

City of San Diego

CONTRACTOR'S NAME: Atlas Development
ADDRESS: 991C Lomas Santa Fe Dr. #115
TELEPHONE NO.: 619-200-0902 **FAX NO.:**
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Phone No. (619) 533-3104
E. Schroth-Nichols/J. Borja/cc

BIDDING DOCUMENTS



FOR

EB SCRIPPS PARK COMFORT STATION

BID NO.: _____ **K-19-1767-DBB-3**
SAP NO. (WBS/IO/CC): _____ **S-15035**
CLIENT DEPARTMENT: _____ **1714**
COUNCIL DISTRICT: _____ **1**
PROJECT TYPE: _____ **BT**

THIS CONTRACT WILL BE SUBJECT TO THE FOLLOWING:

- PHASED-FUNDING
- THE CITY'S SUBCONTRACTING PARTICIPATION REQUIREMENTS FOR SLBE PROGRAM.
- PREVAILING WAGE RATES: STATE FEDERAL
- APPRENTICESHIP

BID DUE DATE:

2:00 PM

JANUARY 15, 2019

CITY OF SAN DIEGO'S ELECTRONIC BIDDING SITE, PLANETBIDS

<https://www.sandiego.gov/publicworks/about/contracting>

ENGINEER OF WORK

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

William A. Magnuson
1) Registered Architect

12/12/2018
Date

Seal:



George S. Freilka
2) For City Engineer

12/12/2018
Date

Seal:

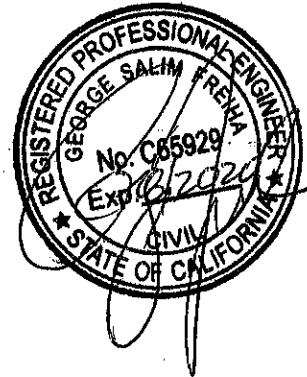


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NOTICE INVITING BIDS

1. **SUMMARY OF WORK:** This is the City of San Diego's (City) solicitation process to acquire Construction services for **EB Scripps Park Comfort Station**. For additional information refer to Attachment A.
2. **FULL AND OPEN COMPETITION:** This contract is open to full competition and may be bid on by Contractors who are on the City's current Prequalified Contractors' List. For information regarding the Contractors Prequalified list visit the City's web site: <http://www.sandiego.gov>.
3. **ESTIMATED CONSTRUCTION COST:** The City's estimated construction cost for this project is **\$3,400,000**.
4. **BID DUE DATE AND TIME ARE: JANUARY 15, 2019 at 2:00 PM**
5. **PREVAILING WAGE RATES APPLY TO THIS CONTRACT:** Refer to Attachment D.
6. **LICENSE REQUIREMENT:** To be eligible for award of this contract, Prime contractor must possess the following licensing classification: **A or B**
7. **SUBCONTRACTING PARTICIPATION PERCENTAGES:** Subcontracting participation percentages apply to this contract.
 - 7.1. The City has incorporated **mandatory** SLBE-ELBE subcontractor participation percentages to enhance competition and maximize subcontracting opportunities. For the purpose of achieving the mandatory subcontractor participation percentages, a recommended breakdown of the SLBE and ELBE subcontractor participation percentages based upon certified SLBE and ELBE firms has also been provided to achieve the mandatory subcontractor participation percentages:

1. SLBE participation	6.5%
2. ELBE participation	9.4%
3. Total mandatory participation	15.9%
 - 7.2. The Bid may be declared non-responsive if the Bidder fails to meet the following requirements:
 - 7.2.1. Include SLBE-ELBE certified subcontractors at the overall mandatory participation percentage identified in this document; **OR**
 - 7.2.2. Submit Good Faith Effort documentation, saved in searchable Portable Document Format (PDF) and stored on Compact Disc (CD) or Digital Video Disc (DVD), demonstrating the Bidder made a good faith effort to outreach to and include SLBE-ELBE Subcontractors required in this document within 3 Working Days of the Bid opening if the overall mandatory participation percentage is not met.

8. AWARD PROCESS:

- 8.1. The Award of this contract is contingent upon the Contractor's compliance with all conditions of Award as stated within these documents and within the Notice of Intent to Award.
- 8.2. Upon acceptance of bids and determination of the apparent low bidder, the City will prepare the contract documents for execution within approximately 21 days of the date of the bid opening. The City will then award the contract upon receipt of properly signed Contract, bonds, and insurance documents.
- 8.3. This contract will be deemed executed and effective only upon the signing of the Contract by the Mayor or his designee and approval as to form by the City Attorney's Office.
- 8.4. The low Bid will be determined by the Base Bid.
- 8.5. Once the low bid has been determined, the City may, at its sole discretion, award the contract for the Base bid alone.

9. SUBMISSION OF QUESTIONS:

- 9.1. 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. Any questions related to this solicitation shall be submitted to:

Public Works Contracts
525 B Street, Suite 750 (7TH Floor)
San Diego, California, 92101
Attention: Brittany Friedenreich

OR:

BFriedenreic@sandiego.gov

- 9.2. Questions received less than 14 days prior to the date for opening of Bids may not be considered.
- 9.3. Questions or clarifications deemed by the City to be material shall be answered via issuance of an addendum and posted to the City's online bidding service.
- 9.4. Only questions answered by formal written addenda shall be binding. Oral and other interpretations or clarifications shall be without legal effect. It is the Bidder's responsibility to be informed of any addenda that have been issued and to include all such information in its Bid.

