB-2-A**
SAP NO. (WBS/IO/CC):	**B-10167**
CLIENT DEPARTMENT:	**1714**
COUNCIL DISTRICT:	**7**
PROJECT TYPE:	**BE**

THIS CONTRACT IS SUBJECT TO THE FOLLOWING:

- THE CITY'S SUBCONTRACTING PARTICIPATION REQUIREMENTS FOR SLBE PROGRAM.
- COMPETITION RESTRICTED TO: SLBE-ELBE ☒ FIRMS ONLY.

THIS BIDDING DOCUMENT TO BE SUBMITTED IN ITS ENTIRETY
REFER TO VOLUME I COVER PAGE 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.

PROPOSAL

Bidder's General Information

To the City of San Diego:

Pursuant to "Notice Inviting 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_____

(2) Signature (Given and surname) of proprietor _____

(3) Place of Business (Street & Number) _____

(4) City and State _____ Zip Code _____

(5) Telephone No. _____ Facsimile No. _____

IF A PARTNERSHIP, SIGN HERE:

(1) Name under which business is conducted _____

(2) Name of each member of partnership, indicate character of each partner, general or special (limited):

_____

_____

(3) Signature (Note: Signature must be made by a general partner)

_____

Full Name and Character of partner

_____

_____

(4) Place of Business (Street & Number) _____

(5) City and State _____ Zip Code _____

(6) Telephone No. _____ Facsimile No. _____

IF A CORPORATION, SIGN HERE:

(1) Name under which business is conducted Atlas Development

(2) Signature, with official title of officer authorized to sign for the corporation:

M Atefi
(Signature)

Mark Atefi
(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) 991C Lomas Santa Fe Dr #115

(5) City and State Solana Beach CA Zip Code 92075

(6) Telephone No. 619-200-0902 Facsimile No. 858-350-9337

THE FOLLOWING SECTIONS MUST BE FILLED IN BY ALL PROPOSERS:

In accordance with the "**NOTICE INVITING 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 A & B

LICENSE NO. 858038 EXPIRES 4/30/15

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: mark.atefi@atlas-corp.net

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 M Ahn. Title President

SUBSCRIBED AND SWORN TO BEFORE ME, THIS 26 DAY OF Aug, 2013

Notary Public in and for the County of San Diego, State of California

(NOTARIAL SEAL)

KI HOON CHOI
Commission No. 1962199
NOTARY PUBLIC - CALIFORNIA
SAN DIEGO COUNTY
Commission Expires DEC 1, 2015

BID BOND

KNOW ALL MEN BY THESE PRESENTS,

That Atlas Development Corporation as Principal, and

Great American 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

Allied Gardens Pool ADA Improvements Bid No. L-14-5648-DBB-2-A

NOW THEREFORE, if said Principal is awarded a contract by said OWNER and, within the time and in the manner required in the "Notice Inviting 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 21st day of August, 20 13

Atlas Development Corporation (SEAL)	Great American Insurance Company (SEAL)
(Principal)	(Surety)
By: _____	By: _____
(Signature)	(Signature)
	Tara Bacon, Attorney-in-Fact

(SEAL AND NOTARIAL ACKNOWLEDGEMENT OF SURETY)

ACKNOWLEDGMENT

State of California
County of San Diego

On August 21, 2013 before me, Maria Hallmark, Notary Public, personally appeared Tara Bacon, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person 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 _____

(Seal)

GREAT AMERICAN INSURANCE COMPANY®

Administrative Office: 301 E 4TH STREET • CINCINNATI, OHIO 45202 • 513-369-5000 • FAX 513-723-2740

The number of persons authorized by
this power of attorney is not more than FIVE

No. 0 14839

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the GREAT AMERICAN INSURANCE COMPANY, a corporation organized and existing under and by virtue of the laws of the State of Ohio, does hereby nominate, constitute and appoint the person or persons named below, each individually if more than one is named, its true and lawful attorney-in-fact, for it and in its name, place and stead to execute on behalf of the said Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; provided that the liability of the said Company on any such bond, undertaking or contract of suretyship executed under this authority shall not exceed the limit stated below.

Name		Address	Limit of Power
DALE G. HARSHAW	KYLE KING	ALL OF	ALL
GEOFFREY SHELTON	JOHN R. QUALIN	SAN DIEGO,	$75,000,000.00
TARA BACON		CALIFORNIA	

This Power of Attorney revokes all previous powers issued on behalf of the attorney(s)-in-fact named above.

IN WITNESS WHEREOF the GREAT AMERICAN INSURANCE COMPANY has caused these presents to be signed and attested by its appropriate officers and its corporate seal hereunto affixed this 22ND day of APRIL , 2013 .

Attest GREAT AMERICAN INSURANCE COMPANY

Assistant Secretary

Divisional Senior Vice President

DAVID C. KITCHIN (877-377-2405)

STATE OF OHIO, COUNTY OF HAMILTON - ss:

On this 22ND day of APRIL , 2013 , before me personally appeared DAVID C. KITCHIN, to me known, being duly sworn, deposes and says that he resides in Cincinnati, Ohio, that he is a Divisional Senior Vice President of the Bond Division of Great American Insurance Company, the Company described in and which executed the above instrument; that he knows the seal of the said Company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed by authority of his office under the By-Laws of said Company, and that he signed his name thereto by like authority.

KAREN L. GROSHEIM
NOTARY PUBLIC, STATE OF OHIO
MY COMMISSION EXPIRES 02-20-16

This Power of Attorney is granted by authority of the following resolutions adopted by the Board of Directors of Great American Insurance Company by unanimous written consent dated June 9, 2008.

RESOLVED: That the Divisional President, the several Divisional Senior Vice Presidents, Divisional Vice Presidents and Divisonal Assistant Vice Presidents, or any one of them, be and hereby is authorized, from time to time, to appoint one or more Attorneys-in-Fact to execute on behalf of the Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; to prescribe their respective duties and the respective limits of their authority; and to revoke any such appointment at any time.

RESOLVED FURTHER: That the Company seal and the signature of any of the aforesaid officers and any Secretary or Assistant Secretary of the Company may be affixed by facsimile to any power of attorney or certificate of either given for the execution of any bond, undertaking, contract of suretyship, or other written obligation in the nature thereof, such signature and seal when so used being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

CERTIFICATION

I, STEPHEN C. BERAHA, Assistant Secretary of Great American Insurance Company, do hereby certify that the foregoing Power of Attorney and the Resolutions of the Board of Directors of June 9, 2008 have not been revoked and are now in full force and effect.

Signed and sealed this 21ST day of August , 2013

Assistant Secretary

NON-COLLUSION AFFIDAVIT TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID UNDER 23 UNITED STATES CODE 112 AND PUBLIC CONTRACT CODE 7106

State of California)
) ss.
County of San Diego)

Mark Atefi, 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: M Atefi

Title: President

Subscribed and sworn to before me this 26 day of Aug, 2013

Notary Public

(SEAL)

KI HOON CHOI
Commission No. 1962199
NOTARY PUBLIC - CALIFORNIA
SAN DIEGO COUNTY
Commission Expires DEC 1, 2015

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: Atlas Development Contact Name: Mark Atefi

Company Address: 991C Lomas Santa Fe Dr #115 Contact Phone: 619-200-0902

Solana Beach CA 92075 Contact Email: mark.atefi@atlas-gip.net

CONTRACT INFORMATION

Contract Title: Allied Gardens Pool ADA Improv. Start Date:

Contract Number (if no number, state location): L-14-5648-DBB-2-A End Date:

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 SDMC §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 offer 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 Rules Implementing the EBO are available 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.

Mark Atefi / Pres. M Ate

Name/Title of Signatory Signature

FOR OFFICIAL CITY USE ONLY

Receipt Date: EBO Analyst: ☐ Approved ☐ Not Approved – Reason:

rev 02/15/2011

PROPOSAL (BID)

The Bidder agrees to the construction of **Allied Gardens Pool ADA 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
1.	1	LS	2-4.1	524126	Bonds (payment and Performance)		$ 6,000.00
2.	1	LS	9-3.1	238990	General Requirements		$ 10,000.00
3.	1	LS	9-3.1	238990	Site Demolition		$ 15,000.00
4.	1	LS	9-3.1	238990	Building Demolition		$ 16,000.00
5.	1	LS	9-3.1	238990	Earthwork		$4,000.00
6.	1	LS	9-3.1	237310	Paving and Site Improvements		$40,000.00
7.	1	LS	9-3.1	237310	Building Concrete and Masonry		$14,000.00
8.	1	LS	9-3.1	238390	Wood and Plastics		$8,000.00
9.	1	LS	9-3.1	238350	Doors and Windows		$13,000.00
10.	1	LS	9-3.1	238340	Finishes		$14,000.00
11.	1	LS	9-3.1	238990	Specialties		$17,000.00
12.	1	LS	9-3.1	238220	Plumbing		$40,000.00
13.	1	LS	9-3.1	237990	Construction BMP's		$ 4,000.00
14.	1	AL	7-5.3	238990	Permits – Type I Allowance		$3,325.00
15.	1	AL	9-3.5	238990	Field Orders – Type II Allowance		$15,000.00
						ESTIMATED TOTAL BASE BID:	$219,325.00

TOTAL BID PRICE FOR BID (Items 1 through 15 inclusive) amount written in words:

Two hundred nineteen thousand, three hundred twenty five dollars.

The Bid shall contain an acknowledgment of receipt of all addenda, the numbers of which shall be filled in on the Bid form. If an addendum or addenda has been issued by the City and not noted as being received by the Bidder, this proposal shall be rejected as being **non-responsive**. The following addenda have been received and are acknowledged in this bid: _____

The names of all persons interested in the foregoing proposal as principals are as follows:

Mark Atefi

Zohreh Sadatrafiei

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: Mark Atefi

Title: President

Business Address: 991C Lomas Santa Fe Dr #115 Solana Beach CA 92075

Place of Business: Solana Beach

Place of Residence: San Diego

Signature: M Atefi

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.

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, SLBE, SDB, WoSB, HUBZone, OR SDVOSB①	WHERE CERTIFIED②	CHECK IF JOINT VENTURE PARTNERSHIP
Name: CA Signs Address: 10020 Prospect Ave #2 City: Santee State: CA Zip: 92071 Phone: 619-817-5951	Sub Contractor	sign	$830.00			
Name: Atlas Fence Company Address: 788 Energy way City: Chula Vista State: Ca Zip: 91911 Phone: 619-397-6500	sub contractor	Fence	$6,500.00 min.			
Name: DV Anthony Construction Address: 1305 Wilson Rd. City: El Cajon State: CA Zip: 92019 Phone: 619-279-3184	subcontractor	Door hardware	$4,376.00			

11706 = .0582 (CA)

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.

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 list the Supplier(s) on 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 SDVOSB①	WHERE CERTIFIED②
Name: Address: City: State: Zip: Phone:						
Name: Address: City: State: Zip: Phone:						
Name: Address: City: State: Zip: Phone:						

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
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 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

The Bidder will not receive any subcontracting participation percentages if the Bidder fails to submit the required proof of certification.

Form Title: NAMED EQUIPMENT/MATERIAL SUPPLIER LIST (Rev. July 2012)
Form Number: AA40

ALLIED GARDENS POOL
ADA IMPROVEMENTS
6707 GLENROY STREET, SAN DIEGO, CA 92120

CONTRACTOR'S RESPONSIBILITIES

1. IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO ENFORCE SAFETY MEASURES AND REGULATIONS. THE CONTRACTOR SHALL DESIGN AND CONSTRUCT THESE MEASURES AND BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS LAWS AND REGULATIONS.

2. 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 THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

3. THE CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THAT ALL DETAILS ARE BUILT IN ACCORDANCE WITH THESE PLANS. IF THERE IS ANY QUESTION REGARDING THESE PLANS. THE CONTRACTOR SHALL REQUEST AN INTERPRETATION BEFORE DOING ANY WORK BY CONTACT WITH THE RESIDENT ENGINEER.

4. 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.

5. BEFORE EXCAVATING FOR THIS PROJECT. CONTRACTOR WILL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING UNDERGROUND UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY. THE CONTRACTOR SHALL VERIFY THE LOCATION(S) OF ALL UNDERGROUND UTILITIES. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS WERE BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO OTHER EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS.

6. CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN HEREON AND ANY OTHER EXISTING LINES NOT OF RECORD OR NOT SHOWN.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONUMENTATION AND/OR BENCH MARK SURVEY(S) WHICH WILL BE DISTURBED OR DESTROYED BY CONSTRUCTION WITH THE ASSISTANCE OF A REGISTERED CIVIL ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING. SUCH POINTS SHALL BE REFERENCED AND REPLACED WITH APPROPRIATE MONUMENTATION BY A LAND CORNER RECORD, OR RECORD OF SURVEY. THE RECORD SHALL BE FILED BY A LICENSED LAND SURVEYOR OR REGISTERED CIVIL ENGINEER AS REQUIRED BY THE LAND SURVEYOR'S ACT.

8. CONTRACTOR SHALL NOTIFY THE CITY TRAFFIC ENGINEER AT LEAST FIVE (5) WORKING DAYS IN ADVANCE OF IMPLEMENTING ANY CONSTRUCTION DETOUR IN THE PUBLIC RIGHT OF WAY.

9. IF CONSTRUCTION IS TO BE PERFORMED IN STAGES, ALL WORK SHALL BE COMPLETED IN EACH STAGE PRIOR TO BEGINNING WORK ON THE NEXT STAGE.

10. 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 THE CITY OF SAN DIEGO.

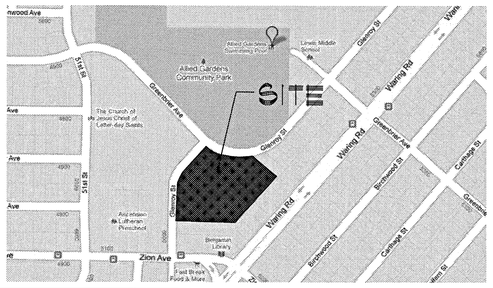
11. SEE ADDITIONAL NOTES AND CONTRACTOR REQUIREMENTS ON ALL SHEETS

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 (GAS, ELECTRIC, TELEPHONE, WATER, SEWER, LIGHTING & T.V.)	800-422.4133
CITY IRRIGATION SYSTEMS & WIRING	619-533.5783
CITY FACILITIES MAINTENANCE DIVISION	619-525.8500

VICINITY MAP



(NOT TO SCALE)

CONSTRUCTION CHANGE / ADDENDUM		
DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.

WARNING

0 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

DESCRIPTION OF WORK

THIS IS A BARRIER REMOVAL PROJECT, WHICH INCLUDES VOLUNTARY ADA UPGRADES TO ALLIED GARDENS POOL AS FOLLOWS:

- RESTROOM UPGRADES 510 SF
- OUTDOOR SHOWERS 90 SF
- DOOR HARDWARE AND SIGNAGE
- ACCESSIBLE PATH OF TRAVEL INCLUDING PARKING, SIDEWALKS, WALKWAYS
- PEDESTRIAN CURB RAMPS AND DRIVEWAY APRONS

SPEC #: 5648

BASIS OF COORDINATES

THE BASIS OF BEARINGS & BENCH MARK

ASSUMED LINE BETWEEN PT# 12 AND #11 IE: N 00 DEGREE E
ELEVATION OF POOL BUILDING EL= 341.25
PROVIDED BY FLORES LUND CONSULTANTS

SITE CONTROL

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
11	5000.000	5000.000	331.27	SCRIBD X
12	4778.075	5000.000	325.77	FK AC
13	5128.719	5236.388	340.70	SCRBD X
14	5059.638	5425.363	343.94	SPIKE
15	5108.894	5427.832	344.92	SCRIBE IN WALK

NOTE: CENTERLINE AND RIGHT-OF-WAY SHOWN HEREON ARE PLOTTED PER EXISTING CURB LOCATIONS FROM FIELD SURVEYS AND ARE DERIVED FROM MAP 5328 AND MAP 4975

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 N.P.D.E.S. PERMIT. PROJECT WILL REQUIRE CONSTRUCTION B.M.P. PER SECTION IV OF THE CITY OF SAN DIEGO'S STORM WATER STANDARDS MANUAL.

CONSTRUCTION & BUILDING CODES

APPLICABLE BUILDING CODES:
2010 BUILDING STANDARDS ADMIN. CODE, PART 1, TITLE 24 C.C.R. (CALIFORNIA CODE OF REGULATIONS)

- 2010 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.
- 2010 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R.
- 2010 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R.
- 2010 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R.
- 2010 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R.
- 2010 CALIFORNIA FIRE CODE , PART 9, TITLE 24 C.C.R.
- 2010 CALIFORNIA EXISTING BUILDING CODE, PART 10, TITLE 24, C.C.R.
- 2010 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.
- 2010 PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS TITLE 19 C.C.R.,

ADDITIONAL APPLICABLE STANDARDS AND SPECIFICATIONS:

- DEPARTMENT OF JUSTICE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

CITY OF SAN DIEGO
PUBLIC WORKS PROJECT

PROJECT DIRECTORY

CLIENT/LEGAL OWNER
CITY OF SAN DIEGO
ENGINEERING & CAPITAL PROJECTS
600 B STREET 8TH FLOOR,
SAN DIEGO, CA 92101
PH: (619) 533-4601
L. CLARK RITTER

ARCHITECT
PLATT/WHITELAW ARCHITECTS INC.
4034 30TH STREET
SAN DIEGO, CA 92104
PH: (619) 546-4326
FAX: (619) 546-4350
SANDY GRAMLEY

CIVIL ENGINEER
FLORES LUND CONSULTANTS
7220 TRADE STREET, SUITE 120
SAN DIEGO, CA 92121
PH: (858) 566-0626
FAX: (858) 566-0627
SVEN GIERLICHS

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 SCHOPPLEIN

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.

Sandra S. Gramley 2-7-2013
SANDRA S. GRAMLEY C21073 DATE
PLATT/WHITELAW ARCHITECTS INC.

PARK CONSTRUCTION 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

1. PRE-CONSTRUCTION MEETING
2. ROUGH GRADING AND DRAINAGE.
3. IRRIGATION MAINLINE PRESSURE TEST.
4. IRRIGATION LATERAL LINE PRESSURE TEST.
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.

DRAWING INDEX

BUILDING CODES ANALYSIS

(E) BUILDING
CONSTRUCTION TYPE III-B
NOT SPRINKLERED
OCCUPANCY TYPE B
1 STORIES
TOTAL 4332 SF.

LEGAL DESCRIPTION

APN # 672-490-04-00
MAP 5628 - ALLIED GARDENS UNIT 4B

Platt/Whitelaw Architects, Inc.
4034 30th Street, SAN DIEGO CA 92104
(619) 546-4328 FAX (619) 546-4350

REGISTERED ARCHITECT SANDRA S. GRAMLEY RENEWAL 2-20-13 STATE OF CALIFORNIA

ALLIED GARDENS POOL
ADA IMPROVEMENTS

SHEET TITLE: TITLE SHEET, DRAWING INDEX, CODES, PROJECT DIRECTORY & VIC. MAP	SHEET NUMBER: G-001
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT SHEET 01 OF 17 SHEETS	WBS #B-10167
FOR CITY ENGINEER 4/14/13 DATE	SAMIR MAHMALJI SECTION HEAD
	CLARK RITTER PROJECT MANAGER
	226-1743 CCS27 COORDINATE
	6304404,1866444 CCS83 COORDINATE
	36588-01-D

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	SG/KMP		11.29.12	

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

ALLIED GARDENS POOL ADA IMPROVEMENTS

J:\0389 allied gardens pool ada\03-drawings\allied gardens pool ada\sheets\g-001 title sheet.dwg 1/29/2013 11:21 AM

DECEMBER 18, 2012

GENERAL NOTES

GENERAL

1. 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, U.L., ANSI, ASTM AND OTHER STANDARDS.
2. 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 RESIDENT ENGINEER 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 DETAILING AND SPECIFYING THE REQUIRED WORK, SHALL BE SUBMITTED TO AND APPROVED BY ARCHITECT BEFORE PROCEEDING WITH THE WORK.
3. THE CONTRACTOR SHALL INCLUDE ALL LABOR, MATERIALS AND SERVICES NECESSARY FOR THE COMPLETION OF ALL WORK SHOWN, PRESCRIBED OR REASONABLY INFERRED, 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.
4. UNDER NO CIRCUMSTANCES SHALL DIMENSIONS BE SCALED DIRECTLY FROM DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER OF ANY DISCREPANCIES OR CONFLICTS.
5. ORIGINAL CONSTRUCTION DRAWINGS ARE AVAILABLE FOR CONTRACTOR INFORMATION. THE RESIDENT ENGINEER HAS NOT VERIFIED AND DOES NOT WARRANTY ACCURACY OF DRAWINGS.
6. 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 RESIDENT ENGINEER 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.
7. 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.
8. 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 RESIDENT ENGINEER SHALL BE NOTIFIED FOR CLARIFICATION.
9. ALL PENETRATIONS THROUGH STRUCTURAL MEMBERS, FIRE-RATED ASSEMBLIES, CEILING & FLOOR SLABS SHALL REQUIRE THE RESIDENT ENGINEER'S APPROVAL PRIOR TO START OF ANY WORK.
10. 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.
11. 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.

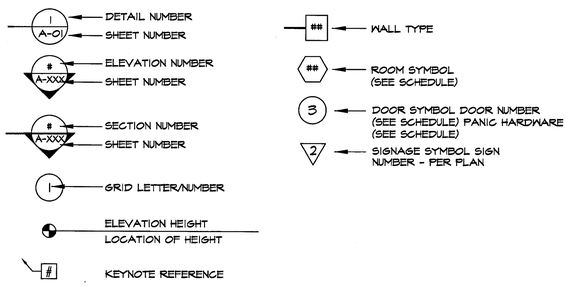
CONTRACTOR

12. 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.
13. 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.
14. 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 RESIDENT ENGINEER.
15. CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER 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.
16. 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

17. EXIT SIGNS MUST BE INTERNALLY ILLUMINATED. (CFC SECTION 1211, 1212, 2501.15, 3213, AND CBC 1011.4)
18. INTERIOR FINISH SHALL COMPLY WITH CBC, CFC & TITLE 19 CCR.
19. THE CONSTRUCTION, REMODEL OR DEMOLITION OF A BUILDING SHALL COMPLY WITH 2010 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.
20. 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.
21. AT LEAST ONE FIRE EXTINGUISHER WITH A MINIMUM RATING OF 2A.10BC SHALL BE PROVIDED WITHIN 75' MAXIMUM TRAVEL DISTANCE FOR EACH 6,000 SQUARE FEET OR PORTION THEREOF ON EACH FLOOR. [CFC SEC. 906]
22. COMPLETE PLANS AND SPECIFICATIONS FOR FIRE-EXTINGUISHING SYSTEMS, INCLUDING AUTOMATIC SPRINKLERS AND WET AND DRY STANDPIPES; HALON SYSTEMS AND OTHER SPECIAL TYPES OF AUTOMATIC FIRE-EXTINGUISHING SYSTEMS; BASEMENT PIPE INLETS; AND OTHER FIRE-PROTECTIVE SYSTEMS AND APPURTENANCES THERETO SHALL BE SUBMITTED TO FIRE AND LIFE SAFETY FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. [CFC 901.2]
23. BUILDINGS UNDERGOING CONSTRUCTION, ALTERATION OR DEMOLITION SHALL BE IN ACCORDANCE WITH CFC CHAPTER 14 [CFC 1401.1]
24. ADDRESS SHALL BE PROVIDED FOR 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 F-00-6]
25. DECORATIVE MATERIALS SHALL BE MAINTAINED IN A FLAME-RETARDANT CONDITION. [TITLE 19, SECT 3.08, 3.21; CFC 804]
26. FIRE EXTINGUISHING SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH CFC 903 AND COMPLY WITH STANDARDS OF 903.3.
27. ALL VALVES CONTROLLING THE WATER SUPPLY FOR AUTOMATIC SPRINKLER SYSTEMS AND WATER FLOW SWITCHES ON ALL SPRINKLER SYSTEMS SHALL BE ELECTRICALLY MONITORED WHERE THE NUMBER OF SPRINKLERS IS 20 OR MORE [CFC 903.4]
28. INSTALLATION OF FIRE ALARM SYSTEMS SHALL BE IN ACCORDANCE WITH CFC 907.
29. COMPLETE PLANS AND SPECIFICATIONS FOR FIRE ALARM SYSTEMS SHALL BE SUBMITTED TO FIRE AND LIFE SAFETY FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. [CFC 907.1.1]
30. AN APPROVED AUDIBLE SPRINKLER FLOW ALARM SHALL BE PROVIDED ON THE EXTERIOR OF THE BUILDING IN AN APPROVED LOCATION.

SYMBOLS LEGEND



ABBREVIATIONS

@	AT
A.B.	ANCHOR BOLT
A.C.	ASPHALT CONCRETE
A.COMP.	ASPHALT COMPOSITION
ACS	ACCESS COMPLIANCE (DSA)
A.C.T.	ACOUSTICAL TILE
ADD'L	ADDITIONAL
A/E	ARCHITECT/ENGINEER
A.F.F.	ABOVE FINISH FLOOR
ALT	ALTERNATE
ALUM	ALUMINUM
APPL	APPLICATION
ARCH'L	ARCHITECTURAL
ASPH	ASPHALT
BD	BOARD
BLDG	BUILDING
B.O.B.	BOTTOM OF BEAM
BOT	BOTTOM
BM	BEAM
B.M.	BENCH MARK
CLK'G	CAULKING
C.B.	CATCH BASIN
CEM	CEMENT
CHN'L	CHANNEL
C.I.	CAST IRON
C.I.P.	CAST IN PLACE
C.J.	CONTROL JOINT
(℄) / C.L.	CENTER LINE
CLG	CEILING
CLR	CLEAR
C.M.U.	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
CPT	CARPET
CTR	CENTER
CUB	CUBICLE
DBL	DOUBLE
DET	DETAIL
D.F.	DRINKING FOUNTAIN
D.H.	DOUBLE HUNG
D.G.	DECOMPOSED GRANITE
DG. FIR	DOUGLAS FIR
(℄) / DIA	DIAMETER
DMG	DAMAGE
DR	DOOR
DS	DOWNSPOUT
DSA	DIVISION OF STATE ARCHITECT
DWG	DRAWING
E	TACTILE "EXIT" SIGN
(E)	EXISTING
EA	EACH
E.C.P.	EXTERIOR CEMENT PLASTER
E.G.	FOR EXAMPLE
E.J.	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EQ	EQUAL
E.R.	TACTILE "EXIT ROUTE" SIGN
ES	TACTILE "EXIT STAIRS" SIGN
E.S.	EACH SIDE
EXH'ST	EXHAUST
EXP	EXPOSED
E.J.	EXPANSION JOINT
F/	FROM
FB	FIBERGLASS
F.D.	FLOOR DRAIN
F.H.	FIRE HYDRANT
F.E.C.	FIRE EXTINGUISHER CABINET
F.H.C	FIRE HOSE CABINET
FIN	FINISH
FLASH'G	FLASHING
FLUOR	FLUORESCENT
FLR	FLOOR
FLR.T.	FLOOR TILE
FLS	FIRE & LIFE SAFETY (DSA)
F.O.B.	FACE OF BUILDING
F.O.C.	FACE OF CONCRETE
F.O.F.	FACE OF FINISH
F.O.M.	FACE OF MASONRY
F.O.P.	FACE OF POST
F.O.S.	FACE OF STUD
FT	FOOT
FTG	FOOTING
FURR'G	FURRING
F.V.	FIELD VERIFY
GA	GAUGE
GRD	GRADE
GEN	GENERAL
G.W.B.	GYPSUM WALL BOARD
GYP.	GYPSUM
HARD'R	HARDENER
H.B.	HOSE BIB
HD	HEAD
HDWR	HARDWARE
H.M.	HOLLOW METAL
HORIZ	HORIZONTAL
HT	HEIGHT
HW	HARDWOOD
I.D.	INSIDE DIAMETER
INSUL	INSULATION
INT	INTERIOR
JAN	JANITOR
KN	KEYNOTE
LAM	LAMINATE
LAV	LAVATORY
L.F.	LINEAR FEET
LG	LONG
L.L.V.	LONG LEG VERTICAL
MACH	MACHINE
MAS	MASONRY
MAT	MATERIAL
MAX	MAXIMUM
M.B.	MACHINE BOLT
MECH	MECHANICAL
MTL	METAL
MH	MANHOLE
MIN	MINIMUM
MFR	MANUFACTURER
M.O.	MASONRY OPENING
MR.B.	MARKER BOARD
MTD	MOUNTED
N.I.V.	NOT IN CONTRACT
(#) / NO	NUMBER
NOM	NOMINAL
N.T.S.	NOT TO SCALE
(N)	NEW
O/	OVER
O.A.	OVERALL
O.C.	ON CENTER
OCC	OCCUPANT/OCCUPANCY
O.H.	OVERALL HEIGHT
OPN'G	OPENING
OPP.	OPPOSITE
OPP. H.	OPPOSITE HAND
PC	PIECE
PERF	PERFORATED
PLAS	PLASTIC
P.H.	PANIC HARDWARE
P.L.	PLASTIC LAMINATE
PLT	PLATE
PLYWD	PLYWOOD
P.O.A.	PATH OF TRAVEL (ACCESSIBLE)
P.S.A.	POUNDS PER SQUARE FOOT
P.T.	PRESSURE TREATED
(℄)/P.L.	PROPERTY LINE
P.T.D.	PAPER TOWEL DISPENSER
Q.T.	QUARRY TILE
QTY	QUANTITY
RAD	RADIUS
REINF	REINFORCING
R.C.P.	REFLECTED CEILING PLAN
R.O.	ROUGH OPENING
R.R.	RETURN REGISTER
REQ'D	REQUIRED
S.D.	SOAP DISH
S.F.	SQUARE FEET
SHWR	SHOWER
SHT	SHEET
SHT'G	SHEATHING
SIM	SIMILAR
SP	SPECIAL
SPC	SPACE
SQ	SQUARE
S.R.	SUPPLY REGISTER
S.S.	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURAL
SUSP	SUSPENDED
T&B	TOP & BOTTOM
TEL	TELEPHONE
THK	THICK
THRESH	THRESHOLD
T.STL.	TOP OF
T.P.H.	TOILET PAPER HOLDER
TRANS	TRANSVERSE
TLT	TOILET
TYP	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
U.O.N.	UNLESS OTHERWISE NOTED
V.A.T.	VINYL ASBESTOS TILE
V.C.T.	VINYL COMPOSITION TILE
VERT	VERTICAL
W/	WITH
W.C.U.	WATER CLOSET
WD	WOOD
W/O	WITHOUT
WDW	WINDOW
WP	WATERPROOF
W.W.F.	WELDED WIRE FABRIC
W.M.S.	WIRE MESH SCREEN
(L)	ANGLE
(I)	CHANNEL
(#)	POUND OR NUMBER

SPECIAL INSPECTION REPORT

NOTICE TO THE APPLICANT/ OWNER/ OWNER'S AGENT/ ARCHITECT OR ENGINEER OF RECORD: BY USING THIS PERMITTED CONSTRUCTION DRAWINGS FOR CONSTRUCTION/INSTALLATION OF THE WORK SPECIFIED HEREIN, YOU AGREE TO COMPLY WITH THE REQUIREMENTS OF CITY OF SAN DIEGO FOR SPECIAL INSPECTIONS, STRUCTURAL OBSERVATIONS, CONSTRUCTION MATERIAL TESTING AND OFF-SITE FABRICATION OF BUILDING COMPONENTS, CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS AND, AS REQUIRED BY THE CALIFORNIA CONSTRUCTION CODES.

NOTICE TO THE CONTRACTOR/ BUILDER/ INSTALLER/ SUB-CONTRACTOR/ OWNER-BUILDER: BY USING THE PERMITTED CONSTRUCTION DRAWINGS FOR CONSTRUCTION/INSTALLATION OF THE WORK SPECIFIED HEREIN, YOU ACKNOWLEDGE AND ARE AWARE OF, THE REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS. YOU AGREE TO COMPLY WITH THE REQUIREMENTS OF CITY OF SAN DIEGO FOR SPECIAL INSPECTIONS, STRUCTURAL OBSERVATIONS, CONSTRUCTION MATERIAL TESTING AND OFF-SITE FABRICATION OF BUILDING COMPONENTS, CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS AND, AS REQUIRED BY THE CALIFORNIA CONSTRUCTION CODES.

Platt/Whitelaw Architects, Inc.
4034 30th Street, SAN DIEGO CA 92104
(619) 546-4326 FAX (619) 546-4350

REGISTERED ARCHITECT — INDRA S. GRAY — C-21073 — EXP. 7-30-13 — STATE OF CALIFORNIA

ALLIED GARDENS POOL
ADA IMPROVEMENTS

SHEET TITLE: GENERAL NOTES, SYMBOLS LEGEND, STANDARDS AND ABBREVIATIONS

SHEET NUMBER: G-002

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET 02 OF 17 SHEETS

WBS #B-10167

FOR CITY ENGINEER — DATE 4/14/13

SAMIR MAHMALJI
SECTION HEAD

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	SG/KMP		11.29.12	

CLARK RITTER
PROJECT MANAGER

226-1743
CCS27 COORDINATE

6304404,1866444
CCS83 COORDINATE

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

36588-02-D

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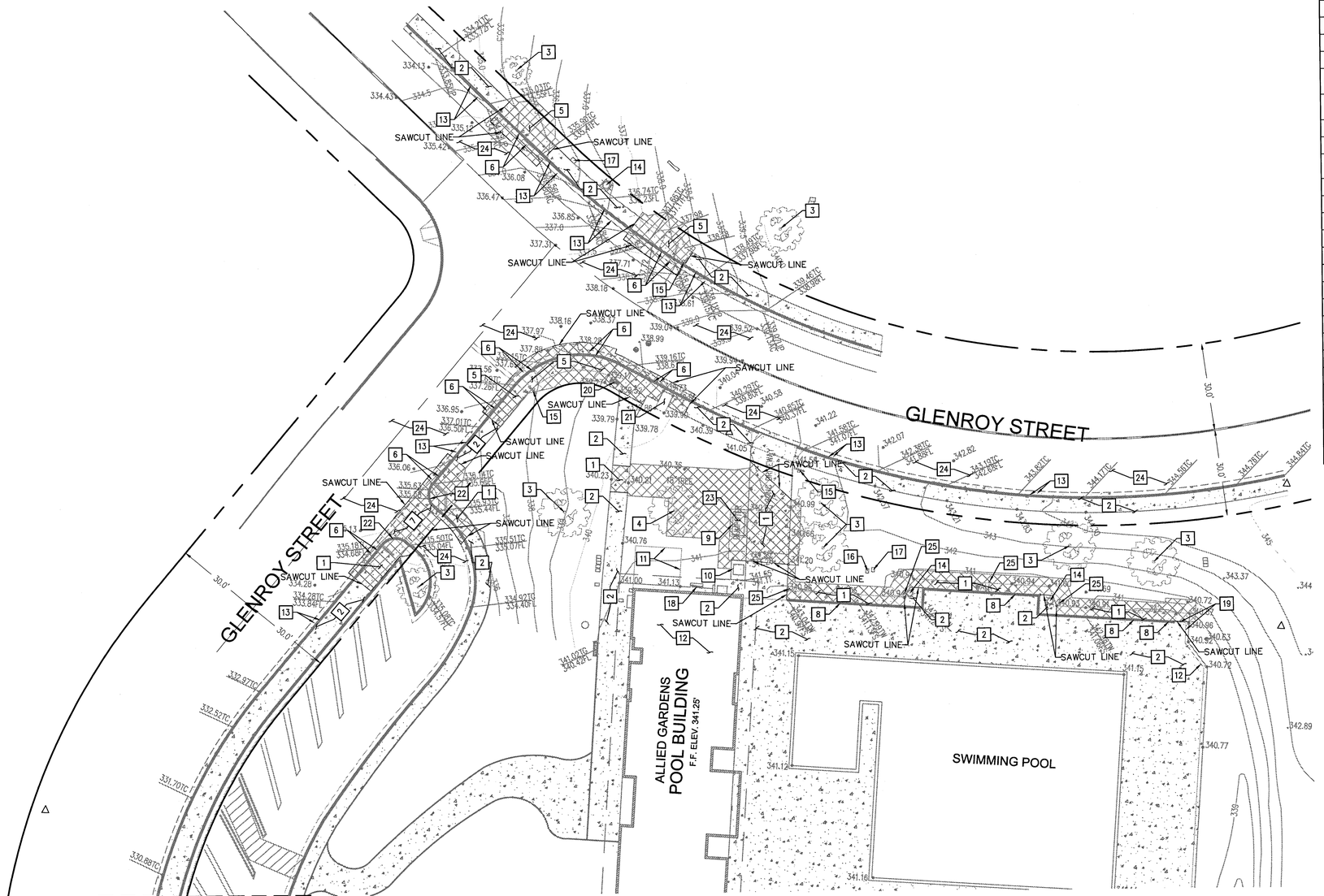


DEMOLITION KEY NOTES

1	DEMOLISH AND REMOVE EXISTING CONCRETE PAVING.
2	EXISTING CONCRETE PAVING TO REMAIN, PROTECT IN PLACE.
3	EXISTING TREE TO REMAIN, PROTECT IN PLACE.
4	REMOVE EXISTING TREE.
5	SAWCUT, DEMOLISH AND REMOVE EXISTING CONCRETE PAVING INCLUDING BASE MATERIAL.
6	SAWCUT, DEMOLISH AND REMOVE EXISTING CURB AND GUTTER INCLUDING BASE MATERIAL.
7	DEMOLISH AND REMOVE EXISTING CONCRETE APRON.
8	EXISTING WALL AND FENCE TO REMAIN, PROTECT IN PLACE.
9	RELOCATE EXISTING DUMPSTER ENCLOSURE. SEE ARCHITECTURE PLANS FOR NEW LOCATION.
10	EXISTING ELECTRICAL TRANSFORMER TO REMAIN, PROTECT IN PLACE.
11	EXISTING FENCE TO REMAIN, PROTECT IN PLACE.
12	EXISTING BUILDING TO REMAIN, PROTECT IN PLACE.
13	EXISTING CURB AND GUTTER TO REMAIN, PROTECT IN PLACE.
14	EXISTING LIGHT TO REMAIN, PROTECT IN PLACE.
15	EXISTING SIGN TO REMAIN, PROTECT IN PLACE.
16	EXISTING IRRIG. PBOX TO REMAIN, PROTECT IN PLACE.
17	EXISTING ELECT. PBOX TO REMAIN, PROTECT IN PLACE.
18	EXISTING BACKFLOW TO REMAIN, PROTECT IN PLACE.
19	RELOCATE EXISTING GATE/ POST TO THE SOUTH.
20	EXISTING FIRE HYDRANT TO REMAIN, PROTECT IN PLACE.
21	EXISTING VAULT TO REMAIN, PROTECT IN PLACE.
22	REMOVE AND DEMOLISH EXISTING CURB.
23	REMOVE AND DEMOLISH EXISTING CONCRETE SLAB. REMOVE EXISTING TRASH FENCE ENCLOSURE AND SAVE FOR REINSTALLATION.
24	EXISTING AC TO REMAIN, PROTECT IN PLACE.
25	EXISTING SPRINKLER HEAD TO RELOCATE.

DEMOLITION NOTES

1. DEMOLISH AND REMOVE ALL EXISTING IMPROVEMENTS AND CONSTRUCTION DEBRIS 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.

EXISTING

ITEM	STANDARD DWGS.	SYMBOL
PROPERTY LINE/ RIGHT OF WAY		
EXISTING CONTOUR		459
EXISTING TREE		
EXISTING FENCE		x
EXISTING BUILDING		
EXISTING CONCRETE		
EXISTING CURB AND GUTTER		
EXISTING CURB		
AREA OF DEMOLITION		
SAWCUT LINE		

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 R. LUND C36812 — 6/30/2014 EXPIRES

REGISTERED PROFESSIONAL ENGINEER — WILLIAM RYAN LUND — NO. 36812 — Exp. 6/30/2014 — CIVIL — STATE OF CALIFORNIA

GRAPHIC SCALE
20 0 20 40
(IN FEET)
1 INCH = 20 FT

FLC
SCALE: 1"=20'

BergerABAM
FLORES LUND CONSULTANTS
7220 Trade Street, Suite 120
San Diego, CA 92121 (858) 566-0626

DATE:	12/16/12
FLC PROJECT NO.	1112
DESIGN BY:	SG
DRAWN BY:	SG
REVIEWED BY:	WRL

Platt/Whitelaw Architects, Inc.
4034 30th Street, SAN DIEGO CA 92104
(619) 546-4326 FAX (619) 546-4350

ALLIED GARDENS POOL ADA IMPROVEMENTS

SHEET TITLE: EXISTING CONDITIONS AND DEMOLITION PLAN

SHEET NUMBER: C-100

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET 3 OF 17 SHEETS

WBS #B-10167

Samir M 4/14/13
FOR CITY ENGINEER DATE

SAMIR MAHMALJI
SECTION HEAD

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	SG/KMP		06.01.11	
ADDENDUM	SG		11.29.12	