10. PHASED FUNDING: For Phased Funding Conditions, see Attachment B.

INSTRUCTIONS TO BIDDERS

1. PREQUALIFICATION OF CONTRACTORS:

- 1.1. Contractors submitting a Bid must be pre-qualified for the total amount proposed, including all alternate items, 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 may be deemed **non-responsive** and ineligible for award.
- 1.2. The completed application must be submitted online no later than 2 weeks prior to the bid opening.
- 1.3. **Joint Venture Bidders Cumulative Maximum Bidding Capacity:** For projects with an engineer's estimate of \$30,000,000 or greater, Joint Ventures submitting bids may be deemed responsive and eligible for award if the cumulative maximum bidding capacity of the individual Joint Venture entities is equal to or greater than the total amount proposed.
 - 1.3.1. Each of the entities of the Joint Venture must have been previously prequalified at a minimum of \$15,000,000.
 - 1.3.2. Bids submitted with a total amount proposed of less than \$30,000,000 are not eligible for Cumulative Maximum Bidding Capacity prequalification. To be eligible for award in this scenario, the Joint Venture itself or at least one of the Joint Venture entities must have been prequalified for the total amount proposed.
 - 1.3.3. Bids submitted by Joint Ventures with a total amount proposed of \$30,000,000 or greater on a project with an engineer's estimate of less than \$30,000,000 are not eligible for Cumulative Maximum Bidding Capacity prequalification.
 - 1.3.4. The Joint Venture designated as the Apparent Low Bidder shall provide evidence of its corporate existence and furnish good and approved bonds in the name of the Joint Venture within 14 Calendar Days of receipt by the Bidder of a form of contract for execution.
- 1.4. Complete information and links to the on-line prequalification application are available at:

<http://www.sandiego.gov/cip/bidopps/prequalification>
- 1.5. Due to the City's responsibility to protect the confidentiality of the contractors' information, City staff will not be able to provide information regarding contractors' prequalification status over the telephone. Contractors may access real-time information about their prequalification status via their vendor profile on [PlanetBids™](#).

2. **ELECTRONIC FORMAT RECEIPT AND OPENING OF BIDS:** Bids will be received in electronic format (eBids) EXCLUSIVELY at the City of San Diego's electronic bidding (eBidding) site, at: <https://www.sandiego.gov/publicworks/about/contracting> and are due by the date, and time shown on the cover of this solicitation.
- 2.1. **BIDDERS MUST BE PRE-REGISTERED** with the City's bidding system and possess a system-assigned Digital ID in order to submit an electronic bid.
- 2.2. The City's bidding system will automatically track information submitted to the site including IP addresses, browsers being used and the URLs from which information was submitted. In addition, the City's bidding system will keep a history of every login instance including the time of login, and other information about the user's computer configuration such as the operating system, browser type, version, and more. Because of these security features, Contractors who disable their browsers' cookies will not be able to log in and use the City's bidding system.
- 2.3. The City's electronic bidding system is responsible for bid tabulations. Upon the bidder's or proposer's entry of their bid, the system will ensure that all required fields are entered. **The system will not accept a bid for which any required information is missing.** This includes all necessary pricing, subcontractor listing(s) and any other essential documentation and supporting materials and forms requested or contained in these solicitation documents.
- 2.4. **BIDS REMAIN SEALED UNTIL BID DEADLINE.** eBids are transmitted into the City's bidding system via hypertext transfer protocol secure (https) mechanism using SSL 128-256 bit security certificates issued from Verisign/Thawte which encrypts data being transferred from client to server. Bids submitted prior to the "Bid Due Date and Time" are not available for review by anyone other than the submitter who has until the "Bid Due Date and Time" to change, rescind or retrieve its proposal should it desire to do so.
- 2.5. **BIDS MUST BE SUBMITTED BY BID DUE DATE AND TIME.** Once the bid deadline is reached, no further submissions are accepted into the system. Once the Bid Due Date and Time has lapsed, bidders, proposers, the general public, and City staff are able to immediately see the results on line. City staff may then begin reviewing the submissions for responsiveness, EOCB compliance and other issues. The City may require any Bidder to furnish statement of experience, financial responsibility, technical ability, equipment, and references.
- 2.6. **RECAPITULATION OF THE WORK.** Bids shall not contain any recapitulation of the Work. Conditional Bids may be rejected as being non-responsive. Alternative proposals will not be considered unless called for.

2.7. BIDS MAY BE WITHDRAWN by the Bidder only up to the bid due date and time.

2.7.1. Important Note: Submission of the electronic bid into the system may not be instantaneous. Due to the speed and capabilities of the user's internet service provider (ISP), bandwidth, computer hardware and other variables, it may take time for the bidder's submission to upload and be received by the City's eBidding system. It is the bidder's sole responsibility to ensure their bids are received on time by the City's eBidding system. The City of San Diego is not responsible for bids that do not arrive by the required date and time.

2.8. ACCESSIBILITY AND AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANCE: To request a copy of this solicitation in an alternative format, contact the Public Works Contract Specialist listed on the cover of this solicitation at least five (5) working days prior to the Bid/Proposal due date to ensure availability.