CLARK RITTER
PROJECT MANAGER

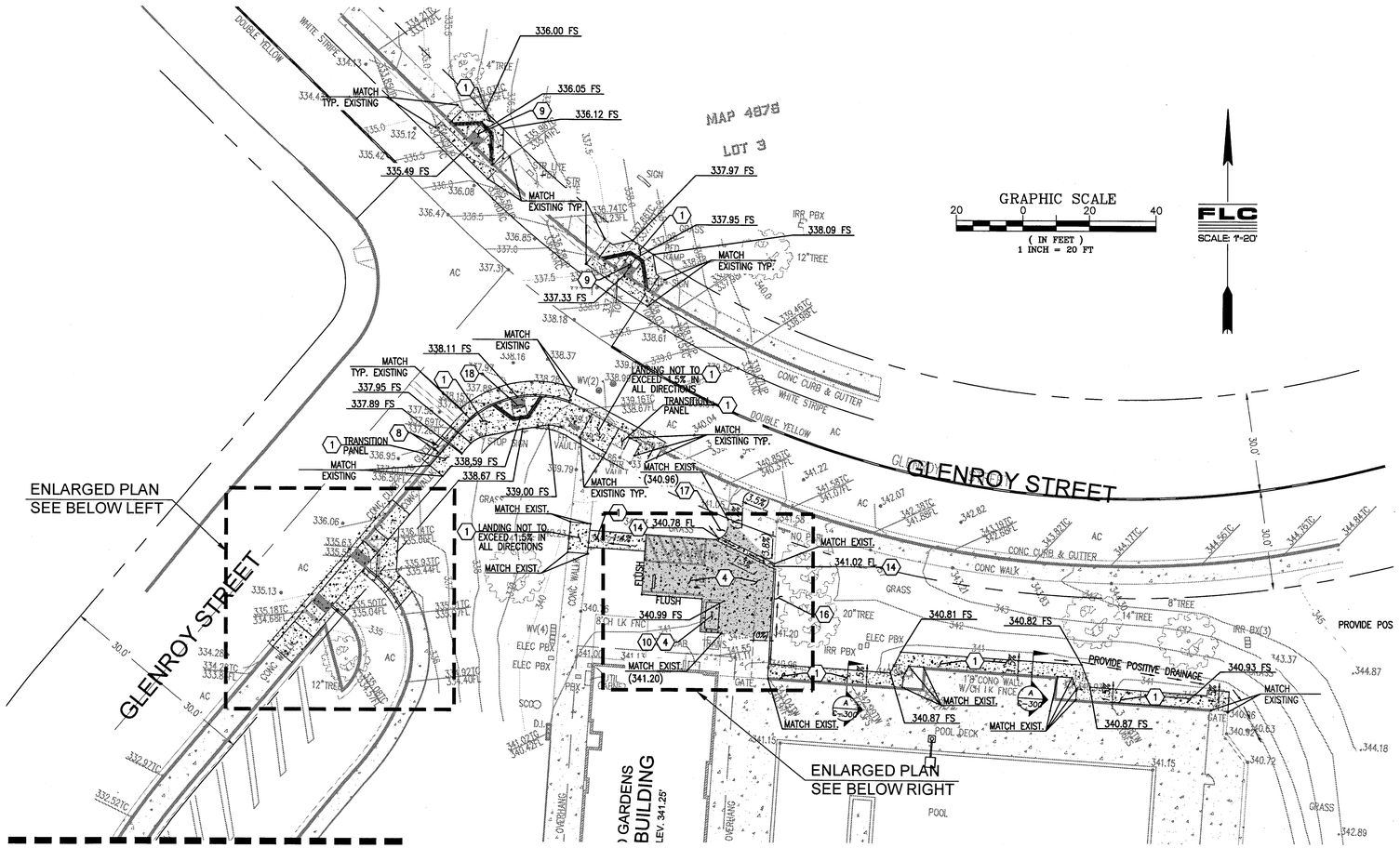
226-1743
CCS27 COORDINATE

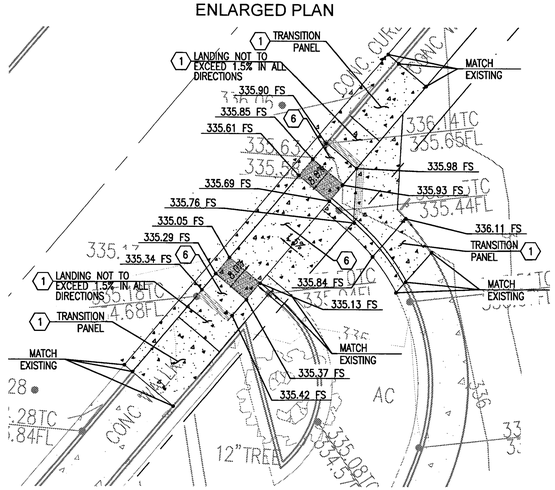
6304404,1866444
CCS83 COORDINATE

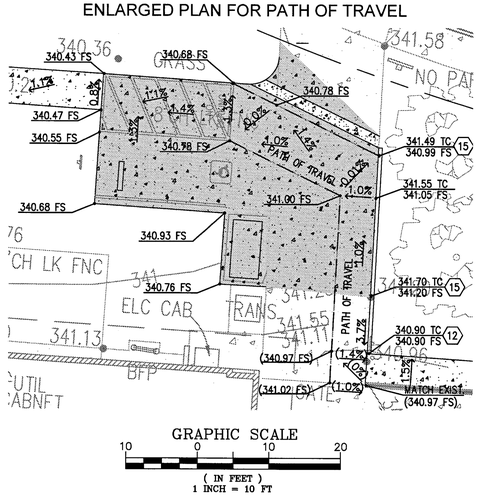
36588-03-D

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

ALLIED GARDENS POOL ADA IMPROVEMENTS







ACCESSIBILITY NOTES

1. COMPLY WITH THE REQUIREMENTS OF THE CALIFORNIA BUILDING CODE 2010 CBC AND FOR ALL SITE IMPROVEMENTS.
2. MAXIMUM CROSS SLOPE ON WALKWAYS SHALL BE 1.5%.
3. 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 1:2.
4. CATCH BASIN AND DRAIN INLET GRATES SHALL HAVE SPACES NO GREATER THAN 1/2" WIDE IN ONE DIRECTION. IF GRATINGS HAVE ELONGATED OPENINGS, THEY SHALL BE PLACED SO THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.
5. CURB RAMPS SHALL BE REQUIRED WHEREVER ACCESSIBLE ACCESS ROUTES CROSS A CURB.
6. ACCESSIBLE RAMPS AND HANDRAILS SHALL BE REQUIRED WHEREVER SLOPE EXCEEDS 5%. MAXIMUM SLOPE SHALL BE 8.33%. LEVEL LANDINGS SHALL BE INSTALLED AT TOP AND BOTTOM OF EACH RUN EQUAL TO THE WIDTH OF THE RAMP, 60" X 60" MINIMUM, AND INTERMEDIATE LANDINGS AT INTERVALS NOT EXCEEDING 30" OF VERTICAL RISE. BOTTOM LANDINGS AND INTERMEDIATE LANDINGS WITH DIRECTION CHANGES IN EXCESS OF 30 DEGREES SHALL BE MINIMUM 72" IN THE DIRECTION OF TRAVEL. RAMPS AND LANDINGS WITH VERTICAL SIDE DROP-OFFS SHALL HAVE WALLS, RAILINGS, PROTECTIVE SURFACES OR MINIMUM 6" HIGH CURBS.
7. ALL STAIRS SHALL HAVE A 2" WIDE SLIP RESISTANT, CONTRASTING COLOR STRIPE AND DETECTABLE WARNING, 1" MAXIMUM FROM NOSING ON ALL TREADS.
8. ALL PAVEMENT CROSS SLOPES (SLOPES PERPENDICULAR TO THE DIRECTION OF TRAVEL) SHALL BE A MAXIMUM OF 1.5%. ALL RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1 IN 12. ALL LANDINGS AT STAIRS AND RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1.5% (BOTH DIRECTIONS). ALL WALKWAYS SHALL HAVE A MAXIMUM SLOPE LESS THAN 4.5% IN THE DIRECTION OF TRAVEL. ALL MAXIMUM SLOPES ARE ABSOLUTE AND SUPERSEDE 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%. 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.

KEY NOTES

1	FURNISH AND INSTALL NEW P.C.C. FLATWORK PER SDRSD G-7.
2	PROTECT IN PLACE EXIST. CURB AND GUTTER.
4	7" P.C.C. CONCRETE PAVEMENT.
6	FURNISH AND INSTALL NEW P.C.C. DRIVEWAY PER SDRSD G-14D.
8	FURNISH AND INSTALL NEW P.C.C. CURB AND GUTTER PER SDRSD G-2
9	FURNISH AND INSTALL NEW PROPOSED PEDESTRIAN RAMP PER SDG-132, TYPE B WITH 4' BOTTOM LANDING.
10	NEW LOCATION OF DUMPSTER. INSTALL FENCE PER ARCHITECTURE DWG.
11	FURNISH AND INSTALL PCC DRIVEWAY PER SDRSD G-14D.
12	TRANSITION FROM 6" CURB TO FLUSH CURB.
13	MATCH EXISTING GRADE.
14	FURNISH AND INSTALL 18" WIDE CONCRETE GUTTER PER SDRSD G-12.
15	FURNISH AND INSTALL NEW 6" CURB PER SDRSD G-1
16	RE-GRADE AS NECESSARY TO MEET NEW CURB. MAINTAIN POSITIVE SLOPE. (MIN 2%)
17	RE-GRADE AS NECESSARY TO MEET NEW PAVEMENT. MAINTAIN POSITIVE SLOPE. (MIN 2%)
18	FURNISH AND INSTALL NEW PROPOSED PEDESTRIAN CURB RAMP PER SDG-132, TYPE A WITH 4' BOTTOM LANDING.

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.
4. 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.
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6. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

EXISTING

ITEM	STANDARD DWGS.	SYMBOL
PROPERTY LINE		
EXISTING CONTOUR		459
EXISTING TREE		
EXISTING FENCE		x
EXISTING BUILDING		
EXISTING CONCRETE		
EXISTING CURB AND GUTTER		
EXISTING CURB		

PROPOSED

NEW CONCRETE FLATWORK 4" W/#3 BARS@18" OC. BOTH WAYS	
NEW 7" P.C.C. CONCRETE PVMT. #5 BARS@12" OC. BOTH WAYS	
DIRECTION OF FLOW AND SLOPE	2.5%
KEY NOTE REFERENCE SYMBOL	4
TOP OF CURB ELEVATION / FINISH SURFACE ELEVATION	65.90 TC / 65.40 FS
FLOW LINE ELEVATION	64.90 FL
PROPERTY LINE/ RIGHT OF WAY	
FINISHED SPOT ELEVATION	6.0
PROPOSED PEDESTRIAN RAMP SDG-132	

REGISTERED PROFESSIONAL ENGINEER
WILLIAM RYAN LUND
No. 38012
Expires 6/30/2014
CIVIL
STATE OF CALIFORNIA

BergerABAM
FLORES LUND CONSULTANTS
7220 Trade Street, Suite 120
San Diego, CA 92121 (858) 566-0626

DATE:	01/24/13
FLC PROJECT NO.	1112
DESIGN BY:	SG
DRAWN BY:	SG
REVIEWED BY:	WRL

Platt/Whitelaw Architects, Inc.
4034 30th Street, SAN DIEGO CA 92104
(619) 546-4326 FAX (619) 546-4350

ALLIED GARDENS POOL ADA IMPROVEMENTS

SHEET TITLE: GRADING AND DRAINAGE PLAN

SHEET NUMBER: C-200

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET 4 OF 17 SHEETS

WBS #B-10167

FOR CITY ENGINEER — DATE 4/14/13

SAMIR MAHMALJI
SECTION HEAD

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	FLC		11.29.12	

CLARK RITTER
PROJECT MANAGER

226-1743
CCS27 COORDINATE

6304404,1866444
CCS83 COORDINATE

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

36588-04-D

ALLIED GARDENS POOL ADA IMPROVEMENTS

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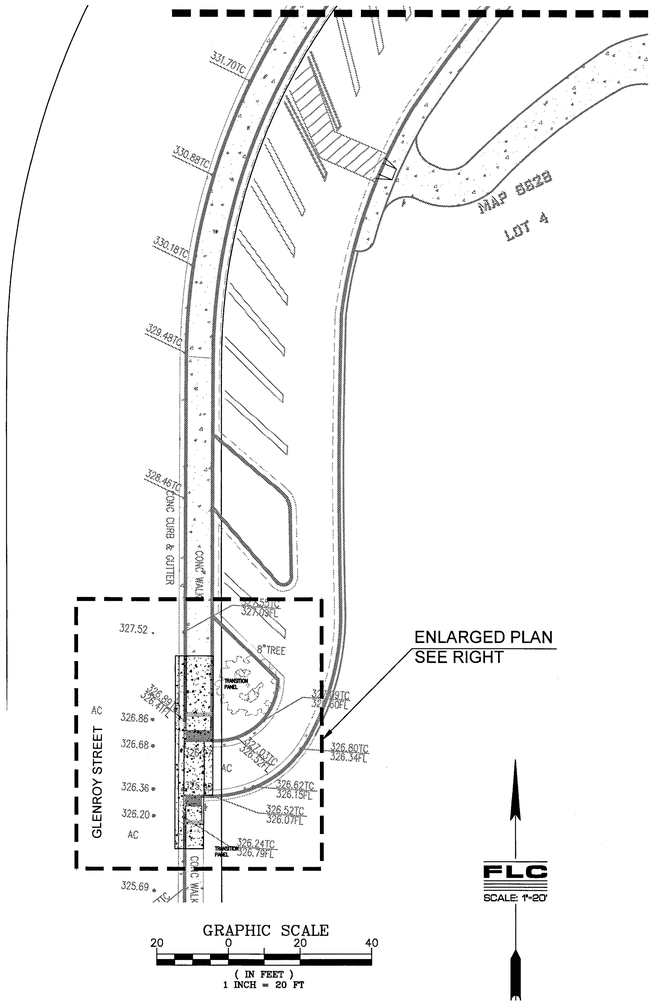
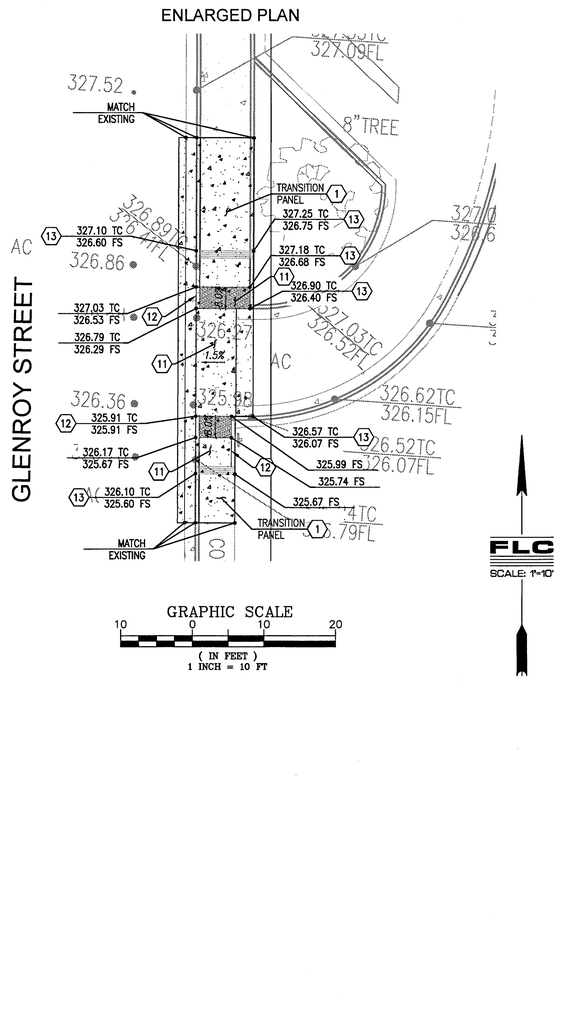
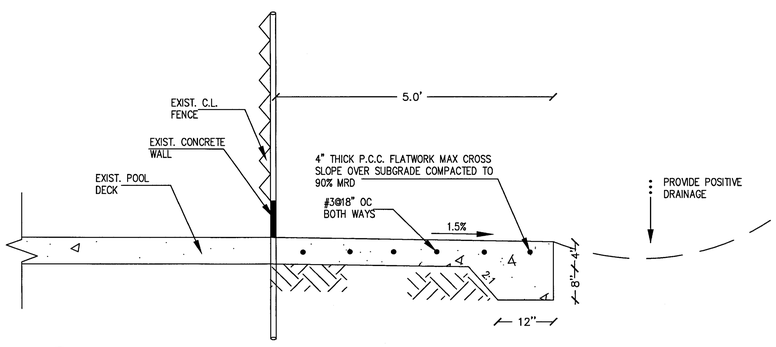






A TYPICAL SECTION AT 5' ACCESSIBLE P.C.C. SIDEWALK N.T.S

ACCESSIBILITY NOTES

1. COMPLY WITH THE REQUIREMENTS OF THE CALIFORNIA BUILDING CODE 2010 CBC AND FOR ALL SITE IMPROVEMENTS.
2. MAXIMUM CROSS SLOPE ON WALKWAYS SHALL BE 1.5%.
3. 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 1:2.
4. CATCH BASIN AND DRAIN INLET GRATES SHALL HAVE SPACES NO GREATER THAN 1/2" WIDE IN ONE DIRECTION. IF GRATINGS HAVE ELONGATED OPENINGS, THEY SHALL BE PLACED SO THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.
5. CURB RAMPS SHALL BE REQUIRED WHEREVER ACCESSIBLE ACCESS ROUTES CROSS A CURB.
6. ACCESSIBLE RAMPS AND HANDRAILS SHALL BE REQUIRED WHEREVER SLOPE EXCEEDS 5%. MAXIMUM SLOPE SHALL BE 8.33% LEVEL LANDINGS SHALL BE INSTALLED AT TOP AND BOTTOM OF EACH RUN EQUAL TO THE WIDTH OF THE RAMP, 60" X 60" MINIMUM, AND INTERMEDIATE LANDINGS AT INTERVALS NOT EXCEEDING 30" OF VERTICAL RISE. BOTTOM LANDINGS AND INTERMEDIATE LANDINGS WITH DIRECTION CHANGES IN EXCESS OF 30 DEGREES SHALL BE MINIMUM 72" IN THE DIRECTION OF TRAVEL. RAMPS AND LANDINGS WITH VERTICAL SIDE DROP-OFFS SHALL HAVE WALLS, RAILINGS, PROTECTIVE SURFACES OR MINIMUM 6" HIGH CURBS.
7. ALL STAIRS SHALL HAVE A 2" WIDE SLIP RESISTANT, CONTRASTING COLOR STRIPE AND DETECTABLE WARNING, 1" MAXIMUM FROM NOSING ON ALL TREADS.
8. ALL PAVEMENT CROSS SLOPES (SLOPES PERPENDICULAR TO THE DIRECTION OF TRAVEL) SHALL BE A MAXIMUM OF 1.5%. ALL RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1 IN 12. ALL LANDINGS AT STAIRS AND RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1.5% (BOTH DIRECTIONS). ALL WALKWAYS SHALL HAVE A MAXIMUM SLOPE LESS THAN 4.5% IN THE DIRECTION OF TRAVEL. ALL MAXIMUM SLOPES ARE ABSOLUTE AND SUPERSEDE 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%. 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.

KEY NOTES

1	FURNISH AND INSTALL NEW P.C.C. FLATWORK PER SDRSD G-7.
2	PROTECT IN PLACE EXIST. CURB AND GUTTER.
4	7" P.C.C. CONCRETE PAVEMENT.
6	FURNISH AND INSTALL P.C.C. DRIVEWAY PER SDRSD G-14D.
8	FURNISH AND INSTALL NEW P.C.C. CURB AND GUTTER PER SDRSD G-2
9	FURNISH AND INSTALL NEW PROPOSED PEDESTRIAN RAMP PER SDG-132, TYPE B WITH 4' BOTTOM LANDING.
10	NEW LOCATION OF DUMPSTER. INSTALL FENCE PER ARCHITECTURE DWG.
11	FURNISH AND INSTALL PCC DRIVEWAY PER SDRSD G-14D.
12	TRANSITION FROM 6" CURB TO FLUSH CURB.
13	MATCH EXISTING GRADE.
14	FURNISH AND INSTALL 18" WIDE CONCRETE GUTTER PER SDRSD G-12.
15	FURNISH AND INSTALL NEW 6" CURB PER SDRSD G-1
16	RE-GRADE AS NECESSARY TO MEET NEW CURB. MAINTAIN POSITIVE SLOPE. (MIN 2%)
17	RE-GRADE AS NECESSARY TO MEET NEW PAVEMENT. MAINTAIN POSITIVE SLOPE. (MIN 2%)
18	FURNISH AND INSTALL NEW PROPOSED PEDESTRIAN CURB RAMP PER SDG-132, TYPE A WITH 4' BOTTOM LANDING.

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.
4. 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.
5. 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.
6. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

EXISTING

ITEM	STANDARD DWGS.	SYMBOL
PROPERTY LINE		
EXISTING CONTOUR		459
EXISTING TREE		
EXISTING FENCE		x
EXISTING BUILDING		
EXISTING CONCRETE		
EXISTING CURB AND GUTTER		
EXISTING CURB		

PROPOSED

NEW CONCRETE FLATWORK 4" W/#3 BARS@18" OC. BOTH WAYS	
NEW 7" P.C.C. CONCRETE PVMT. #5 BARS@12" OC. BOTH WAYS	
DIRECTION OF FLOW AND SLOPE	2.5%
KEY NOTE REFERENCE SYMBOL	4
TOP OF CURB ELEVATION / FINISH SURFACE ELEVATION	65.90 TC / 65.40 FS
FLOW LINE ELEVATION	64.90 FL
PROPERTY LINE/ RIGHT OF WAY	
FINISHED SPOT ELEVATION	6.0
PROPOSED PEDESTRIAN RAMP SDG-132	

REGISTERED PROFESSIONAL ENGINEER
WILLIAM RYAN LUND
No. 36812
Expires 6/30/2014
CIVIL
STATE OF CALIFORNIA

Platt/Whitelaw Architects, Inc.
4034 30th Street, SAN DIEGO CA 92104
(619) 546-4326 FAX (619) 546-4350

BergerABAM
FLORES LUND CONSULTANTS
7220 Trade Street, Suite 120
San Diego, CA 92121 (858) 566-0626

ALLIED GARDENS POOL ADA IMPROVEMENTS

SHEET TITLE: GRADING AND DRAINAGE PLAN

SHEET NUMBER: C-300

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET 5 OF 17 SHEETS

WBS #B-10167

Samir M 4/14/13
FOR CITY ENGINEER DATE

SAMIR MAHMALJI
SECTION HEAD

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	FLC		11.29.12	

CLARK RITTER
PROJECT MANAGER

226-1743
CCS27 COORDINATE

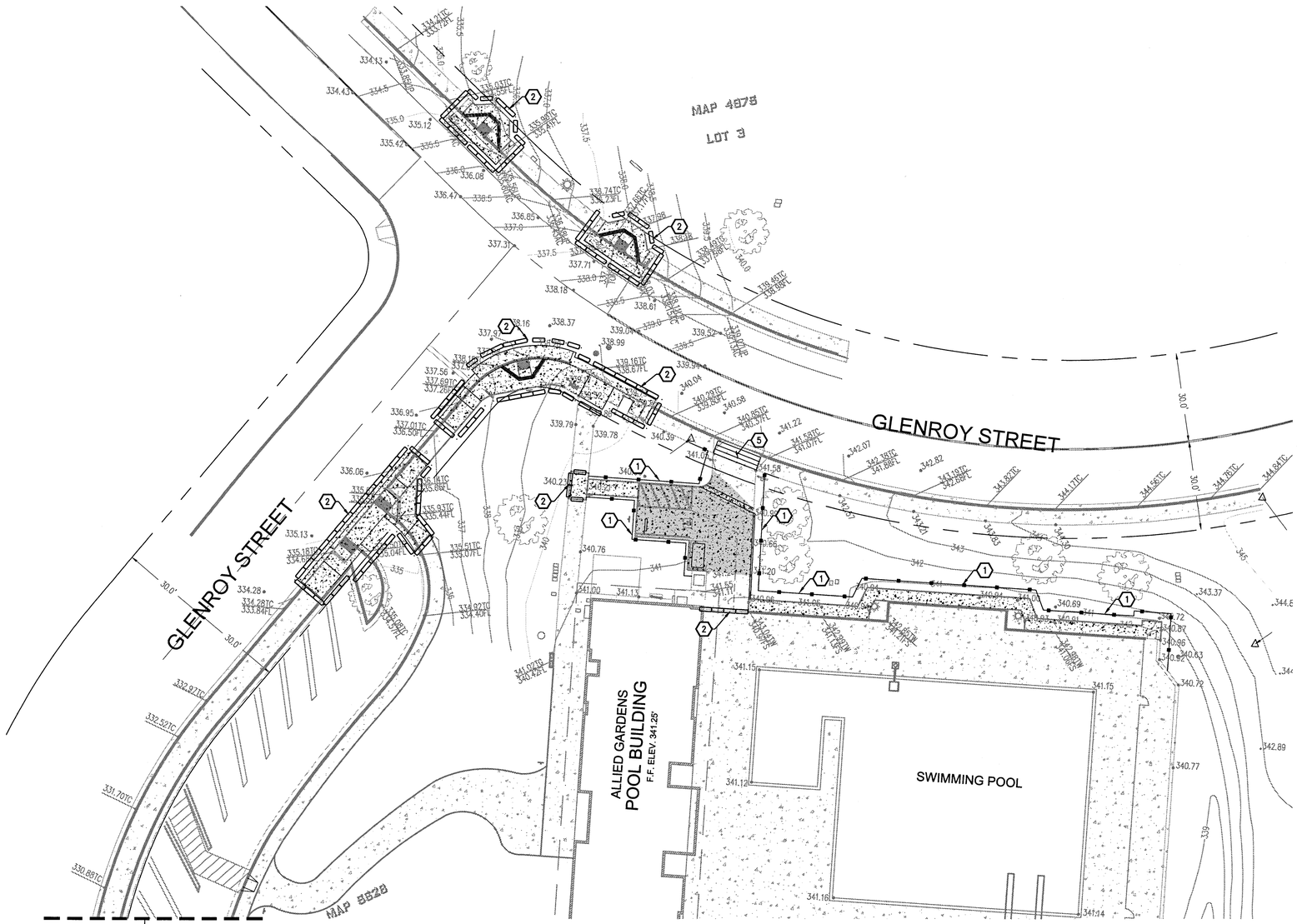
6304404,1866444
CCS83 COORDINATE

36588-05-D

DATE:	01/24/13
FLC PROJECT NO.	1112
DESIGN BY:	SG
DRAWN BY:	SG
REVIEWED BY:	WRL

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

ALLIED GARDENS POOL ADA IMPROVEMENTS



EROSION CONTROL NOTES

1.	THE CONTRACTOR SHALL OBTAIN, READ, AND IMPLEMENT ALL PORTIONS OF THE WATER POLLUTION CONTROL PLAN (WPCP).
2.	THE CONTRACTOR IS RESPONSIBLE FOR DOING WEEKLY, PRE-STORM, MID-STORM, AND POST-STORM INSPECTIONS IN ACCORDANCE WITH THE WPCP.
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 WPCP.
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.

EXISTING

ITEM	STANDARD DWGS.	SYMBOL
PROPERTY LINE		
EXISTING CONTOUR		459
EXISTING TREE		
EXISTING FENCE		X
EXISTING BUILDING		
EXISTING CONCRETE		
EXISTING CURB AND GUTTER		
EXISTING CURB		

PROPOSED

NEW CONCRETE FLATWORK	
NEW 7" P.C.C. CONCRETE PVMT.	
DIRECTION OF FLOW AND SLOPE	2.5%
KEY NOTE REFERENCE SYMBOL	4
TOP OF CURB ELEVATION / FINISH SURFACE ELEVATION	65.90 TC / 65.40 FS
FLOW LINE ELEVATION	64.90 FL
PROPERTY LINE	
FINISHED SPOT ELEVATION	6.0
PROPOSED PEDESTRIAN RAMP SDG-130, SDG-132,	

LEGEND

	SYMBOL	DESCRIPTION	BMP*	LOCATION
1		SILT FENCE	SE-1	AS INDICATED, AND AT TOES OF ALL SLOPES GREATER THAN 15 FT. HIGH
2		GRAVEL BAGS	SE-6	AS INDICATED, AND AT TOPS AND TOES OF ALL SLOPES, INCLUDING TEMPORARY SLOPES
3	FR	FIBER ROLLS	SE-5	AS INDICATED, AND AT TOPS AND TOES OF ALL SLOPES, INCLUDING TEMPORARY SLOPES
4		TOP AND TOE OF SLOPE DIVERSION DITCH	EC-9	AS INDICATED, AND AS REQUIRED TO DIRECT RUNOFF TOWARDS STORM DRAIN
5		STABILIZED CONSTRUCTION ENTRANCE/ EXIT	TC-1 TYPE 2	AS INDICATED, AND AT ANY OTHER ACCESS POINTS FOR CONSTRUCTION VEHICLES
TYP.		STORM DRAIN INLET PROTECTION	SE-10	ALL STORM DRAIN INLETS

*REFERS TO CALIFORNIA STORMWATER BMP HANDBOOK – CONSTRUCTION (NOVEMBER 2009)

GRAPHIC SCALE
20 0 20 40
(IN FEET)
1 INCH = 20 FT

FLC
1"=20'

REGISTERED PROFESSIONAL ENGINEER
WILLIAM RYAN LUND
No. 36972
Expires 6/30/2014
CIVIL
STATE OF CALIFORNIA

PRELIMINARY-NOT FOR CONSTRUCTION

FLC FLORES LUND CONSULTANTS
PROFESSIONAL ENGINEERS
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(858) 566-0828 FAX (858) 566-0827

DATE:	01/24/13
PLOTTED:	11:11 A
FLC PROJECT NO.	C1112
DESIGN BY:	SG
DRAWN BY:	SG
REVIEWED BY:	WRL
UPDATED BY:	s.gierlichs

Platt/Whitelaw Architects, Inc.
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ALLIED GARDENS POOL
ADA IMPROVEMENTS

SHEET TITLE: EROSION CONTROL PLAN

SHEET NUMBER: C-400

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET 6 OF 17 SHEETS

WBS #B-10167

Samir M 4/14/13
FOR CITY ENGINEER DATE

SAMIR MAHMALJI
SECTION HEAD

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	FLC		11.29.12	

CLARK RITTER
PROJECT MANAGER

226-1743
CCS27 COORDINATE

6304404,1866444
CCS83 COORDINATE

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

36588-06-D

ALLIED GARDENS POOL ADA IMPROVEMENTS

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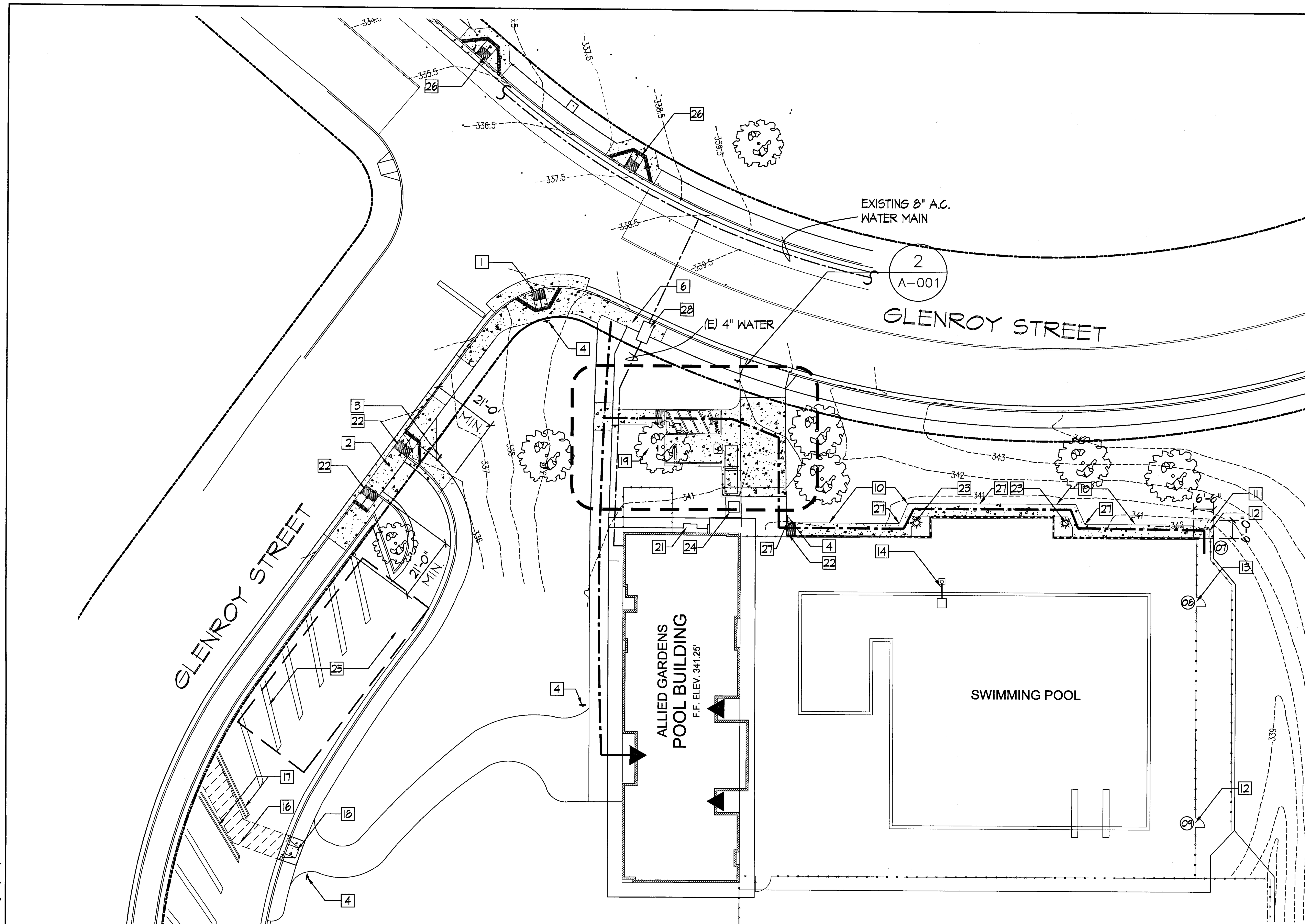
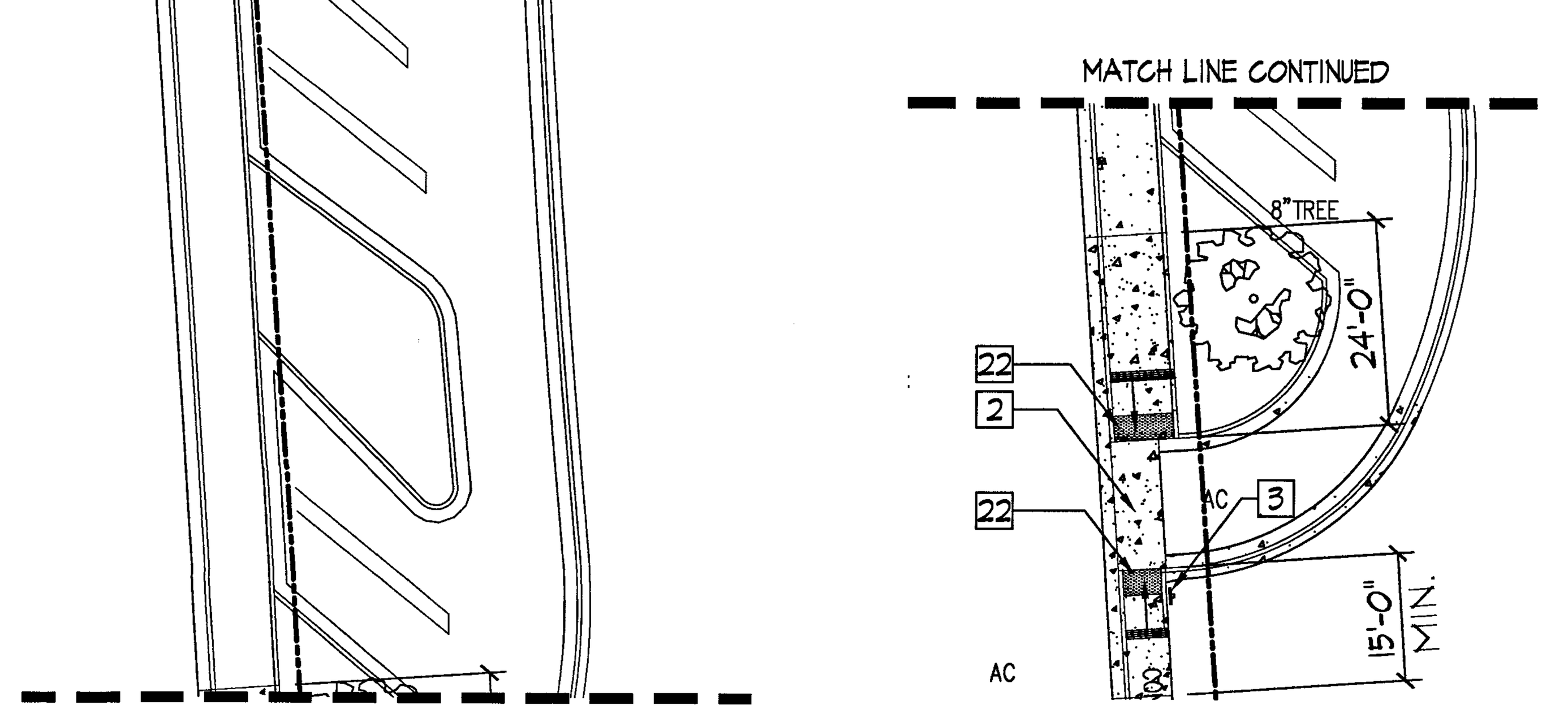
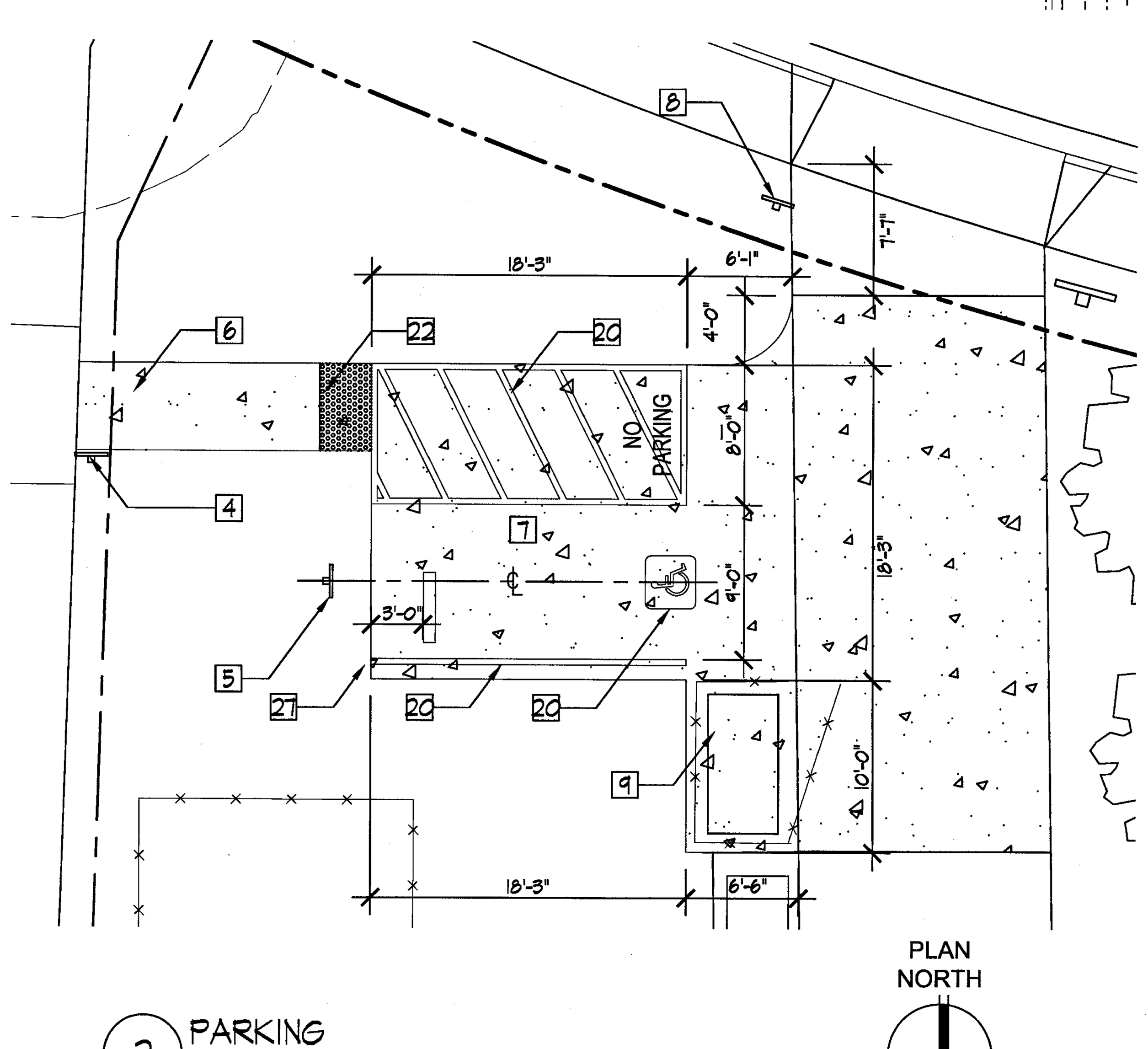




1 SITE PLAN
SCALE: 1"=20'-0"

PLAN NORTH



2 PARKING
SCALE: 1/8"=1'-0"

PLAN NORTH

KEYNOTES

1. REPLACE EXISTING CURB RAMPS AND WITH ADA COMPLIANT CURB RAMP PER SDG-132, TYPE A WITH 3'x4' DETECTABLE WARNING PER CITIES AML (APPROVED MATERIALS LIST). REPLACE GUTTER AND CURB BETWEEN RAMPS TO ALLOW FOR ACCESSIBLE SLOPES AND 4' BOTTOM LANDING.
2. REPLACE EXISTING WITH A 15' WIDE DRIVEWAY APRON AND CURB RAMP PER G-14D.
3. PROVIDE DIRECTIONAL SIGNAGE TO ACCESSIBLE PARKING. SEE 6/A-501.
4. PROVIDE DIRECTIONAL SIGNAGE TO ACCESSIBLE ROUTE. SEE 1/A-500.
5. PROVIDE VAN ACCESSIBLE PARKING SIGN PER CURRENT SDM-117.
6. REMOVE AND REPLACE SIDEWALK WITH 5' WIDE ACCESSIBLE CONCRETE SIDEWALK, MAX SLOPE OF 4.5% AND MAX CROSS SLOPE OF 1.5%. SIDEWALK TO EXTEND ADJACENT TO EXISTING CURB RAMP TO THE SIDEWALK PANEL PAST THE METAL UTILITY SIDEWALK.
7. PROVIDE VAN ACCESSIBLE PARKING STALL PER CURRENT SDM-117. CONCRETE PAVING TO MAINTAIN 1.5% MAX SLOPE IN ALL DIRECTIONS.
8. PROVIDE SIGN "UNAUTHORIZED PARKING IN ACCESSIBLE SPACE MAY RESULT IN VEHICLE BEING TOWED" AT ENTRANCE TO PARKING LOT PER 2/A-500.
9. REMOVE (E) DUMPSTER ENCLOSURE AND REINSTALL ON CONCRETE PAD. COORDINATE DUMPSTER LOCATION W/ R.E. DURING CONSTRUCTION.
10. REMOVE AND REPLACE CONCRETE WALK WITH 4' WIDE ACCESSIBLE CONCRETE WALK, MAX SLOPE OF 4.5% AND MAX CROSS SLOPE OF 1.5%.
11. REMOVE AND REPLACE CONCRETE SLAB.
12. MODIFY GATE WITH LEVER STYLE HARDWARE AND 10" KICK PLATE PER SDM-114.
13. RELOCATE EXISTING GATE I POST TO THE SOUTH. MODIFY GATE WITH LEVER STYLE HARDWARE AND 10" KICK PLATE PER SDM-114.
14. FURNISH AND INSTALL BATTERY OPERATED POOL LIFT SPECTRUM PRODUCTS TRAVELLER II XRC 500 WITH CART, COVER AND BATTERY.
15. W/ BRONZE 6" STANCHION ANCHOR.
16. SLURRY SEAL EXISTING ACCESSIBLE PARKING LOT STRIPING AND CROSSWALK STRIPING, AND REMOVE EXISTING SIGNAGE.
17. PROVIDE DOUBLE WHITE REFLECTIVE PAINT STRIPING TO MATCH EXISTING PARKING LOT STRIPING. PARKING SPACES SHOULD BE EQUALLY SPACED TO PROVIDE 3 PARKING STALLS AT 8' WIDE MINIMUM CENTER TO CENTER.
18. REMOVE EXISTING CURB RAMP AND REPLACE W/ CURB, GUTTER AND SIDEWALK.
19. REMOVE TREE AND ROOTS THAT AFFECT THE ACCESSIBLE PARKING. SPACE AND SIDEWALK.
20. ACCESSIBLE PARKING STRIPING AND MARKINGS PER CURRENT SDM-117.
21. (E) BACKFLOW PREVENTER TO REMAIN
22. 3'X5' DETECTABLE WARNING PER SDG-130 AND CITIES AML (APPROVED MATERIALS LIST).
23. (E) LIGHT POLE TO REMAIN
24. (E) TRANSFORMER TO REMAIN
25. SUGGESTED CONTRACTOR STAGING AREA. MAINTAIN PUBLIC ACCESS TO ALL SITE FACILITIES. IF STAGING STORAGE DISTURBS EXISTING CONSTRUCTION OR LANDSCAPE/ IRRIGATION, CONTRACTOR TO RESTORE TO ORIGINAL CONDITION. COORDINATE STAGING AREAS WITH RESIDENT ENGINEER.

KEYNOTES CONT.