3. ELECTRONIC BID SUBMISSIONS CARRY FULL FORCE AND EFFECT

3.1. The bidder, by submitting its electronic bid, acknowledges that doing so carries the same force and full legal effect as a paper submission with a longhand (wet) signature.

3.2. By submitting an electronic bid, the bidder certifies that the bidder has thoroughly examined and understands the entire Contract Documents (which consist of the plans and specifications, drawings, forms, affidavits and the solicitation documents), and that by submitting the eBid as its bid proposal, the bidder acknowledges, agrees to and is bound by the entire Contract Documents, including any addenda issued thereto, and incorporated by reference in the Contract Documents.

3.3. The Bidder, by submitting its electronic bid, agrees to and certifies under penalty of perjury under the laws of the State of California, that the certification, forms and affidavits submitted as part of this bid are true and correct.

3.4. The Bidder agrees to the construction of the project as described in Attachment "A-Scope of Work" for the City of San Diego, in accordance with the requirements set forth herein for the electronically submitted prices. The Bidder guarantees the Contract Price for a period of 120 days from the date of Bid opening. 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.

4. BIDS ARE PUBLIC RECORDS: Upon receipt by the City, Bids shall become public records subject to public disclosure. It is the responsibility of the respondent to clearly identify any confidential, proprietary, trade secret or otherwise legally privileged information contained within the Bid. General references to sections of the California Public Records Act (PRA) will not suffice. If the Contractor does not provide applicable case law that clearly establishes that the requested information is exempt from the disclosure requirements of the PRA, the City shall be free to release the information when required in accordance with the PRA, pursuant to any other applicable law, or by order of any court or government agency, and the Contractor will hold the City harmless for release of this information.

5. CONTRACTOR REGISTRATION AND ELECTRONIC REPORTING SYSTEM:

5.1. Prior to the Award of the Contract or Task Order, you and your Subcontractors and Suppliers must register with the City’s web-based vendor registration and bid management system. For additional information go to:

<http://www.sandiego.gov/purchasing/bids-contracts/vendorreg>

5.2. 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.

6. JOINT VENTURE CONTRACTORS: Provide a copy of the Joint Venture agreement and the Joint Venture license to the City within 14 Calendar Days after receiving the Contract forms.

7. INSURANCE REQUIREMENTS:

7.1. 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.

7.2. 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.

8. 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”) http://www.greenbookspecs.org/	2015	PWPI070116-01
City of San Diego Standard Specifications for Public Works Construction (“The WHITEBOOK”)* https://www.sandiego.gov/publicworks/edocref/greenbook	2015	PWPI070116-02
City of San Diego Standard Drawings* https://www.sandiego.gov/publicworks/edocref/standarddraw	2016	PWPI070116-03
Citywide Computer Aided Design and Drafting (CADD) Standards https://www.sandiego.gov/publicworks/edocref/drawings	2016	PWPI092816-04
California Department of Transportation (CALTRANS) Standard Specifications – http://www.dot.ca.gov/des/oe/construction-contract-standards.html	2015	PWPI092816-05

Title	Edition	Document Number
CALTRANS Standard Plans http://www.dot.ca.gov/des/oe/construction-contract-standards.html	2015	PWPI092816-06
California Manual on Uniform Traffic Control Devices Revision 1 (CA MUTCD Rev 1) - http://www.dot.ca.gov/trafficops/camutcd/	2014	PWPI092816-07
<p>NOTE: *Available online under Engineering Documents and References at: https://www.sandiego.gov/publicworks/edocref</p>		

9. **CITY'S RESPONSES AND ADDENDA:** The City, at its discretion, may respond to any or all questions submitted in writing via the City's eBidding web site in the **form of an addendum**. No other responses to questions, oral or written shall be of any force or effect with respect to this solicitation. The changes to the Contract Documents through addenda are made effective as though originally issued with the Bid. The Bidders shall acknowledge the receipt of Addenda at the time of bid submission.
10. **CITY'S RIGHTS RESERVED:** The City reserves the right to cancel the Notice Inviting Bids at any time, and further reserves the right to reject submitted Bids, without giving any reason for such action, at its sole discretion and without liability. Costs incurred by the Bidder(s) as a result of preparing Bids under the Notice Inviting Bids shall be the sole responsibility of each bidder. The Notice Inviting Bids creates or imposes no obligation upon the City to enter a contract.
11. **CONTRACT PRICING:** This solicitation is for a Lump Sum contract with Unit Price provisions as set forth herein. The Bidder agrees to perform construction services for the City of San Diego in accordance with these contract documents for the prices listed below. The Bidder further agrees to guarantee the Contract Price for a period of 120 days from the date of Bid opening. The duration of the Contract Price guarantee may be extended, by mutual consent of the parties, by the number of days required for the City to obtain all items necessary to fulfill all contractual conditions.
12. **SUBCONTRACTOR INFORMATION:**
- 12.1. **LISTING OF SUBCONTRACTORS.** In accordance with the requirements provided in the "Subletting and Subcontracting Fair Practices Act" of the California Public Contract Code, the Bidder shall provide the **NAME** and **ADDRESS** of each Subcontractor who will perform work, labor, render services or who 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 state within the description, whether the subcontractor is a **CONSTRUCTOR, CONSULTANT** or **SUPPLIER**. The Bidder shall state the **DIR REGISTRATION NUMBER** for all subcontractors and shall further state within the description, the **PORTION** of the work which will be performed 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 may 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 for which Bidders are seeking recognition towards achieving any mandatory, voluntary (or both) subcontracting participation goals.

Additionally, pursuant to California Senate Bill 96 and in accordance with the requirements of Labor Code sections 1771.1 and 1725.5, by submitting a bid or proposal to the City, Contractor is certifying that he or she has verified that all subcontractors used on this public work project are registered with the California Department of Industrial Relations (DIR). **The Bidder shall provide the name, address, license number, DIR registration number of any Subcontractor - regardless of tier** - who will perform work, labor, render services or specially fabricate and install a portion [type] of the work or improvement pursuant to the contract.

12.2. LISTING OF SUPPLIERS. Any Bidder seeking the recognition of Suppliers of equipment, materials, or supplies obtained from third party Suppliers towards achieving any mandatory or voluntary (or both) subcontracting participation goals shall provide, at a minimum, the **NAME, LOCATION (CITY), DIR REGISTRATION NUMBER** and the **DOLLAR VALUE** of each supplier. The Bidder will be credited up to 60% of the amount to be paid to the Suppliers for materials and supplies unless vendor manufactures or substantially alters materials and supplies, in which case, 100% will be credited. The Bidder is to indicate within the description whether the listed firm is a supplier or manufacturer. If no indication is provided, the listed firm will be credited at 60% of the listed dollar value for purposes of calculating the Subcontractor Participation Percentage.

12.3. LISTING OF SUBCONTRACTORS OR SUPPLIERS FOR ALTERNATES. For subcontractors or suppliers to be used on additive or deductive alternate items, in addition to the above requirements, bidder shall further note "ALTERNATE" and alternate item number within the description.

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

14. AWARD:

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

14.2. 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.

- 14.3.** This contract will be deemed executed and effective only upon the signing of the Contract by the Mayor or his designee and approval as to form the City Attorney's Office.
- 15. SUBCONTRACT LIMITATIONS:** The Bidder's attention is directed to Standard Specifications for Public Works Construction, Section 2-3, "SUBCONTRACTS" in The GREENBOOK and as amended in the SSP which requires the Contractor to self-perform not less than the specified amount. Failure to comply with this requirement shall render the bid **non-responsive** and ineligible for award.
- 16. 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 Contracts.
- 17. ONLY ONE BID PER CONTRACTOR SHALL BE ACCEPTED:** 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.
- 18. 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 within these documents.
- 19. BIDDER'S GUARANTEE OF GOOD FAITH (BID SECURITY) FOR DESIGN-BID-BUILD CONTRACTS:**
- 19.1.** For bids \$250,000 and above, bidders shall submit Bid Security at bid time. Bid Security shall be in one of the following forms: a cashier's check, or a properly certified check upon some responsible bank; or an approved corporate surety bond payable to the City of San Diego for an amount of not less than 10% of the total bid amount.
- 19.2.** This check or bond, and the monies represented thereby, will be held by the City as a guarantee that the Bidder, if awarded the contract, will in good faith enter into the contract and furnish the required final performance and payment bonds.
- 19.3.** The Bidder agrees that in the event of the Bidder's failure to execute this contract and provide the required final bonds, the money represented by the cashier's or certified

check will remain the property of the City; and the Surety agrees that it will pay to the City the damages, not exceeding the sum of 10% of the amount of the Bid, that the City may suffer as a result of such failure.

- 19.4.** At the time of bid submission, bidders must upload and submit an electronic PDF copy of the aforementioned bid security. Whether in the form of a cashier's check, a properly certified check or an approved corporate surety bond payable to the City of San Diego, the bid security must be uploaded to the City's eBidding system. Within twenty-four (24) hours after the bid due date and time, the first five (5) apparent low bidders must provide the City with the original bid security.
- 19.5.** Failure to submit the electronic version of the bid security at the time of bid submission AND failure to provide the original within twenty-four (24) hours may cause the bid to be rejected and deemed non-responsive.

20. AWARD OF CONTRACT OR REJECTION OF BIDS:

- 20.1.** This contract may be awarded to the lowest responsible and reliable Bidder.
- 20.2.** Bidders shall complete ALL eBid forms as required by this solicitation. Incomplete eBids will not be accepted.
- 20.3.** The City reserves the right to reject any or all Bids, to waive any informality or technicality in Bids received, and to waive any requirements of these specifications as to bidding procedure.
- 20.4.** Bidders will not be released on account of their errors of judgment. Bidders may be released only upon receipt by the City within 3 Working Days of the bid opening, written notice from the Bidder which shows proof of honest, credible, clerical error of a material nature, free from fraud or fraudulent intent; and of evidence that reasonable care was observed in the preparation of the Bid.
- 20.5.** A bidder who is not selected for contract award may protest the award of a contract to another bidder by submitting a written protest in accordance with the San Diego Municipal Code.
- 20.6.** The City of San Diego will not discriminate in the award of contracts with regard to race, religion creed, color, national origin, ancestry, physical handicap, marital status, sex or age.
- 20.7.** Each Bid package properly signed as required by these specifications shall constitute a firm offer which may be accepted by the City within the time specified herein.
- 20.8.** The City reserves the right to evaluate all Bids and determine the lowest Bidder on the basis of the base bid and any proposed alternates or options as detailed herein.