26. PROVIDE CURB RAMPS AND WITH ADA COMPLIANT CURB RAMP WITH DETECTABLE WARNING PER SDG-132, TYPE B. REPLACE GUTTER AND CURB BETWEEN RAMPS TO ALLOW FOR ACCESSIBLE SLOPES AND 4' BOTTOM LANDING.
27. RELOCATE LANDSCAPING SPRINKLER HEADS AND REINSTALL ADJACENT TO SIDEWALK. THE NEW LOCATIONS SHALL PROVIDE FULL COVERAGE. TYPICAL OF ALL SPRINKLER HEADS AFFECTED BY WORK.
28. 2-2" WATER METER IN CONCRETE VAULT

LANDSCAPE & IRRIGATION NOTES

1. ALL DISTURBED AREAS SHALL MATCH APPEARANCE OF ADJACENT AREAS AT END OF WORK. TURF SHALL BE REPLACED WITH SOD AS APPROVED BY PARK & RECREATION DEPARTMENT. SEE GREENBOOK AND WHITEBOOK SECTION 308 - LANDSCAPE AND IRRIGATION INSTALLATION, AND SPEC SECTION 329200 TURF & GRASSES
2. PROJECT FOREMAN TO INSPECT PROJECT SITE PRIOR TO BEGINNING WORK AND MEET WITH ALLIED GARDENS POOL PERSONNEL TO DETERMINE WHICH EXISTING IRRIGATION FACILITIES ARE AFFECTED BY DEMOLITION/CONSTUCTION OF SITE IMPROVEMENTS.
3. IRRIGATION MAINLINE, WIRE, VALVES AND CONTROLLERS WHICH SERVE PORTIONS OF THE CONSTRUCTION AREA OUTSIDE OF THE PROJECT SITE SHALL REMAIN OPERATIONAL.
4. 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' DIA.
5. IT MAY BE NECESSARY TO RELOCATE AND/OR RECONNECT EXISTING IRRIGATION FACILITIES IN ORDER TO HAVE A FUNCTIONING SYSTEM. TAKE APPROPRIATE ACTION PRIOR TO DEMOLITION TO ENSURE THAT EXISTING PRESSURIZED WATER LINES, LATERAL LINES, AND IRRIGATION CONTROL WIRES ARE PROPERLY DISCONNECTED, RELOCATED AND/OR CAPPED TO PREVENT WATER SPILLAGE OR POTENTIAL HAZARDS. VERIFY EXACT LOCATION OF FACILITIES WITHIN AND ADJACENT TO WORK AREAS.
6. HAVE A PROJECT FOREMAN ON SITE DURING DEMOLITION TO DISCONNECT AND CAP EXISTING IRRIGATION FACILITIES.
7. OBTAIN APPROVAL FROM RESIDENT ENGINEER FOR RELOCATION OF EXISTING FACILITIES PRIOR TO CONSTRUCTION.
8. VERIFY EXACT LOCATIONS AND STAKE ALL DISCONNECTED, CAPPED OR RELOCATED FACILITIES IN THE FIELD AFTER DEMOLITION HAS BEEN COMPLETED.
9. VERIFY LOCATIONS OF ALL PERTINENT SITE IMPROVEMENTS INSTALLED UNDER OTHER TRADES, INCLUDING PIPING AND WIRING. IF ANY PART OF THIS PLAN CANNOT BE FOLLOWED DUE TO SITE CONDITIONS, CONTACT CITY RESIDENT ENGINEER FOR INSTRUCTIONS PRIOR TO COMMENCING WORK.
   CONTRACTOR SHALL COORDINATE WITH THE CITY RESIDENT ENGINEER TO PRESERVE AND PROTECT EXISTING LANDSCAPE AND IRRIGATION SYSTEMS ADJACENT TO PROJECT SITE, AND EXISTING IRRIGATION FACILITIES WITHIN PROJECT AREA AFFECTED BY THIS WORK. ALL TREES ADJACENT TO A CONSTRUCTION AREA SHALL BE PROTECTED BY PLACING ORANGE CAUTION FENCING AROUND THE TREE AT THE TREE'S DRIPLINE. ALL WORK, EQUIPMENT AND MATERIAL TO STAY CLEAR OF THESE AREAS.
10. ALL IRRIGATION WORK SHALL CONFORM TO THE CITY OF SAN DIEGO'S JAN. 2011 ISSUE OF THE CONSULTANT'S GUIDE TO PARK DESIGN AND DEVELOPMENT AND ALL OTHER LANDSCAPE-RELATED CITY AND REGIONAL STANDARDS.
11. ALL IRRIGATION SYSTEM ADJUSTMENTS ARE TO BE INSPECTED BY THE PARK AND RECREATION DEPARTMENT AND SHALL BE SHOWN TO OPERATE SATISFACTORILY.

GENERAL NOTES

1. ALL CONCRETE WALKWAYS TO HAVE A 4.5% MAX SLOPE IN THE DIRECTION OF TRAVEL AND 1.5% MAX CROSS SLOPE.
2. ACCESSIBLE PARKING STALLS TO COMPLY WITH CURRENT SDM-117.
3. BRING ALL SECTIONS OF WALKWAY REPLACEMENT TO NEAREST JOINT.
4. SEE C-200 FOR EXTENT OF CONCRETE PAVEMENT WORK.

PARKING COMPLIANCE

PARKING	TOTAL	ACC	VAN
LOT	19	1	(1)
REQUIRED		1	(1)

1 TO 25 = 1 SPACES
(X) = VAN SPACE INCLUDED IN ACC NUMBER

LEGEND

- PROPERTY LINE
- SITE ACCESSIBLE PATH OF TRAVEL (P.O.T.)
- PROPOSED CONCRETE SIDEWALK
- (E) FENCE
- ACCESSIBLE ENTRANCES AND EXITS

0 10' 20' 40'
SCALE: 1" = 20'-0"

Platt/Whitelaw Architects, Inc.
4034 30th Street, SAN DIEGO CA 92104
(619) 546-4326 FAX (619) 546-4350

REGISTERED ARCHITECT — SANDRA S. GRAMLEY — C-21073 — STATE OF CALIFORNIA

ALLIED GARDENS POOL
ADA IMPROVEMENTS

SHEET TITLE:	SHEET NUMBER:
SITE PLAN	A-001

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET 07 OF 17 SHEETS

WBS #B-10167

Samir M 4/1/13
FOR CITY ENGINEER — DATE

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	SG/KMP		11.29.12	

SAMIR MAHMALJI — SECTION HEAD
CLARK RITTER — PROJECT MANAGER
226-1743 — CCS27 COORDINATE
6304404,1866444 — CCS83 COORDINATE

CONTRACTOR ____ DATE STARTED ____
INSPECTOR ____ DATE COMPLETED ____

36588-07-D

ALLIED GARDENS POOL ADA IMPROVEMENTS

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DECEMBER 18, 2012

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

PLAN NORTH

KEYNOTES

1. REMOVE AND REINSTALL METAL BARRIER
2. REMOVE DRINKING FOUNTAINS.
3. REMOVE SLOPED SLAB.
4. REMOVE CMU PARTITION.
5. REMOVE URINAL.
6. REMOVE SINK.
7. REMOVE TOILET AND CHANGING COMPARTMENT PARTITIONS.
8. REMOVE ALL GRAB BARS IN BOTH RESTROOMS (TYPICAL).
9. REMOVE TOILET.
10. REMOVE AND REINSTALL BABY CHANGING STATION.
11. REMOVE HAND DRYER.
12. REMOVE CHANGING ROOM BENCH AND METAL POSTS. PATCH AND PAINT.
13. REMOVE +/- 38" SECTION OF COUNTER.
14. REMOVE AND REINSTALL CHANGING ROOM DOOR AS INDICATED. SEE A-110.
15. REMOVE SHOWER HEAD AND CONTROLS.
16. REMOVE SECTION OF BENCH. PATCH AND PAINT.
17. REMOVE SOAP DISPENSERS.
18. REMOVE HOSE BIBB.
19. REMOVE AND RELOCATE WALL MOUNTED SOAP DISPENSER.
20. REMOVE FRAMED PARTITION.

LEGEND

- ROOM 600 — ROOM TAG - SEE SHEET A-5.1
- W — SIGN TYPE
- REMOVE
- DEMOLISH EXISTING SLAB AS INDICATED
- (E) CMU WALL TO REMAIN
- (E) WD STUD WALL TO REMAIN

0 2'-8" 5'-4" 10'-8"
SCALE: 0'-0 3/16" = 1'-0"

Platt/Whitelaw Architects, Inc.
4034 30th Street, SAN DIEGO CA 92104
(619) 546-4326 FAX (619) 546-4350

REGISTERED ARCHITECT SANDRA S. GRAGLIA C-21073 EXP. 4-30-13 STATE OF CALIFORNIA

ALLIED GARDENS POOL
ADA IMPROVEMENTS

SHEET TITLE: DEMOLITION PLAN	SHEET NUMBER: A-100
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT SHEET 08 OF 17 SHEETS	WBS #B-10167
Samir M 4/14/13 FOR CITY ENGINEER DATE	SAMIR MAHMALJI SECTION HEAD
CLARK RITTER PROJECT MANAGER	
226-1743 CCS27 COORDINATE	
6304404,1866444 CCS83 COORDINATE	
CONTRACTOR DATE STARTED INSPECTOR DATE COMPLETED	36588-08-D

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	SG/KMP		11.29.12	

ALLIED GARDENS POOL ADA IMPROVEMENTS

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DECEMBER 18, 2012

DOOR SCHEDULE

DOOR									DETAILS
MARK	TYPE	SIZE WIDTH	SIZE HEIGHT	SIZE THICK	MAT'L	FINISH	HARDWARE GROUPS (SEE SPEC SECTION 08110)		
01	(E)	--	--	1-3/4"	WD	(E) PAINT	003	--	3/A-500
02	(E)	--	--	1-3/4"	WD	(E) PAINT	001	--	--
03	(E)	--	--	1-3/4"	WD	(E) PAINT	001	--	--
04	(E)	--	--	1-3/4"	WD	(E) PAINT	002	--	4/A-500
05	(E)	--	--	1-3/4"	WD	(E) PAINT	005A	--	--
06	(E)	--	--	1-3/4"	WD	(E) PAINT	005	--	--
07	(E)	--	--	--	MTL	--	006	--	7/A-501
08	(E)	--	--	--	MTL	--	004	--	5/A-501
09	(E)	--	--	--	MTL	--	004	--	5/A-501

INTERIOR FINISH SCHEDULE

ROOM	NAME	FLOOR	NORTH WALL	EAST WALL	SOUTH WALL	WEST WALL	REMARKS
105	TOILET	HFC	PP	PP	--		PATCH AND PAINT WALL TO MATCH (E)
106	WOMEN	HFC	--	--	--	--	
107	HALL	HFC	--	--	--	--	
114	HALL	HFC	--	--	--	--	
115	TOILET	HFC	--	PP	PP	--	PATCH AND PAINT WALL
116	MEN	HFC	--	--	--	--	

FINISH LEGEND

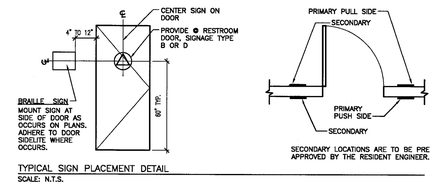
PP PP PATCH AND PAINT
HFC HFC HIGH PERFORMANCE FLOOR COATING

INTERIOR FINISH NOTES

1. SEE INTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION.
2. PROTECT FACTORY FINISHED ITEMS WHEN PAINTING ADJACENT SURFACES.
3. PAINT ALL EXPOSED METAL SURFACES.

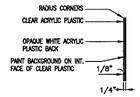
SIGN SCHEDULE

SIGN NO.	SIGN TAG	NOTES	SIGN NO.	SIGN TAG	NOTES
103-A	E	(E) TO REMAIN	110-A	E	BACKPLATE
104-A	E	(E) TO REMAIN	111-A	G	BACKPLATE
105-A	G	---	113-A	D	---
106-A	G	---	113-B	C	---
107-A	B	---	113-C	G	---
107-B	A	(E) TO REMAIN	114-A	D	---
108-A	F	---	114-B	C	(E) RELOCATE
109-A	B	---	115-A	G	---
109-B	A	---	116-A	G	---
109-C	G	---	117-A	E	STORAGE

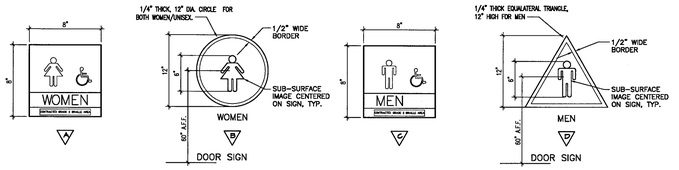


TYPICAL SIGN PLACEMENT DETAIL
SCALE: N.T.S.

SECONDARY LOCATIONS ARE TO BE PRE APPROVED BY THE RESIDENT ENGINEER.



TYPICAL SIGN DETAIL (SECTION)
SCALE: N.T.S.



SIGN TYPES
SCALE: N.T.S.

SIGNAGE NOTES

1. SIGNS SHALL COMPLY WITH CBC SECTION 11B.5.
2. THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL BE THE STANDARD USED TO IDENTIFY FACILITIES THAT ARE ACCESSIBLE TO AND USEABLE BY PHYSICALLY DISABLED PERSONS AS SET FORTH AND SPECIFICALLY REQUIRED IN THIS DETAIL.
3. LETTER SIZE: LETTERS AND NUMBERS ON SIGNS SHALL BE 1" HIGH, RAISED A MIN. OF 1/32" ABOVE BACKGROUND.
4. CONTRAST OF SYMBOL: CHARACTERS AND SYMBOLS CONTRAST WITH THEIR BACKGROUND, EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND. SYMBOLS SHALL BE CONTRASTING IN COLOR FROM THE DOOR.
5. PICTORIAL SYMBOL SIGNS: PICTORIAL SYMBOL SIGNS SHALL BE ACCOMPANIED BY THE EQUAL VERBAL DESCRIPTION PLACED DIRECTLY BELOW THE PICTOGRAM. THE BORDER DIMENSION OF THE PICTOGRAM SHALL BE A MINIMUM OF 6 INCHES IN HEIGHT.
6. SIGNS (U.N.O.) ARE MOUNTED TO WALL OR SIDELIGHT ADJACENT TO DOOR AS OCCURS ON PLAN PER TYPICAL SIGN PLACEMENT DETAIL
7. COLOR SELECTED BY ARCHITECT THROUGH RESIDENT ENGINEER OR REPRESENTATIVE. VERIFY LOCATION OF SIGN WITH RESIDENT ENGINEER PRIOR TO MOUNTING.
8. BRAILLE: CONTRACTED GRADE 2 BRAILLE DOTS AT 1/10" O.C. WITHIN CELL AND 2/10" BETWEEN EACH CELL. DOTS SHALL BE RAISED A MIN. OF 1/32" ABOVE BACKGROUND. TO BE PROVIDED AT SIDE OF DOOR AS OCCURS ON PLANS. SIGN MFR. TO VERIFY BRAILLE TRANSLATION.
9. DOOR MOUNTED SIGNS SHALL BE CENTERED ON DOOR, AS SHOWN, MOUNTED 60" ABOVE FLOOR. SIGN SHALL BE ATTACHED WITH TAMPER PROOF SCREWS + ADHESIVE.
10. SIGNS TO MATCH EXISTING SIGNS.
11. PROVIDE A BACKPLATE FOR SIGNS MOUNTED ON GLASS.

KEYNOTES

1. NOT USED
2. +/- 38" WIDE X 34" HIGH ACCESSIBLE COUNTER
3. LOWER BABY CHANGING STATION. SEE DETAIL 9/501.
4. PROVIDE 18" WIDE X 54" HIGH MIRROR. MOUNT BOTTOM EDGE OF MIRROR AT 18".
5. PROVIDE 24"X48"X18" HIGH BENCH.
6. PROVIDE COAT HOOKS MOUNTED AT 48" MAX.
7. REVERSE SWING AS INDICATED AND REINSTALL CHANGING ROOM PARTITION DOOR AND HARDWARE.
8. PROVIDE 18" WIDE X 24" HIGH MIRROR. MOUNT WITH BOTTOM EDGE OF MIRROR AT 34".
9. PROVIDE ACCESSIBLE LOCKER
10. HIGH PERFORMANCE FLOOR COATING
11. SOLID POLYMER PARTITION.
12. CUT AND GRID OVERHEAD BARS BETWEEN BENCHES FLUSH TO BENCH SUPPORTS.
13. RAISE OR RELOCATE FLOOR DRAIN TO FLUSH OUT AT 1.5% MAX SLOPED FLOOR. DRAIN MUST BE RAISED OR RELOCATED SO THAT FLOOR SLOPES TO DRAIN.

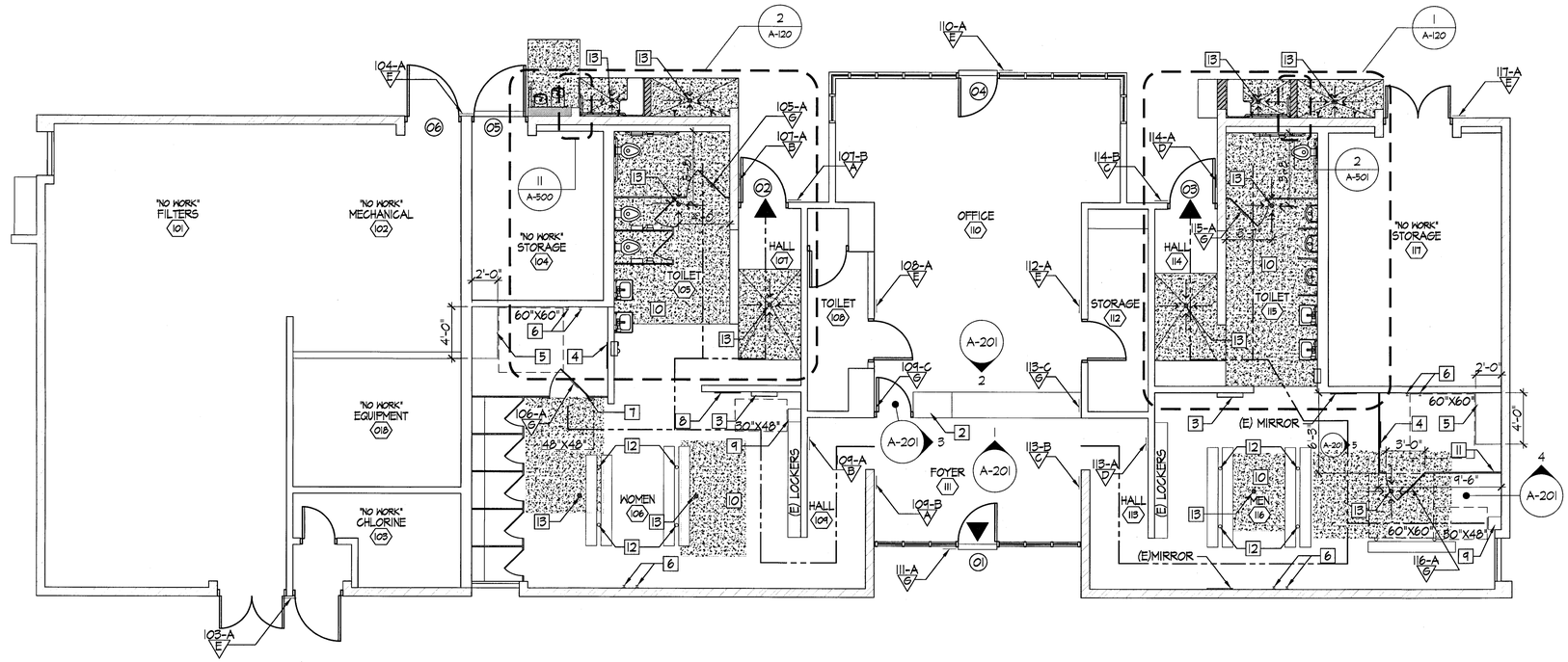
GENERAL NOTES

1. PATCH AND REPAINT EXISTING WALLS TO MATCH ADJOINING WALL AND CEILING. PAINT ENTIRE PLANE OF PATCHED WALL OR REPAIR WALLS TO NEAREST CORNER.
2. SAND AND GRIND SMOOTH EXISTING BENCH. PAINT TO MATCH EXISTING BENCH.
3. LOWER ALL (E) MIRRORS IN BOTH THE MEN'S AND THE WOMEN'S RESTROOM, SO THE BOTTOM IS AT40" TO THE MIRRORED SURFACE.

LEGEND

- ROOM 600 — ROOM TAG
- ## — DOOR TAG
- SIGN TAG
- NEW WALL CONSTRUCTION
- REPLACE SECTION OF CONCRETE SLAB. SLOPE TO BE LESS THAN 1.5% IN ALL DIRECTIONS. TRANSITION SLAB TO MEET EXISTING SLAB. PROVIDE A BROOM FINISH FOR SLIP RESISTANCE. SEE 4/A-501.
- ACCESSIBLE PATH OF TRAVEL
- ACCESSIBLE ENTRANCES AND EXITS

0 2'-8" 5'-4" 10'-8"
SCALE: 0'-0 3/16" = 1'-0"



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

PLAN NORTH

Platt/Whitelaw Architects, Inc.
4034 30th Street, SAN DIEGO CA 92104
(619) 546-4328 FAX (619) 546-4350