21. BID RESULTS:

- 21.1.** The availability of the bids on the City's eBidding system shall constitute the public announcement of the apparent low bidder. In the event that the apparent low bidder is subsequently deemed non-responsive or non-responsible, a notation of such will be made on the eBidding system. The new ranking and apparent low bidder will be adjusted accordingly.
- 21.2.** To obtain the bid results, view the results on the City's web site, or request the results by U.S. mail and provide a self-addressed, stamped envelope. If requesting by mail, be sure to reference the bid name and number. The bid tabulations will be mailed to you upon their completion. The results will not be given over the telephone.

22. THE CONTRACT:

- 22.1.** 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.
- 22.2.** 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.
- 22.3.** 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.
- 22.4.** 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.
- 22.5.** 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 and approval as to form by the City Attorney's Office. 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.

- 23. 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.
- 24. CITY STANDARD PROVISIONS:** This contract is subject to the following standard provisions. See The WHITEBOOK for details.
- 24.1.** The City of San Diego Resolution No. R-277952 adopted on May 20, 1991 for a Drug-Free Workplace.
 - 24.2.** The City of San Diego Resolution No. R-282153 adopted on June 14, 1993 related to the Americans with Disabilities Act.
 - 24.3.** The City of San Diego Municipal Code §22.3004 for Contractor Standards.
 - 24.4.** The City of San Diego's Labor Compliance Program and the State of California Labor Code §§1771.5(b) and 1776.
 - 24.5.** 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.
 - 24.6.** The City's Equal Benefits Ordinance (EBO), Chapter 2, Article 2, Division 43 of The San Diego Municipal Code (SDMC).
 - 24.7.** The City's Information Security Policy (ISP) as defined in the City's Administrative Regulation 90.63.
- 25. PRE-AWARD ACTIVITIES:**
- 25.1.** The contractor selected by the City to execute a contract for this Work shall submit the required documentation as specified in the herein and in the Notice of Award. Failure to provide the information as specified may result in the Bid being rejected as **non-responsive**.
 - 25.2.** The decision that bid is non-responsive for failure to provide the information required within the time specified shall be at the sole discretion of the City.

PERFORMANCE BOND, LABOR AND MATERIALMEN'S BOND

FAITHFUL PERFORMANCE BOND AND LABOR AND MATERIALMEN'S BOND:

Atlas Development Corporation , 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
**THREE MILLION TWO HUNDRED SEVENTEEN THOUSAND SIX HUNDRED FORTY SIX DOLLARS AND
TWELVE CENTS (\$3,217,646.12)** for the faithful performance of the annexed contract, and in the
sum of **THREE MILLION TWO HUNDRED SEVENTEEN THOUSAND SIX HUNDRED FORTY SIX
DOLLARS AND TWELVE CENTS (\$3,217,646.12)** for the benefit of laborers and materialmen
designated below.

Conditions:

If the Principal shall faithfully perform the annexed contract with the City of 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 Article 2. Claimants, (iii)
public works of Improvement commencing with Civil Code Section 9100 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.

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

PERFORMANCE BOND, LABOR AND MATERIALMEN'S BOND (continued)

Dated February 18, 2019

Approved as to Form

Atlas Development Corporation

Principal

By



Mark Atefi, President

Printed Name of Person Signing for Principal

Mara W. Elliott, City Attorney

By



Deputy City Attorney

Great American Insurance Company

Surety

By



Minna Huovila, Attorney-in-fact

Approved:

750 The City Drive South, Suite 470

Local Address of Surety

By



Claudia Abarca
Deputy Director
Public Works Department

Orange, CA 92888

Local Address (City, State) of Surety

714-740-3101

Local Telephone No. of Surety

Premium \$ 38,389.00

Bond No. 2119167

ATTACHMENTS

ATTACHMENT A
SCOPE OF WORK

SCOPE OF WORK

1. **SCOPE OF WORK:** The intent of the project is to remove and replace the existing comfort station in line with the community approved conceptual plans, landscaping, and Americans with Disabilities Act improvements. The new comfort station, will be located in the same general location as the existing comfort station. The project also proposes landscaping and new ADA compliant pathways. The existing comfort station, servicing EB Scripps Park, also contains a sewer pump station #33 for the La Jolla Bridge Club. Sewer pump station #33 shall be demolished and a new public sewer pump station shall be constructed to serve only the La Jolla Bridge Club facilities. The Bridge Club is a privately operated facility and is separate from the comfort station. Service (all utility) and access to the Bridge Club shall be maintained at all times.
 - 1.1. The Work shall be performed in accordance with:
 - 1.1.1. The Notice Inviting Bids and Plans numbered **39742-1-D** through **39742-63-D**, inclusive.
2. **LOCATION OF WORK:** The location of the Work is as follows:

1160 Coast Blvd. La Jolla. – See Appendix E, Location Map.
3. **CONTRACT TIME:** The Contract Time for completion of the Work, including the Plant Establishment Period, shall be **440 Working Days**.

ATTACHMENT B
PHASED FUNDING PROVISIONS

PHASED FUNDING PROVISIONS

1. PRE-AWARD

- 1.1. Within 10 Working Days after the Bid Opening date, the Apparent Low Bidder must contact the Project Manager to discuss fund availability for each phase and shall also submit the following:
 - 1.1.1. Construction Cost Loaded Schedule in accordance with 6-1, "CONSTRUCTION SCHEDULE AND COMMENCEMENT OF THE WORK" and 9-3, "PAYMENT.
- 1.2. Your failure to perform any of the following may result cancelling your award of the Contract:
 - 1.2.1. Meeting with the City's Project Manager to discuss the Phased Funding Schedule.
 - 1.2.2. Agreeing to a Phased Funding Schedule within **thirty** Working Days after meeting with the City's Project Manager.

2. POST-AWARD

- 2.1. Do not start any construction activities for the next phase until the NTP has been issued by the Engineer. The City will issue separate Notice to Proceed (NTP) documents for each phase.
- 2.2. If requested, the Engineer may issue the NTP for the next phase before the end of the current approved phase.

PHASED FUNDING SCHEDULE AGREEMENT

The particulars left blank below, such as the total number of phases and the amounts assigned to each phase, will be completed with funding specific information from the Pre-Award Schedule and Construction Cost Loaded Schedule submitted to and approved by the City.

BID NUMBER: K-19-1767-DBB-3

CONTRACT OR TASK TITLE: EB Scripps Park Comfort Station

CONTRACTOR: Atlas Development

Funding Phase	Phase Description	Phase Start	Phase Finish	Not-to-Exceed Amount
1	Demo and removal of existing building, walkways, site utilities and selective irrigation systems; clearing and grubbing; installation of sewer lift station, site sewer and water, and site electrical; procurement of metal door frames; grading and pad preparation	May 2019	July 2019	\$997,185.00
2	Building footings, slab, drains; construction/erection of new comfort station building; building utilities beyond stub-outs; new irrigation/landscaping and PEP; new concrete walkways	July 2019	January 2021	\$2,220,461.12
Contract Total				\$3,217,646.12


Notes:

- 1) WHITEBOOK section 9-3.6, "Phased Funding Compensation" applies.
- 2) The total of all funding phases shall be equal to the TOTAL BID PRICE as shown on BID SCHEDULE 1 - PRICES.
- 3) This PHASED FUNDING SCHEDULE AGREEMENT will be incorporated into the CONTRACT and shall only be revised by written modifications to the CONTRACT.

CITY OF SAN DIEGO

PRINT NAME: Steve Guarente

Construction Manager

Signature: 

Date: 3/26/19

PRINT NAME: Elizabeth Schroth-Nichols

Project Manager

Signature: 

Date: 3/26/19

CONTRACTOR

PRINT NAME: Mark Atefi

Title: President

Signature: 

Date: 3/26/19

ATTACHMENT C
INTENTIONALLY LEFT BLANK

ATTACHMENT D
PREVAILING WAGES

PREVAILING WAGES

1. **PREVAILING WAGE RATES:** Pursuant to San Diego Municipal Code section 22.3019, construction, alteration, demolition, repair and maintenance work performed under this Contract is subject to State prevailing wage laws. For construction work performed under this Contract cumulatively exceeding \$25,000 and for alteration, demolition, repair and maintenance work performed under this Contract cumulatively exceeding \$15,000, the Contractor and its subcontractors shall comply with State prevailing wage laws including, but not limited to, the requirements listed below.
 - 1.1. **Compliance with Prevailing Wage Requirements.** Pursuant to sections 1720 through 1861 of the California Labor Code, the Contractor and its subcontractors shall ensure that all workers who perform work under this Contract are paid not less than the prevailing rate of per diem wages as determined by the Director of the California Department of Industrial Relations (DIR). This includes work performed during the design and preconstruction phases of construction including, but not limited to, inspection and land surveying work.
 - 1.1.1. Copies of such prevailing rate of per diem wages are on file at the City and are available for inspection to any interested party on request. Copies of the prevailing rate of per diem wages also may be found at <http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>. Contractor and its subcontractors shall post a copy of the prevailing rate of per diem wages determination at each job site and shall make them available to any interested party upon request.
 - 1.1.2. The wage rates determined by the DIR refer to expiration dates. If the published wage rate does not refer to a predetermined wage rate to be paid after the expiration date, then the published rate of wage shall be in effect for the life of this Contract. If the published wage rate refers to a predetermined wage rate to become effective upon expiration of the published wage rate and the predetermined wage rate is on file with the DIR, such predetermined wage rate shall become effective on the date following the expiration date and shall apply to this Contract in the same manner as if it had been published in said publication. If the predetermined wage rate refers to one or more additional expiration dates with additional predetermined wage rates, which expiration dates occur during the life of this Contract, each successive predetermined wage rate shall apply to this Contract on the date following the expiration date of the previous wage rate. If the last of such predetermined wage rates expires during the life of this Contract, such wage rate shall apply to the balance of the Contract.
 - 1.2. **Penalties for Violations.** Contractor and its subcontractors shall comply with California Labor Code section 1775 in the event a worker is paid less than the prevailing wage rate for the work or craft in which the worker is employed. This shall be in addition to any other applicable penalties allowed under Labor Code sections 1720 – 1861.