REGISTERED ARCHITECT SANDRA S. BREWER RCE 21073 EXP. 3-30-13 STATE OF CALIFORNIA

ALLIED GARDENS POOL
ADA IMPROVEMENTS

SHEET TITLE: FLOOR PLAN AND SCHEDULES

SHEET NUMBER: A-110

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET 09 OF 17 SHEETS

WBS #B-10167

Samir M 4/14/13
FOR CITY ENGINEER DATE

SAMIR MAHMALJI
SECTION HEAD

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	SG/KMP		11.29.12	

CLARK RITTER
PROJECT MANAGER

226-1743
CCS27 COORDINATE

6304404,1866444
CCS83 COORDINATE

36588-09-D

CONTRACTOR ____ DATE STARTED ____
INSPECTOR ____ DATE COMPLETED ____

ALLIED GARDENS POOL ADA IMPROVEMENTS

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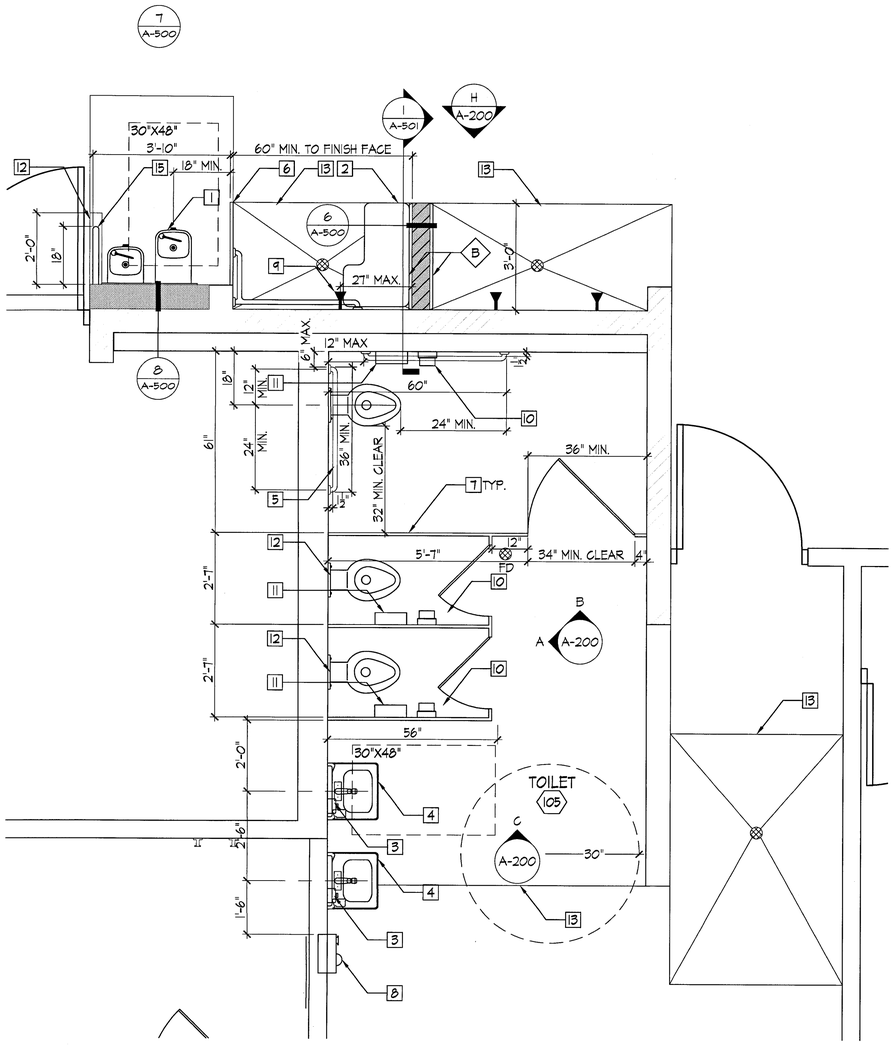
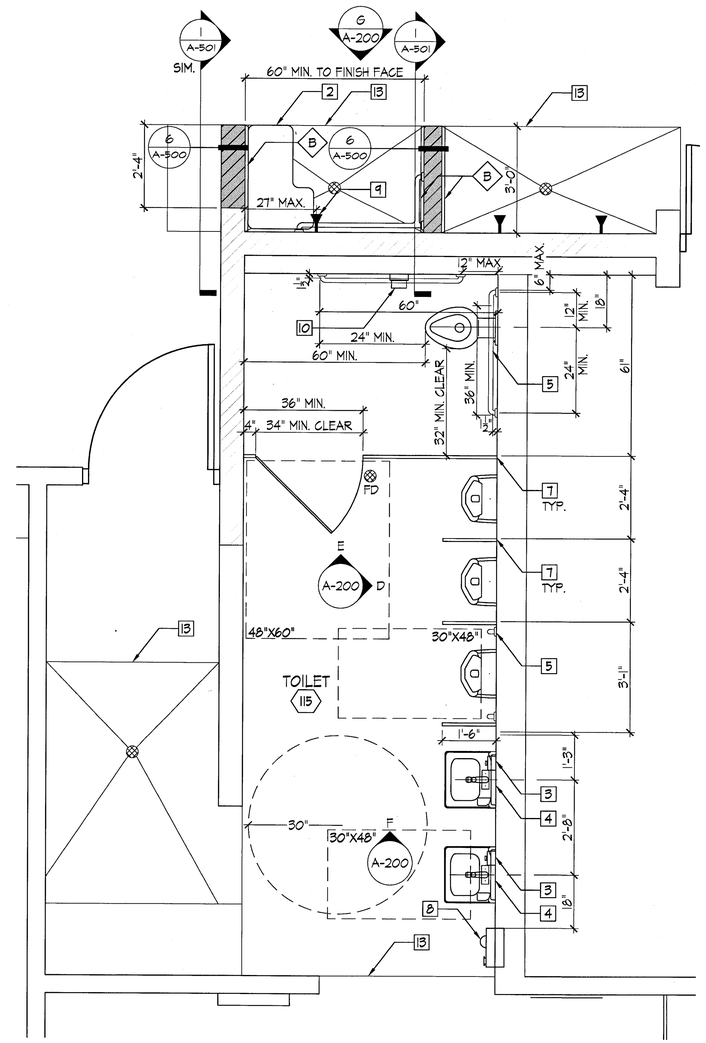
DECEMBER 18, 2012



PLAN NORTH

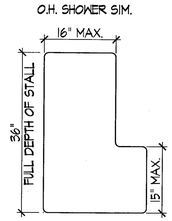
2 ENLARGED WOMENS RESTROOM FLOOR PLAN
SCALE: 1/2"=1'-0"



PLAN NORTH

1 ENLARGED MENS RESTROOM FLOOR PLAN
SCALE: 1/2"=1'-0"

O.H. SHOWER SIM.



3 SHOWER SEAT TYP.
SCALE: 1-1/2"=1'-0"

KEYNOTES

1	HI/LO DRINKING FOUNTAIN
2	ACCESSIBLE SHOWER FOLDING SEAT, PER DETAIL 3.
3	SURFACE MOUNTED SOAP DISPENSER
4	WALL HUNG SINK. INSULATE JACKET AT SINK.
5	1 1/2" DIAMETER STAINLESS STEEL GRAB BARS @ SIDE AND REAR OF TOILET. SEE 10/A-500.
6	PHENOLIC PANEL W/ FULL HIGH S.S. BRACKET
7	SOLID POLYMER PARTITION
8	SEMI-RECESSED HAND/HAIR DRYER. CONNECT TO EXISTING ELECTRICAL WIRING.
9	ACCESSIBLE SHOWER
10	2 SURFACE MOUNTED TOILET TISSUE DISPENSER
11	SURFACE MOUNTED SANITARY NAPKIN DISPOSAL.
12	6" HIGH CURB TO TRANSITION HIGHER EXIST SLAB AND NEW WORK.
13	MATCH EXISTING SLAB AND SLOPE CONCRETE SLAB 1.5% MAX TO DRAIN. MATCH EXISTING
14	TILE TO EXTEND AND REPLACE EXISTING TILE UP TO 6'-8" ON THIS SECTION OF CMU WALL
15	REINSTALL EXISTING METAL BARRIER

GENERAL NOTES

1. PATCH AND REPAINT EXISTING WALLS TO MATCH AJOINING WALL AND CEILING. PAINT ENTIRE PLANE OF PATCHED WALL OR REPAIR WALLS TO NEAREST CORNER.
2. SAND AND GRIND SMOOTH EXISTING BENCH. PAINT TO MATCH EXISTING BENCH.
3. PROVIDE SOLID BACKING (2X WOOD BLOCKING) FOR ALL ACCESSORIES IN RESTROOM.

LEGEND

ROOM 600 — ROOM TAG - SEE SHEET A-110

NEW WALL CONSTRUCTION

X — WALL FINISH. SEE FINISH SCHEDULE ON A-200

0 1' 2' 4'
SCALE: 1/2" = 1'-0"

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REGISTERED ARCHITECT SANDRA S. GRAMLEY C-21073 EXP. 4-30-13 STATE OF CALIFORNIA

ALLIED GARDENS POOL
ADA IMPROVEMENTS

SHEET TITLE: ENLARGED FLOOR PLANS	SHEET NUMBER: A-120
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS DEPARTMENT SHEET 10 OF 17 SHEETS	WBS #B-10167
FOR CITY ENGINEER 4/14/13 DATE	SAMIR MAHMALJI SECTION HEAD

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	SG/KMP		11.29.12	

CLARK RITTER PROJECT MANAGER
226-1743 CCS27 COORDINATE
6304404,1866444 CCS83 COORDINATE
36588-10-D

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

ALLIED GARDENS POOL ADA IMPROVEMENTS

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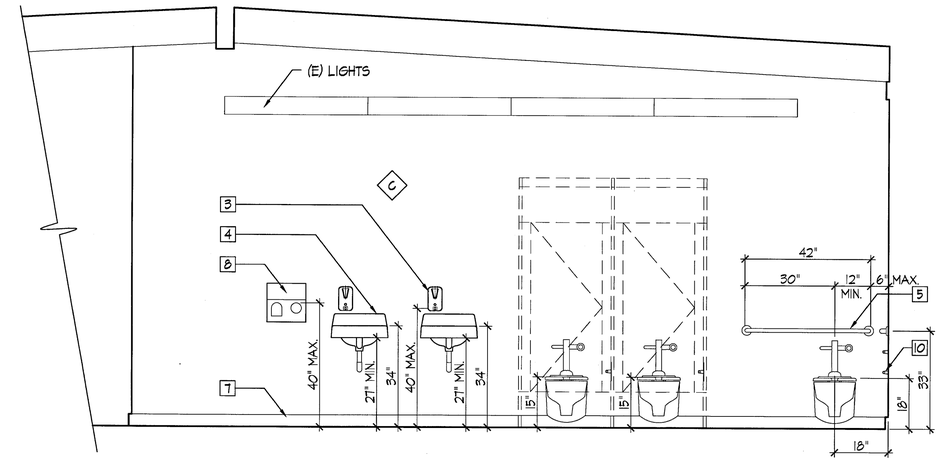
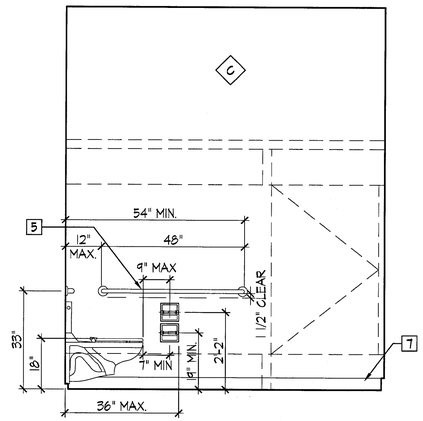
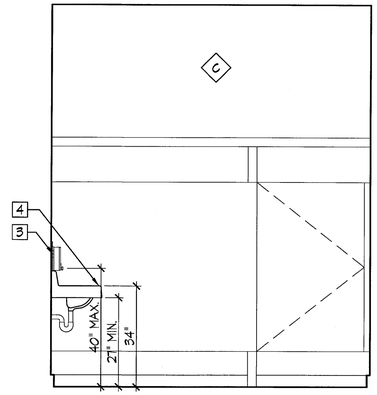


A WOMEN'S RESTROOM ELEVATION
SCALE: 1/2"=1'-0"



B WOMEN'S RESTROOM ELEVATION
SCALE: 1/2"=1'-0"



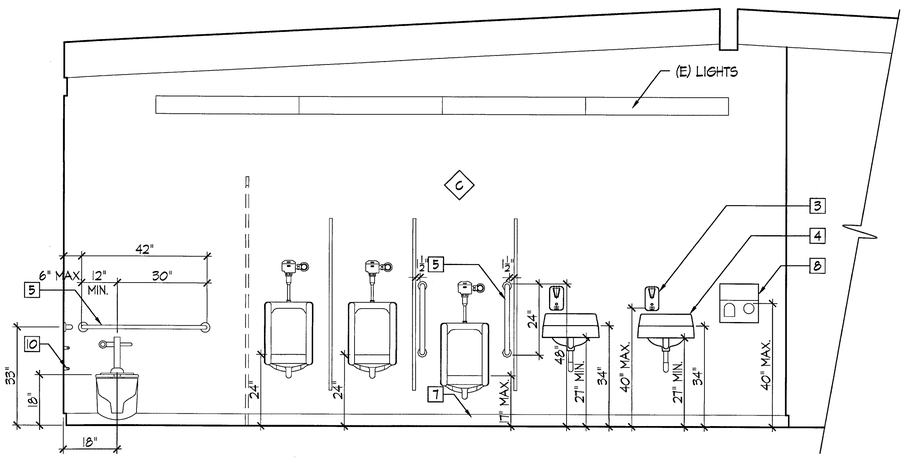
C WOMEN'S RESTROOM ELEVATION
SCALE: 1/2"=1'-0"

KEYNOTES

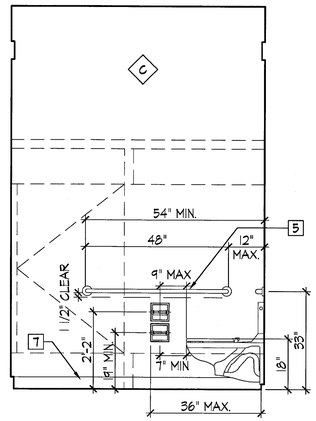
1	HI/LO DRINKING FOUNTAIN
2	ACCESSIBLE SHOWER FOLDING SEAT.
3	SURFACE MOUNTED SOAP DISPENSER
4	WALL HUNG SINK. INSULATED JACKET AT PIPES UNDER SINK.
5	1 1/2" DIAMETER STAINLESS STEEL GRAB BAR
6	PHENOLIC PANEL
7	(E) 4" CONCRETE CURB
8	SEMI-RECESSED HAND/HAIR DRYER
9	ACCESSIBLE SHOWER
10	SURFACE MOUNTED 2 TOILET TISSUE DISPENSERS
11	SURFACE MOUNTED SANITARY NAPKIN DISPOSAL.
12	FLOOR MOUNTED PANEL WITH INLINE FLOOR BRACE, S.S. LEVELING DEVICE AND S.S. SHOE.
13	METAL BARRIER

GENERAL NOTES

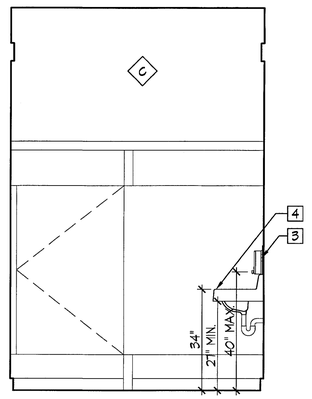
1. PATCH AND REPAINT EXISTING WALLS TO MATCH ADJOINING WALL AND CEILING. PAINT ENTIRE PLANE OF PATCHED WALL OR REPAIR WALLS TO NEAREST CORNER.
2. ALL DRAINPIPES AND ALL HOT WATER PIPES ACCESSIBLE UNDER LAVATORIES ARE TO BE INSULATED OR OTHERWISE COVERED.
3. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.



D MEN'S RESTROOM ELEVATION
SCALE: 1/2"=1'-0"



E MEN'S RESTROOM ELEVATION
SCALE: 1/2"=1'-0"

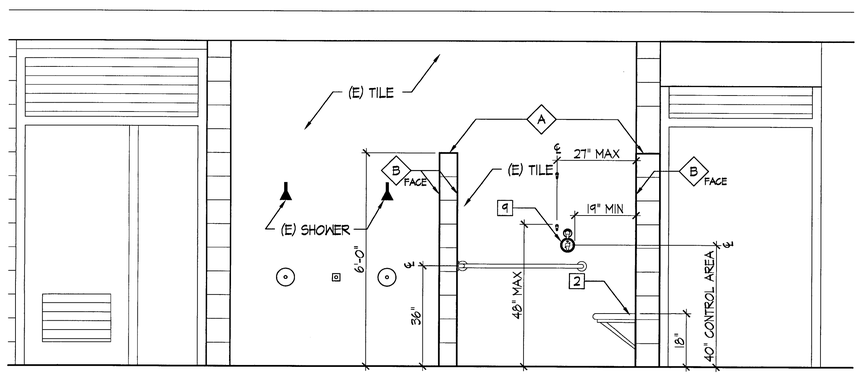


F MEN'S RESTROOM ELEVATION
SCALE: 1/2"=1'-0"

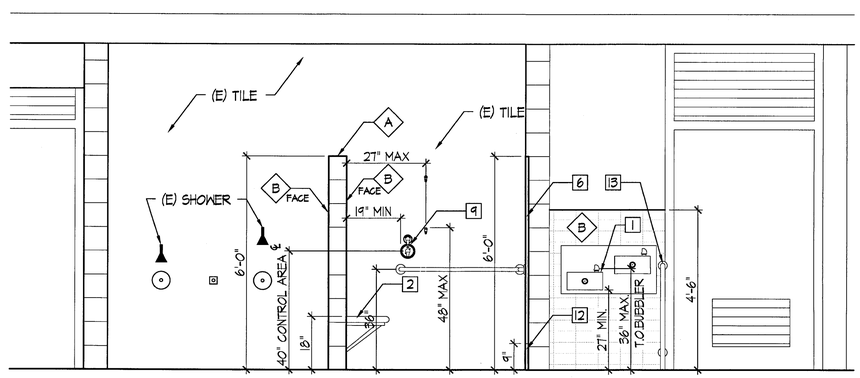
FINISH SCHEDULE

MARK (A)	MATERIAL	SIZE	FINISH	COLOR	NOTES
A	CMU		PRECISION	NATURAL	--
B	TILE	6X6	GLAZED	ALMOND	RANDOM (50%)
	TILE	6X6	GLAZED	GALAXY	RANDOM (25%)
	TILE	6X6	GLAZED	ORANGE	RANDOM (25%)
C	PAINT		TO MATCH (E)	TO MATCH (E)	--

NOTE: COLORS LISTED ARE IN PRICE GROUP 4 (ORANGE) AND PRICE GROUP 2 (ALMOND).



G SHOWERS EXTERIOR ELEVATION
SCALE: 1/2"=1'-0"



H SHOWERS EXTERIOR ELEVATION
SCALE: 1/2"=1'-0"

0 1' 2' 4'
SCALE: 1/2" = 1'-0"

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REGISTERED ARCHITECT SANDRA S. GRAILEY C-21073 EXP. 7-30-13 STATE OF CALIFORNIA

ALLIED GARDENS POOL
ADA IMPROVEMENTS

SHEET TITLE: INTERIOR AND EXTERIOR ELEVATIONS

SHEET NUMBER: A-200

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET 11 OF 17 SHEETS

WBS #B-10167

Samir M. 4/14/13
FOR CITY ENGINEER DATE

SAMIR MAHMALJI
SECTION HEAD

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	SG/KMP		11.29.12	

CLARK RITTER
PROJECT MANAGER

226-1743
CCS27 COORDINATE

6304404,1866444
CCS83 COORDINATE

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

36588-11-D

ALLIED GARDENS POOL ADA IMPROVEMENTS

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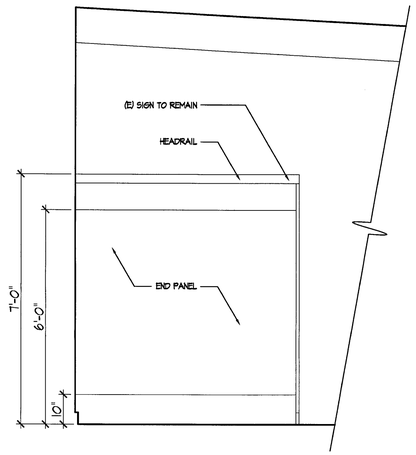
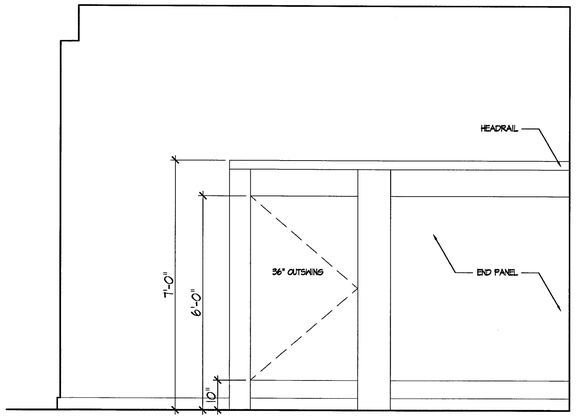
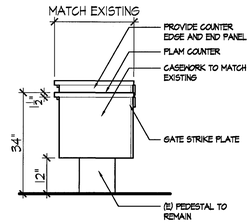


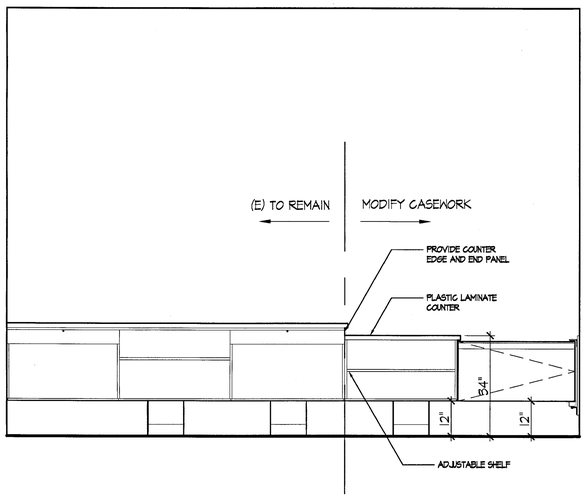
5 DRESSING ROOM SIDE ELEVATION
SCALE: 1/2"=1'-0"



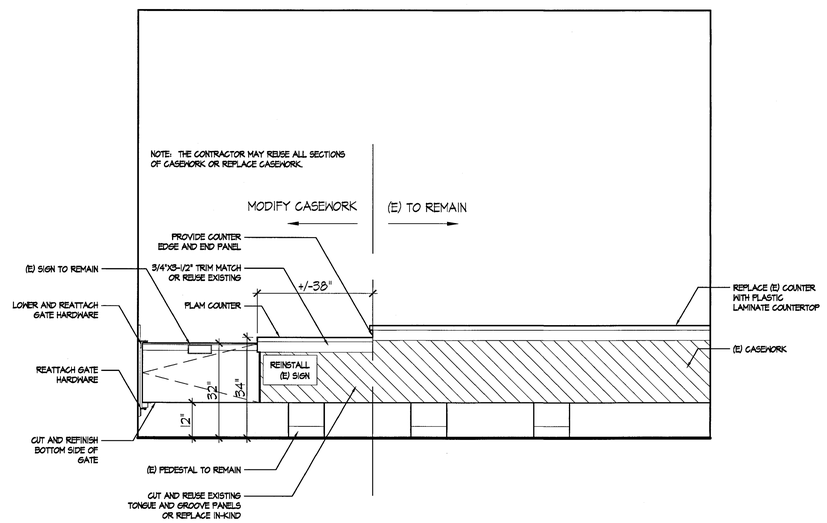
4 DRESSING ROOM FRONT ELEVATION
SCALE: 1/2"=1'-0"



3 COUNTER ELEVATION
SCALE: 1/2"=1'-0"



2 COUNTER ELEVATION
SCALE: 1/2"=1'-0"



1 COUNTER ELEVATION
SCALE: 1/2"=1'-0"

GENERAL NOTES

1. PATCH AND REPAINT EXISTING CABINETS TO MATCH ADJOINING SURFACES.
2. REPLACEMENT OF CASEWORK TO MATCH EXISTING IN FINISH AND MATERIAL.
3. THE CONTRACTOR MAY REUSE ALL OR SECTIONS OF CASEWORK AND TRIM OR REPLACE CASEWORK.
4. COUNTERTOP COLOR TO BE SELECTED BY THE ARCHITECT.