- 1.3. Payroll Records.** Contractor and its subcontractors shall comply with California Labor Code section 1776, which generally requires keeping accurate payroll records, verifying and certifying payroll records, and making them available for inspection. Contractor shall require its subcontractors to also comply with section 1776. Contractor and its subcontractors shall submit weekly certified payroll records online via the City's web-based Labor Compliance Program. Contractor is responsible for ensuring its subcontractors submit certified payroll records to the City.
- 1.3.1.** Contractor and their subcontractors shall also furnish records specified in Labor Code section 1776 directly to the Labor Commissioner in the manner required by Labor Code section 1771.4.
- 1.4. Apprentices.** Contractor and its subcontractors shall comply with California Labor Code sections 1777.5, 1777.6 and 1777.7 concerning the employment and wages of apprentices. Contractor is held responsible for the compliance of their subcontractors with sections 1777.5, 1777.6 and 1777.7.
- 1.5. Working Hours.** Contractor and their subcontractors shall comply with California Labor Code sections 1810 through 1815, including but not limited to: (i) restrict working hours on public works contracts to eight hours a day and forty hours a week, unless all hours worked in excess of 8 hours per day are compensated at not less than 1½ times the basic rate of pay; and (ii) specify penalties to be imposed on contractors and subcontractors of \$25 per worker per day for each day the worker works more than 8 hours per day and 40 hours per week in violation of California Labor Code sections 1810 through 1815.
- 1.6. Required Provisions for Subcontracts.** Contractor shall include at a minimum a copy of the following provisions in any contract they enter into with a subcontractor: California Labor Code sections 1771, 1771.1, 1775, 1776, 1777.5, 1810, 1813, 1815, 1860 and 1861.
- 1.7. Labor Code Section 1861 Certification.** Contractor in accordance with California Labor Code section 3700 is required to secure the payment of compensation of its employees and by signing this Contract, Contractor certifies that "I am aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this Contract."
- 1.8. Labor Compliance Program.** The City has its own Labor Compliance Program authorized in August 2011 by the DIR. The City will withhold contract payments when payroll records are delinquent or deemed inadequate by the City or other governmental entity, or it has been established after an investigation by the City or other governmental entity that underpayment(s) have occurred. For questions or assistance, please contact the City of San Diego's Prevailing Wage Unit at 858-627-3200.

- 1.9. Contractor and Subcontractor Registration Requirements.** This project is subject to compliance monitoring and enforcement by the DIR. A contractor or subcontractor shall not be qualified to bid on, be listed in a bid or proposal, subject to the requirements of section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, unless currently registered and qualified to perform public work pursuant to Labor Code section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.
- 1.9.1.** A Contractor's inadvertent error in listing a subcontractor who is not registered pursuant to Labor Code section 1725.5 in response to a solicitation shall not be grounds for filing a bid protest or grounds for considering the bid non-responsive provided that any of the following apply: (1) the subcontractor is registered prior to bid opening; (2) within twenty-four hours after the bid opening, the subcontractor is registered and has paid the penalty registration fee specified in Labor Code section 1725.5; or (3) the subcontractor is replaced by another registered subcontractor pursuant to Public Contract Code section 4107.
- 1.9.2.** By submitting a bid or proposal to the City, Contractor is certifying that he or she has verified that all subcontractors used on this public work project are registered with the DIR in compliance with Labor Code sections 1771.1 and 1725.5, and Contractor shall provide proof of registration for themselves and all listed subcontractors to the City at the time of bid or proposal due date or upon request.
- 1.10. Stop Order.** For Contractor or its subcontractors engaging in the performance of any public work contract without having been registered in violation of Labor Code sections 1725.5 or 1771.1, the Labor Commissioner shall issue and serve a stop order prohibiting the use of the unregistered contractors or unregistered subcontractor(s) on ALL public works until the unregistered contractor or unregistered subcontractor(s) is registered. Failure to observe a stop order is a misdemeanor.
- 1.11. List of all Subcontractors.** The Contractor shall provide the list of subcontractors (regardless of tier), along with their DIR registration numbers, utilized on this Contract prior to any work being performed; and the Contractor shall provide a complete list of all subcontractors with each invoice. Additionally, Contractor shall provide the City with a complete list of all subcontractors (regardless of tier) utilized on this contract within ten working days of the completion of the contract, along with their DIR registration numbers. The City shall withhold final payment to Construction Management Professional until at least thirty (30) days after this information is provided to the City.

1.12. Exemptions for Small Projects. There are limited exemptions for installation, alteration, demolition, or repair work done on projects of \$25,000 or less. The Contractor shall still comply with Labor Code sections 1720 et. seq. The only recognized exemptions are listed below:

1.12.1. Registration. The Contractor will not be required to register with the DIR for small projects. (Labor Code section 1771.1)

1.12.2. Certified Payroll Records. The records required in Labor Code section 1776 shall be required to be kept and submitted to the City of San Diego, but will not be required to be submitted online with the DIR directly. The Contractor will need to keep those records for at least three years following the completion of the Contract. (Labor Code section 1771.4).