0 1' 2' 4'
SCALE: 1/2" = 1'-0"

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REGISTERED ARCHITECT SANDRA S. GRANLEY C-21073 EXP. 8-30-13 STATE OF CALIFORNIA

ALLIED GARDENS POOL
ADA IMPROVEMENTS

SHEET TITLE: INTERIOR ELEVATIONS

SHEET NUMBER: A-201

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET 12 OF 17 SHEETS

WBS #B-10167

Samir M 4/11/13
FOR CITY ENGINEER DATE

SAMIR MAHMALJI
SECTION HEAD

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	SG/KMP		11.29.12	

CLARK RITTER
PROJECT MANAGER

226-1743
CCS27 COORDINATE

6304404,1866444
CCS83 COORDINATE

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

36588-12-D

ALLIED GARDENS POOL ADA IMPROVEMENTS

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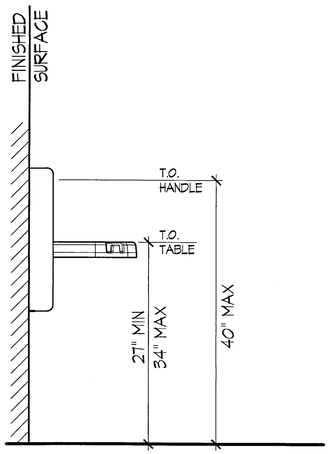
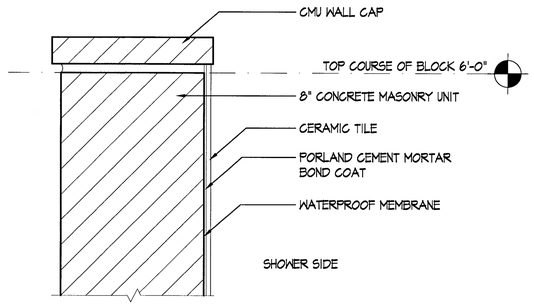


SCALE: 3/4" = 1'-0"

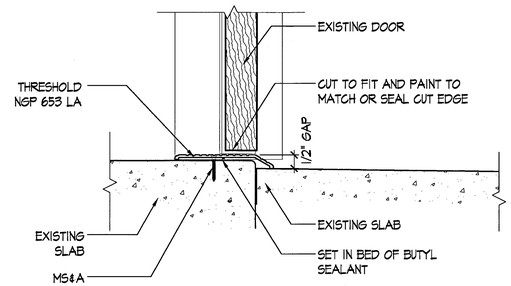
BABY CHANGING TABLE HEIGHT | 9



INSTALL TILE PER TCA W202

SCALE: 3" = 1'-0"

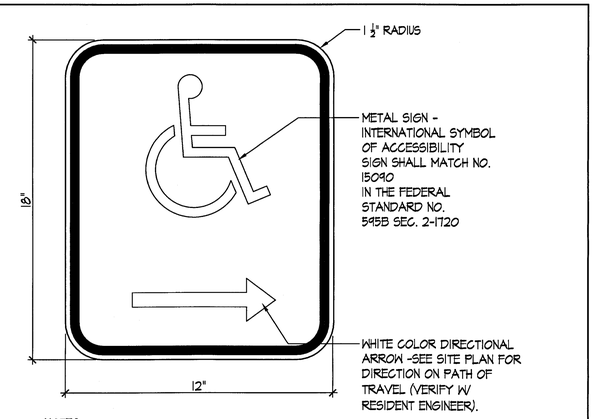
WALL @ SHOWER | 6



FIELD VERIFY ALL CONDITIONS BEFORE COMMENCEMENT OF WORK

SCALE: 3" = 1'-0"

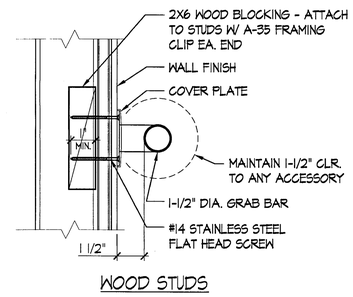
DOOR THRESHOLD | 3



NOTES:
1. COLORS - BORDER TEXT, AND SYMBOL - WHITE (RETROREFLECTIVE)
   BACKGROUND - BLUE (RETROREFLECTIVE)
2. POST MOUNTED SIGNS, SEE M-45 FOR BREAK AWAY SIGN POST.
3. SIGN SHALL BE CONSTRUCTED OF A MINIMUM 1/16" THICK ALUMINUM.

SCALE: 3" = 1'-0"

DIRECTIONAL SIGN | 1

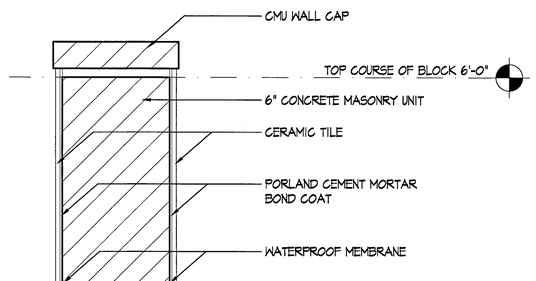


WOOD STUDS

NOTES:
1. GRAB BAR SHALL NOT ROTATE WITHIN ITS FITTINGS
2. GRAB BAR ATTACHMENT SHALL BE CAPABLE OF WITHSTANDING A 250 LB. POINT LOAD

SCALE: 3" = 1'-0"

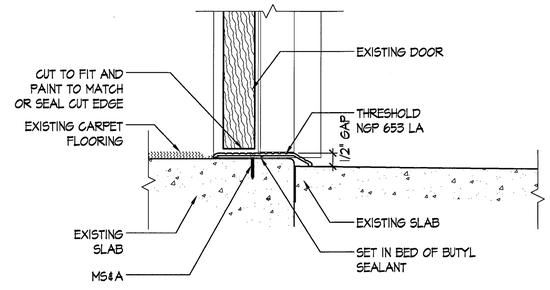
GRAB BAR | 10



INSTALL TILE PER TCA W202

SCALE: 3" = 1'-0"

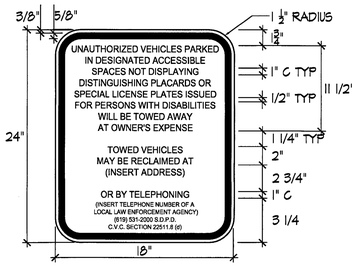
WALL @ SHOWER | 7



FIELD VERIFY ALL CONDITIONS BEFORE COMMENCEMENT OF WORK

SCALE: 3" = 1'-0"

DOOR THRESHOLD | 4

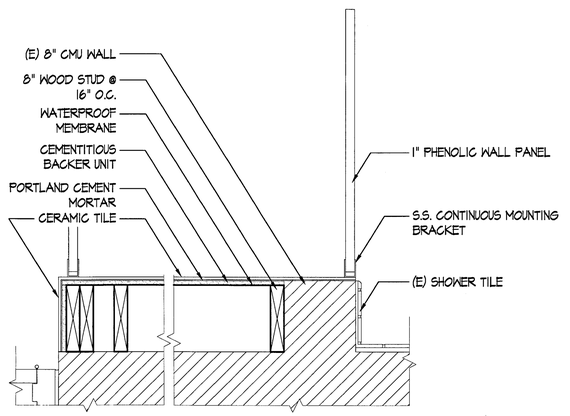


NOTES:

1. AN ADDITIONAL SIGN SHALL BE POSTED IN A CONSPICUOUS PLACE AT EACH ENTRANCE TO OFF-STREET PARKING FACILITIES OR IMMEDIATELY TO AND VISIBLE FROM EACH STALL OR SPACE.
2. COLORS - THE SIGN HAS A WHITE REFLECTIVE BACKGROUND WITH NON-REFLECTIVE BLACK BORDER AND TEXT.
3. BLANK SPACE MUST BE FILLED IN WITH THE APPROPRIATE INFORMATION AS A PERMANENT PART OF THE SIGN AT THE TIME OF FINAL INSPECTION.
4. POST MOUNTED SIGNS, SEE M-45 FOR BREAK AWAY SIGN POST.
5. SIGN SHALL BE CONSTRUCTED OF A MINIMUM 1/16" THICK ALUMINUM.

SCALE: 1 1/2" = 1'-0"

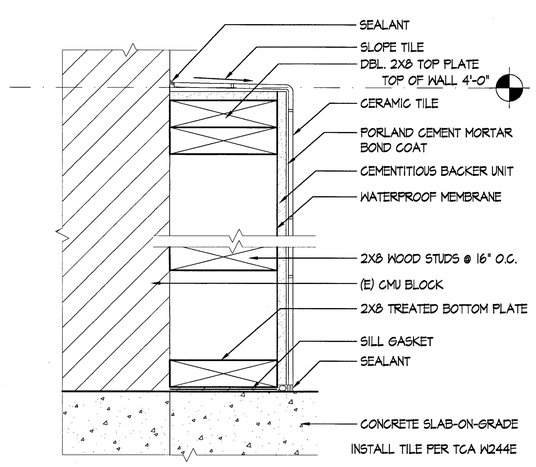
TOW AWAY SIGN | 2



INSTALL TILE PER TCA W244E-09

SCALE: 1 1/2" = 1'-0"

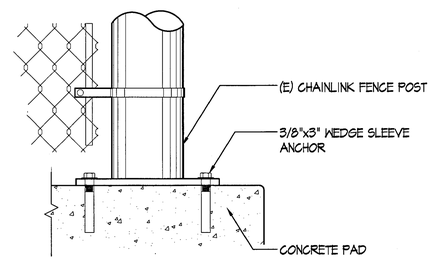
WALL @ DRINKING FOUNTAIN | 11



INSTALL TILE PER TCA W244E

SCALE: 3" = 1'-0"

WALL @ DRINKING FOUNTAIN | 8



FIELD VERIFY ALL CONDITIONS BEFORE COMMENCEMENT OF WORK

CHAINLINK FENCE POST | 5

Platt/Whitelaw Architects, Inc.
4034 30th Street, SAN DIEGO CA 92104
(619) 546-4326 FAX (619) 546-4350

REGISTERED ARCHITECT SANDRA S. GRACE C-21073 EXP. 8-30-13 STATE OF CALIFORNIA

ALLIED GARDENS POOL ADA IMPROVEMENTS

SHEET TITLE: DETAILS

SHEET NUMBER: A-500

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET 13 OF 17 SHEETS

WBS #B-10167

Samir M 4/17/13
FOR CITY ENGINEER DATE

SAMIR MAHMALJI
SECTION HEAD

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	SG/KMP		11.29.12	

CLARK RITTER
PROJECT MANAGER

226-1743
CCS27 COORDINATE

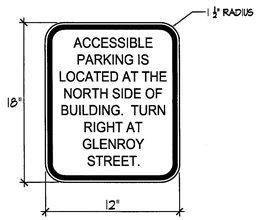
6304404,1866444
CCS83 COORDINATE

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

36588-13-D

J:\0389 allied gardens pool ada\03-drawings\allied gardens pool ada\sheets\a-500 details.dwg 1/29/2013 11:31 AM

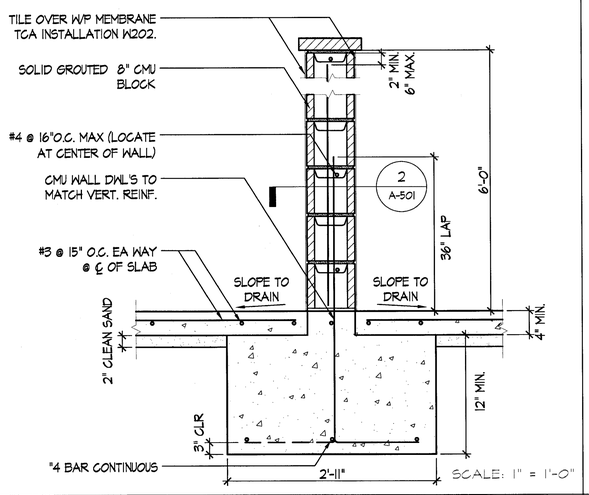
DECEMBER 18, 2012



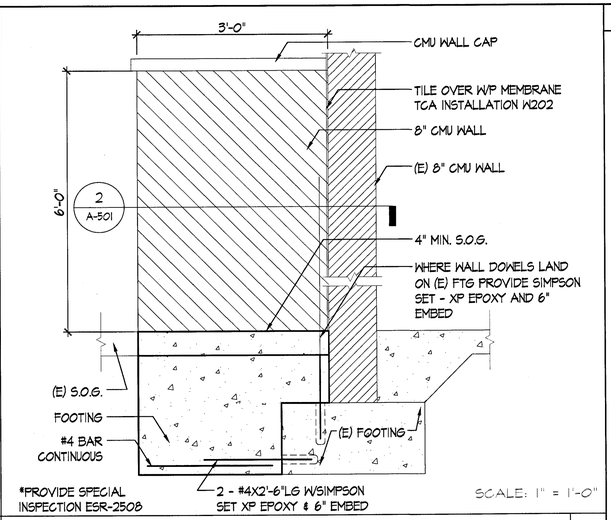
NOTES:

1. COLORS - THE SIGN HAS A WHITE REFLECTIVE BACKGROUND WITH NON-REFLECTIVE BLACK BORDER AND TEXT.
2. BLANK SPACE MUST BE FILLED IN WITH THE APPROPRIATE INFORMATION AS A PERMANENT PART OF THE SIGN AT THE TIME OF FINAL INSPECTION.
3. POST MOUNTED SIGNS, SEE M-45 FOR BREAK AWAY SIGN POST.
4. SIGN SHALL BE CONSTRUCTED OF A MINIMUM 1/16" THICK ALUMINUM.

ACCESSIBLE PARKING SIGN | 6



CMU PARTITION WALL | 3



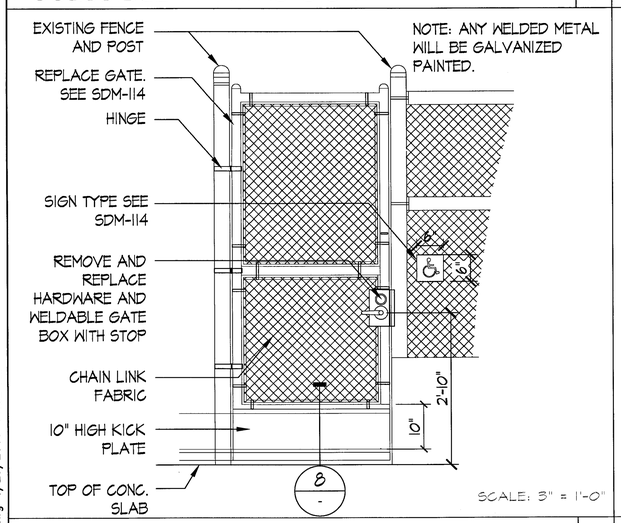
CMU PARTITION WALL | 1

REINFORCED MASONRY

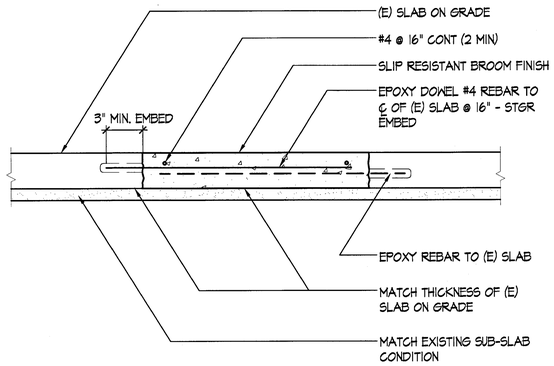
1. CONCRETE BLOCK UNITS (CMU) SHALL COMPLY WITH C.B.C. SEC. 2102A.2.5 AND SHALL BE MEDIUM WEIGHT, OPEN ENDED UNITS SOLID GROUTED AND COMPLY WITH ASTM C90, TYPE I, GRADE 'N' AND SHALL ALSO COMPLY WITH U.B.C. STANDARD NO. FOR f'm=1500 PSI. LAY BLOCK IN RUNNING BOND. PROVIDE DEEP CUT BOND BEAM UNITS WHERE HORIZONTAL REINFORCEMENT OCCURS.
2. MORTAR SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI AFTER 28 DAYS. RECOMMENDED MIXING PROPORTIONS BY VOLUME:
   PORTLAND CEMENT: 1 PART SAND (BASED ON DAMP LOOSE CONDITION): 2 1/4 AND NOT MORE THAN 3 TIMES THE SUM OF THE SEPARATE VOLUMES OF CEMENTITIOUS MATERIALS.
   LIME: OVER 1/4 TO 1/2 PARTS BY VOLUME.
3. COARSE GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AFTER 28 DAYS. RECOMMENDED MIXING PROPORTIONS BY VOLUME:
   PORTLAND CEMENT: 1 PART SAND (BASED ON CAMP LOOSE CONDITION): 2 1/4 TO 3 TIMES THE SUM OF THE VOLUMES OF THE CEMENTITIOUS MATERIALS.
4. REINFORCING STEEL SHALL COMPLY WITH ASTM A615, GRADE 40 OR 60. WELDED REINFORCEMENT SHALL COMPLY WITH ASTM A706 OR VERIFIED EQUIVALENT.
5. MATERIAL QUALITY CONTROL: PRIOR TO DELIVERY OF MASONRY MATERIALS TO THE JOB SITE, DELIVER TO THE ARCHITECT A LETTER CERTIFYING THAT ALL SUCH MATERIALS TO BE DELIVERED TO THE JOBSITE ARE IN STRICT CONFORMANCE WITH THE PROVISIONS OF THIS SECTION.
6. PROVIDE 3/4" MINIMUM OF ONE BAR DIAMETER, WHICHEVER IS GREATER, GROUT BETWEEN THE FACE OF A REBAR AND ANY INTERIOR SURFACE OF THE MASONRY.
7. ALL VERTICAL REINFORCING SHALL BE IN ONE PIECE FROM FOOTING TO ROOF, OR FROM FOOTING TO FLOOR AND FROM FLOOR TO NOT EXCEEDING 200 BAR DIAMETER INTERVALS NOR 10'-0" MAXIMUM ON CENTER. SPLICING OF REINFORCEMENT WILL NOT BE ACCEPTED UNLESS APPROVED PRIOR TO THE START OF ANY MASONRY WORK.
8. ALL CELLS SHALL BE GROUTED SOLID. GROUT LIFTS SHALL NOT EXCEED 6'-0" IN HEIGHT. CLEAN OUT HOLES SHALL BE PROVIDED AT THE BASE OF ALL GROUTED CELLS FOR GROUT LIFTS OVER 5'-0" HIGH. "GROUT-AID" SHALL BE ADDED TO THE MIX FOR GROUT LIFTS OVER 5'-0" HIGH.
9. GROUT CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE POUR 1 1/2" BELOW THE UPPERMOST UNIT.
10. GROUT SHALL BE CONSOLIDATED BEFORE LOSS OF PLASTICITY USING MECHANICAL VIBRATING EQUIPMENT TO MINIMIZE VOIDS DUE TO WATER LOSS. RODDING WILL NOT BE ACCEPTED.

REINFORCING STEEL

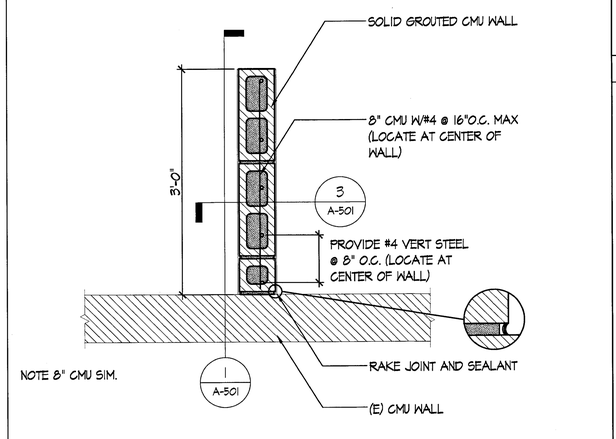
1. DETAILS OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH CHAPTER 7 OF "AMERICAN CONCRETE INSTITUTE" 318 UNLESS OTHERWISE NOTED. REINFORCING STEEL DETAILING, BENDING AND PLACING SHALL BE IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE", LATEST EDITION.
2. WELDING OF REINFORCING STEEL, IS NOT PERMITTED.
3. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 40 OR 60.
4. BAR SUPPORTS SHALL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF "BAR SUPPORT SPECIFICATION" BY THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
5. ALL REINFORCING STEEL AND OTHER EMBEDDED ITEMS SHALL BE SECURELY HELD IN POSITION AND SHALL BE INSPECTED PRIOR TO PLACING CONCRETE AND OR GROUT.
6. NO FIELD BENDING OF REINFORCEMENT WILL BE PERMITTED.



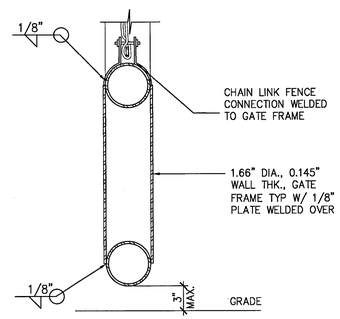
CHAINLINK FENCE | 7



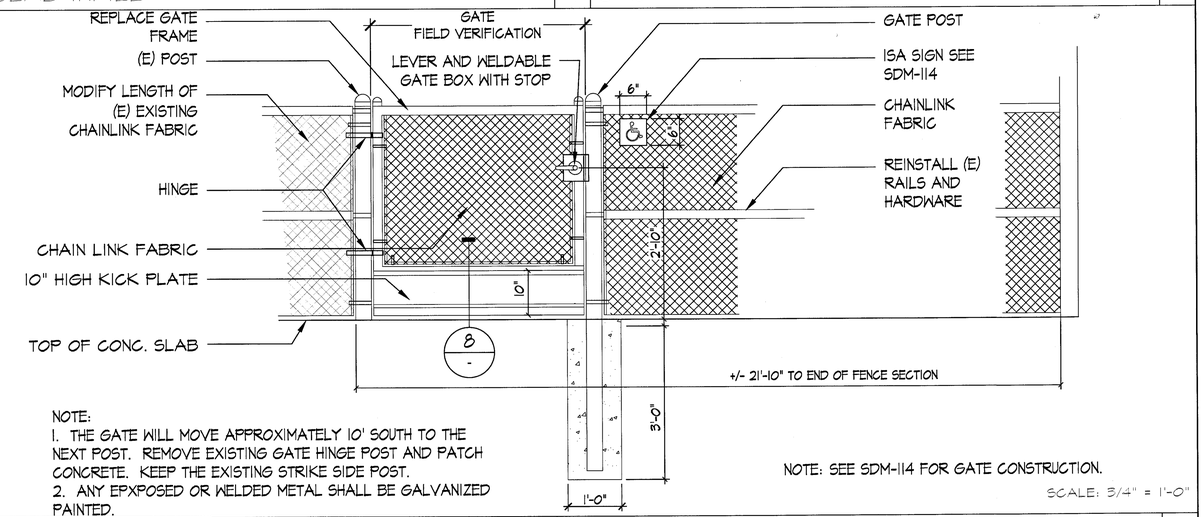
SLAB INFILL | 4



CMU PARTITION WALL | 2



KICK PLATE | 8



CHAINLINK FENCE | 5

Platt/Whitelaw Architects, Inc.
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(619) 546-4326 FAX (619) 546-4350

REGISTERED ARCHITECT SANDRA S. ORSMAN C-21073 EXP. 6-30-13 STATE OF CALIFORNIA

ALLIED GARDENS POOL ADA IMPROVEMENTS

SHEET TITLE: DETAILS

SHEET NUMBER: A-501

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET 14 OF 17 SHEETS

WBS #B-10167

FOR CITY ENGINEER — DATE 4/4/13

SAMIR MAHMALJI, SECTION HEAD

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	SG/KMP		11.29.12	

CLARK RITTER, PROJECT MANAGER

226-1743 CCS27 COORDINATE

6304404,1866444 CCS83 COORDINATE

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

36588-14-D

ALLIED GARDENS POOL ADA IMPROVEMENTS

DECEMBER 18, 2012

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: ZURN Z5615 AQUASENSE ECOVANTAGE HIGH EFFICIENCY TOILET SYSTEM, VITREOUS CHINA, 1-1/2" TOP SPUD, 2-1/8" TRAPWAY, HIGH EFFICIENCY (1.28 GPF) SIPHON JET ACTION, WALL MOUNTED. ZURN ZTS6200EV HIGH EFFICIENCY FLUSHMETER VALVE, BATTERY POWERED. PROVIDE WITH ZURN UNIVERSAL CARRIER. PROVIDE WITH ZURN Z5955SS-EL SEAT. INSTALL FLUSH VALVE ON WIDE SIDE OF TOILET AREA. ADA COMPLIANT (MOUNT TO MEET CA TITLE 24 CBC PART 2 AND CPC PART 6 REQUIREMENTS).
WC-2	1-1/4"	–	2"	4"	INTEGRAL	WATER CLOSET: ZURN Z5615 AQUASENSE ECOVANTAGE HIGH EFFICIENCY TOILET SYSTEM, VITREOUS CHINA, 1-1/2" TOP SPUD, 2-1/8" TRAPWAY, HIGH EFFICIENCY (1.28 GPF) SIPHON JET ACTION, WALL MOUNTED. ZURN ZTS6200EV HIGH EFFICIENCY FLUSHMETER VALVE, BATTERY POWERED. PROVIDE WITH ZURN UNIVERSAL CARRIER. PROVIDE WITH ZURN Z5955SS-EL SEAT. INSTALL FLUSH VALVE ON WIDE SIDE OF TOILET AREA.
U-1	3/4"	–	1-1/4"	2"	INTEGRAL	URINAL: ZURN ONE 5987.205.00, 1/8 GPF, VITREOUS CHINA, PRESSURE COMPENSATING INTERNAL FLOR REGULATOR, 3/4 TOP SPOD, 2" I.P.S. WITH INTEWRAL TRAP, 14" EXTENDED RIM, VANDAL RESISTANT, PROVIDE WITH FLUSH VALVE ZURN ZEG6003EV, BATTERY POWERED, PROVIDE WITH ZURN UNIVERSAL CARRIER. ADA COMPLIANT (MOUNT TO MEET CA TITLE 24 CBC PART 2 AND CPC PART 6 REQUIREMENTS).
U-2	3/4"	–	1-1/4"	2"	INTEGRAL	URINAL: ZURN ONE 5987.205.00, 1/8 GPF, VITREOUS CHINA, PRESSURE COMPENSATING INTERNAL FLOR REGULATOR, 3/4 TOP SPOD, 2" I.P.S. WITH INTEWRAL TRAP, 14" EXTENDED RIM, VANDAL RESISTANT, PROVIDE WITH FLUSH VALVE ZURN ZEG6003EV, BATTERY POWERED, PROVIDE WITH ZURN UNIVERSAL CARRIER.
L-1	1/2"	–	1-1/2"	2"	1-1/4"	LAVATORY: AMERICAN STANDARD 0356.421 LUCERNE WALL-HUNG LAVATORY, VITREOUS CHINA LAVATORY, D-SHAPED BOWL, FRONT OVERFLOW, SELF DRAINING DECK AREA, SINGLE CENTER FAUCET HOLE, 1-1/4" O.D., 6-1/2" DEEP, WHITE. PROVIDE WITH SYMMONS S-6080 ULTRA-SENSE SENSOR ACTIVATED LAVATORY FAUCET, INFRARED POSITION SENSITIVE DETECTION SYSTEM, 1.5 GPM LOW PROFILE VANDAL-RESISTANT AERATOR, 6-VOLT LITHIUM POWER PACK. MOUNT AT ADA COMPLIANT HEIGHT.
DF-1	1/2"	–	1-1/4"	2"	1-1/4"	DRINKING FOUNTAIN: HAWS 1119 "HI-LO" WALL MOUNTED BARRIER-FREE, DUAL 18 GAUGE TYPE 304 STAINLESS STEEL SATIN FINISH BASINS, PUSH-BUTTON OPERATED STAINLESS STEEL VALVES, CHROME PLATED BRASS VANDAL-RESISTANT BUBBLER HEADS, POLISHED CHROME-PLATED BRASS VANDAL-RESISTANT WASTE STRAINERS, VANDAL-RESISTANT BOTTOM PLATES, STAINLESS STEEL SATING FINISH BACK PANEL, 1-1/4" IPS TRAPS, PROVIDE WITH WALL MOUNTING PLATE, AND IN-LINE FILTER, 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"	–	–	–	–	SHOWER: ACORN SHOWERWARE 515-ADA-R-F-FH-FSS-GX-LRD ZENITH 500 ADA SERIES BUILT-IN SHOWER. SOLID BRASS VALVE BODY AND SHOWER HEAD. POLISHED STAINLESS STEEL FOR ALL EXPOSED PARTS. PROVIDE WITH RIGHT HAND FLO-CLOZ SINGLE TEMPERATURE VALVE, 1.4 GPM FLOW AND INDIVIDUAL CHECK STOPS. PROVIDE ADA COMPLIANT CONTROL VALVE WITH LEVER HANDLE, WALL MOUNTED SHOWER HEAD, FIXED HEAT AT 48" IN LIEU OF HAND SHOWER, LEVER HANDLE DIVERTER VALVE, TWO-WALL STAINLESS STEAL GRAB BAR, AND STAINLESS STEAL FOLDING SEAT.
FD-1	–	–	2"	2"	2"	FLOOR DRAIN: ZURN ZN-415B-2-IP-P-VP 2" DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET, POLISHED NICKEL BRONZE TOP, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH SEEPAGE SLOTS, TYPE B POLISHED NICKEL BRONZE, LIGHT DUTY STRAINER. PROVIDE WITH TRAP PRIMER CONNECTION AND VANDAL-PROOF SECURED TOP.
FD-2	–	–	2"	2"	2"	FLOOR DRAIN: ZURN ZN-525-2-IP-P-S-VP 2" DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET, POLISHED NICKEL BRONZE TOP, SEEPAGE PAN, ADJUSTABLE EXTENSION FRAME WITH MEDIUM DUTY CAST IRON DEEP SLOTTED GRATE. PROVIDE WITH TRAP PRIMER CONNECTION, SECONDARY STRAINER AND VANDAL-PROOF SECURED TOP.

- PROVIDE ALL FIXTURES WITH ALL VANDAL PROOF OPTIONS.
- SEE ARCHITECTURAL FOR ACCESSIBILITY MOUNTING HEIGHTS

PLUMBING GENERAL NOTES:

1. CONTRACTOR SHALL CAREFULLY REVIEW THESE PLANS AND SPECIFICATIONS PRIOR TO BID. CONTRACTOR SHALL 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.
2. CONTRACTOR SHALL VERIFY ALL EQUIPMENT MODEL NUMBERS, CAPACITIES, SIZES, VOLTAGES, AND ALL OTHER SCHEDULED INFORMATION WITH OTHER APPLICABLE TRADES AND WITH THE MANUFACTURER PRIOR TO INSTALLATION.
3. CONTRACTOR SHALL VERIFY ALL LOCATIONS, SIZES, P.O.C.'S, INVERT ELEVATIONS, AND AVAILABILITY OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF ANY MATERIAL OR EQUIPMENT.
4. THESE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC, AND ARE NOT INTENDED TO INDICATE ALL DETAILS AND NECESSARY OFFSETS OF PIPING. THE CONTRACTOR SHALL INSTALL MATERIAL AND EQUIPMENT IN A MANNER AS TO CONFORM TO STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE HEADROOM, AND KEEP OPENINGS AND ACCESS CLEAR. CONTRACTOR SHALL 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.
5. NEW EQUIPMENT INDICATED ON THESE DRAWINGS IS SHOWN IN APPROXIMATE LOCATIONS. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING 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.
6. 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.
7. ALL PLUMBING EQUIPMENT, MATERIAL, AND ALL CONNECTIONS THERETO SHALL BE INSTALLED COMPLETE PER MANUFACTURER'S INSTRUCTIONS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL SYSTEM.
8. SOIL, SEWER AND WASTE PIPING SHALL SLOPE AT 1/4" PER FOOT MINIMUM, UNLESS OTHERWISE NOTED.
9. ALL PLUMBING SOLDER SHALL BE LEAD FREE AND SHALL CONFORM TO IAPMO IS 3-2003 AND THE INSTALLATION STANDARD FOR COPPER PLUMBING TUBE, PIPE AND FITTINGS. NON-METALLIC PIPING IS NOT APPROVED.
10. 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.
11. 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.
12. NON-METALLIC PIPING NOT ALLOWED.
13. 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
14. PLUMBING EQUIPMENT SHALL BE CERTIFIED BY, AND COMPLY WITH THE STATE OF CALIFORNIA ENERGY CONSERVATION STANDARDS (E.E.S.) SECTION 113. COMPLIANCE CERTIFICATES SHALL BE PROVIDED WITH EQUIPMENT SUBMITTALS.
15. ALL VENT-THROUGH-ROOF PIPES SHALL TERMINATE NO LESS THAN 10'-0" MINIMUM FROM ALL OUTSIDE AIR AND BUILDING OPENINGS. SHALL CONFORM TO SECTION 906.2 OF THE 2007 CPC.
16. A WATER HAMMER ARRESTOR SHALL BE INSTALLED AT LOCATIONS OF SELF-CLOSING VALVES PER UPC 609.10. PROVIDE 8X8 ACCESS PANEL.
17. INSTALL FLUSH VALVE HANDLES ON WIDE SIDE OF HANDICAP ACCESSIBLE TOILETS PER ADA STANDARDS.
18. USE ONLY CAST IRON FOR SOIL AND WASTE PIPING, AND COPPER PIPING FOR WATER SUPPLY. DO NOT USE PLASTIC PIPING ON THIS PROJECT.
19. BUILDING DRAIN AND VENT PIPING MATERAILS SHALL COMPLY WITH SECTION 710.0 AND 903.0 OF THE CALIFORNIA PLUMBING CODE.
20. ALL SANITARY SYSTEM MATERIALS SHALL BE LISTED BY AN APPROVED LISTING AGENCY.
21. 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 "L" COPPER TUBING IN SINGLE CONTINOUS LENGTH WITH POLYETHYLENE OUTER TUBING. ALL UNDERGROUND COPPER TUBING SHALL BE BRAZED EXCEPT RISERS, WHICH SHALL BE SOFT SOLDERED.
22. UNDERGROUND DOMESTIC WATER PIPING, 4" AND LARGER, SHALL BE C-900 WITH MECHANICAL JOINTS. UNDERGROUND DOMESTIC WATER PIPING SMALLER THAN 4" SHALL BE BRAZED, HARD DRAWN TYPE L COPPER. (EXCEPTION: RISERS SHALL BE SOLDERED.) SOFT COPPER IS NOT APPROVED. SOLVENT WELDED JOINTS ARE NOT APPROVED. ALL GAS PIPING AND FITTINGS ABOVE GRADE SHALL BE GALVANIZED.
23. PROVIDE MIXING VALVES AT SHOWERS PER CPC, SEC 418.

PLUMBING LEGEND

SYMBOL	ABBREVIATIONS	DESCRIPTION
	S OR W	SOIL, WASTE OR DRAIN ABOVE SLAB
	S OR W	SOIL, WASTE OR DRAIN BELOW SLAB
	V	SANITARY VENT
	CW	COLD WATER
	HW	HOT WATER
	HWR	HOT WATER RETURN
— CD —	CD	PRIMARY CONDENSATE DRAIN
	BV	BALL VALVE
	CL	CAPPED LINE
	GCO	CLEAN-OUT TO GRADE
	FCO	FLOOR CLEAN-OUT
	WCO	WALL CLEAN-OUT
	DN	DOWN OR DROP
	UP	RISE OR RISER
	HB	HOSE BIB
	AP	ACCESS PANEL
	AVG.	AVERAGE
	BF	BELOW FLOOR
	CLG	CEILING
	CONT	CONTINUATION
	(E)	EXISTING
	FLR	FLOOR
	FIX.	FIXTURE
	GPM	GALLONS PER MINUTE
	HDR	HEADER
	LAV	LAVATORY
	NIC	NOT IN CONTRACT
	NTS	NOT TO SCALE
	PSI	POUNDS PER SQUARE INCH
	SRCC	SOLAR RATING AND CERTIFICATION CORPORATION
	TYP	TYPICAL
	VTR	VENT THRU ROOF

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 — 9/30/14 EXPIRES

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REGISTERED PROFESSIONAL ENGINEER MARK R. BENDER No. 24209 EXP 9/30/14 MECHANICAL STATE OF CALIFORNIA

11017
09-02-11

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ALLIED GARDENS POOL
ADA IMPROVEMENTS

SHEET TITLE: PLUMBING SCHEDULE, LEGEND AND NOTES

SHEET NUMBER: P-1

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET 15 OF 17 SHEETS

WBS #B-10167

Samir M 4/14/13
FOR CITY ENGINEER DATE

SAMIR MAHMALJI
SECTION HEAD

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	HS		11.29.12	

CLARK RITTER
PROJECT MANAGER

226-1743
CCS27 COORDINATE

6304404,1866444
CCS83 COORDINATE

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

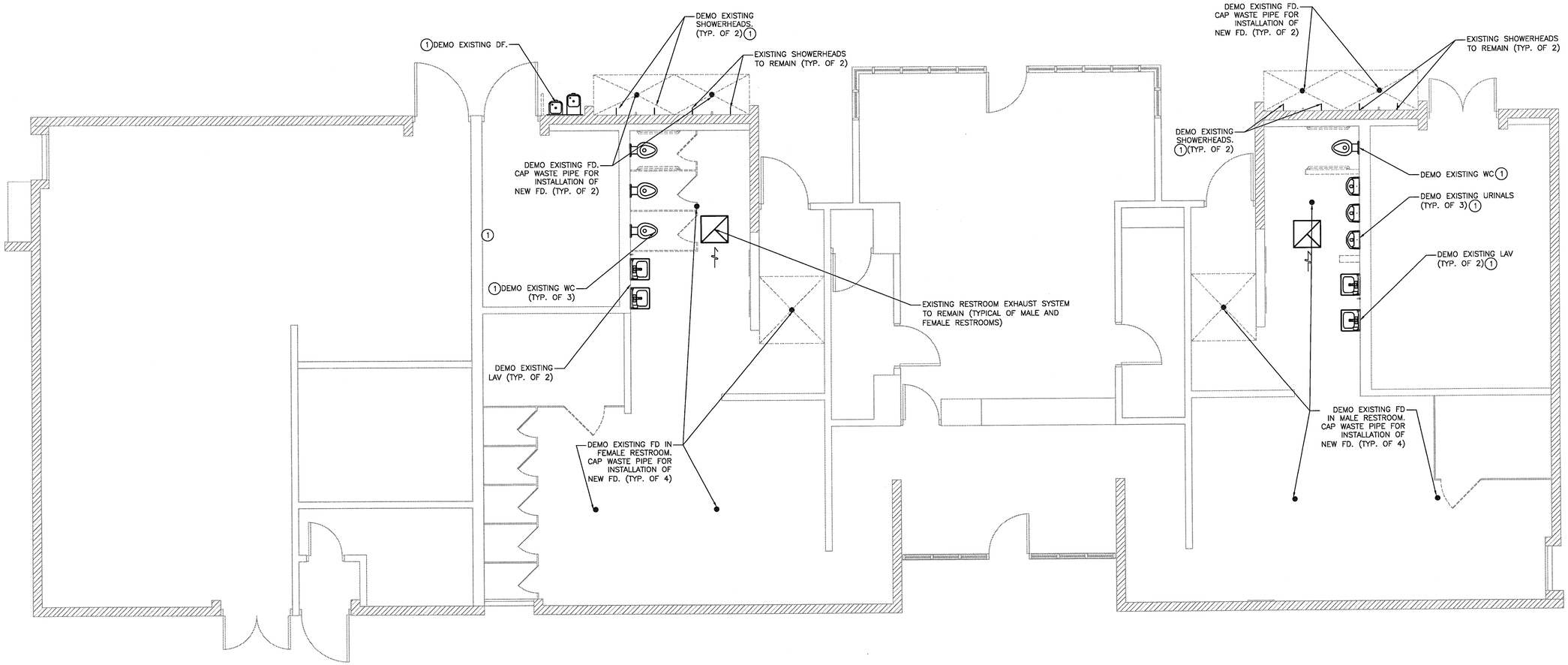
36588-15-D

ALLIED GARDENS POOL ADA IMPROVEMENTS

g:\projects - dwg\2011 projects\11017 allied gardens pool ada upgrade\working drawings\p-1 plumbing schedule sheet.dwg 11/29/2012 7:30 AM

NOTES:

(1) CAP WATER, WASTE, AND VENT PIPE IN WALL FOR INSTALLATION OF NEW PLUMBING FIXTURES



PLUMBING DEMO FLOOR PLAN

1/4" = 1'-0"

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ALLIED GARDENS POOL
ADA IMPROVEMENTS

SHEET TITLE:	SHEET NUMBER:
PLUMBING DEMO FLOOR PLAN	P-2

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET 16 OF 17 SHEETS

WBS #B-10167

Samir M 4/14/13
FOR CITY ENGINEER DATE

SAMIR MAHMALJI
SECTION HEAD

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	HS		11.29.12	

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INSPECTOR _____ DATE COMPLETED _____

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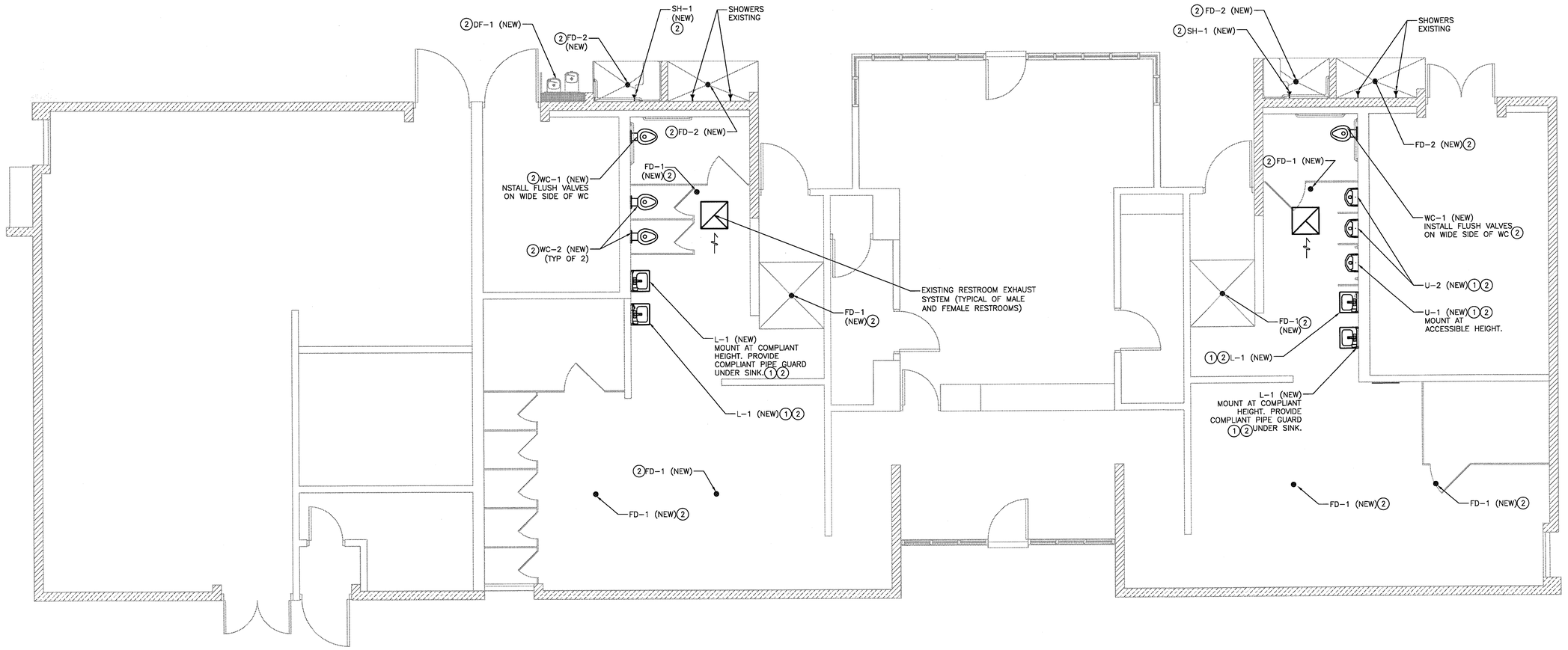

PLUMBING NEW FLOOR PLAN

1/4" = 1'-0"

GENERAL NOTES:

1. ALL HARDWARE (NUTS, UNITSTRUT, ETC) TO BE STAINLESS STEEL

NOTES:

1. PROVIDE CLEANOUTS FOR EACH WATER CLOSET, LAVATORY AND URINAL.
2. CONNECT NEW FIXTURES TO EXISTING WATER, WASTE, AND VENT PIPES.

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ALLIED GARDENS POOL
ADA IMPROVEMENTS

SHEET TITLE: PLUMBING NEW FLOOR PLAN

SHEET NUMBER: P-3

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS DEPARTMENT
SHEET 17 OF 17 SHEETS

WBS #B-10167

Samir M 4/14/13
FOR CITY ENGINEER DATE

SAMIR MAHMALJI
SECTION HEAD

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	HS		11.29.12	

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CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

ALLIED GARDENS POOL ADA IMPROVEMENTS