1.12.3. List of all Subcontractors. The Contractor shall not be required to hire only registered subcontractors and is exempt from submitting the list of all subcontractors that is required in section 4.20.11 above. (Labor code section 1773.3).

ATTACHMENT E
SUPPLEMENTARY SPECIAL PROVISIONS

SUPPLEMENTARY SPECIAL PROVISIONS

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

1. The **2015 Edition** of the Standard Specifications for Public Works Construction (The "GREENBOOK").
2. The **2015 Edition** of the City of San Diego Standard Specifications for Public Works Construction (The "WHITEBOOK"), including the following:
 - a) General Provisions (A) for all Contracts.

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

- 1-2 TERMS AND DEFINITIONS.** To the "WHITEBOOK", item 54, "Normal Working Hours", ADD the following:

The **Normal Working Hours** are **7:00 AM** to **3:30 PM**.

SECTION 2 - SCOPE AND CONTROL OF WORK

- 2-3.2 Self Performance.** To the "GREENBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. You shall perform, with your own organization, Contract Work amounting to at least **50%** of the base Bid.
2. The self performance percentage requirement will be waived for Prime Contractors meeting the Class B License requirement of this Contract.

- 2-5.3.4 Supporting Information.** To the "WHITEBOOK", ADD the following:

3. For landscaping and irrigation materials, submit samples and test results to the Engineer within 15 Days of the NTP.

- 2-7 SUBSURFACE DATA.** To the "WHITEBOOK", ADD the following:

4. In preparation of the Contract Documents, the designer has relied upon the following reports of explorations and tests of subsurface conditions at the Work Site:
 - a) Geotechnical Investigation: La Jolla Cove Comfort Station, Ellen Baker Scripps Park, La Jolla California dated June 28, 2017 by SCST, Inc.
5. The reports listed above are available for review. See **Appendix H**.

2-9.1 Permanent Survey Markers. To the "WHITEBOOK", item 3, DELETE in its entirety and SUBSTITUTE with the following:

3. You shall submit to the Engineer a minimum of 7 Days prior to the start of the Work a list of controlling survey monuments which may be disturbed. CMFS (or the private owner for Permit Work) shall perform the following:
 - a) Set survey points outside the affected Work area that reference and locate each controlling survey monument that may be disturbed.
 - b) File a Corner Record or Record of Survey with the County Surveyor after setting the survey points to be used for re-establishment of the disturbed controlling survey monuments.
 - c) File a Corner Record or Record of Survey with the County Surveyor after re-establishment of the disturbed controlling survey monuments.

2-9.2 Survey Service. To the "GREENBOOK", DELETE in its entirety and SUBSTITUTE with the following:

2-9.2 Survey Service.

1. The Contractor shall locate and mark all features related to the building and site, including landscaping and hardscape, using industry standard contractor's construction tools.
2. The Contractor shall preserve construction survey stakes, control points, and other survey related marks described in 2-9.2.1, "Survey Services Provided by the City" for the duration of the Project. If any construction survey stakes are lost or disturbed and need to be replaced, such replacement shall be performed by the City at your expense.

2-9.2.1 Survey Services Provided by the City.

1. The City will provide surveying services and on-site survey staking for the following:
 - a) Locations of any property lines, boundaries, or easement surveys within the project boundaries as required by the project.
 - b) Locations of up to four corners per building.
 - c) Verification of building pad finish surface elevation.
 - d) A maximum of 4 site control points.
 - e) Location and perpetuation of survey monuments within the project boundary in accordance with 2-9.1, "Permanent Survey Markers".

2. Notify the Resident Engineer in writing at least 2 Working Days prior to requesting survey services provided by the City.

2-9.2.2 Payment.

1. The payment for survey services Work shall be included in the Contract Price.

ADD:

2-10 AUTHORITY OF THE BOARD AND THE ENGINEER. To the "GREENBOOK", Paragraph (2), DELETE in its entirety and SUBSTITUTE with the following:

The decision of the Engineer is final and binding on all questions relating to: quantities; acceptability of material, equipment, or work; execution, progress or sequence of work; requests for information (RFI), and interpretation of the Plans, Specifications, or other Contract Documents. This shall be precedent to any payment under the Contract. The Engineer shall be the single point of contact and shall be included in all communications.

2-15 TECHNICAL STUDIES AND DATA. To the "WHITEBOOK", ADD the following:

3. In preparation of the Contract Documents, the designer has relied upon the following reports of explorations and tests at the Work Site:
 - a) Archaeological Resources Survey for the Ellen Browning Scripps Park Comfort Station Replacement/ Pump Station 33 Demolition Project dated June 28, 2017 by RECON. See **Appendix I**.

2-16 CONTRACTOR REGISTRATION AND ELECTRONIC REPORTING SYSTEM. To the "WHITEBOOK", item 1, DELETE in its entirety.

SECTION 3 – CHANGES IN WORK

3-3.2.3 Markup. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. Work paid under Allowance Bid items for permits, governmental fees, or direct payments specified in the Contract Documents shall not be subject to any markups.
2. The allowance for overhead and profit shall not exceed the values listed in the table below:

Component	Overhead	Profit
Labor	10%	10%

Component	Overhead	Profit
Material	10%	5%
Equipment	10%	5%

3. Markups for materials shall be applied to the actual cost of the material before applying the sales tax.
4. When a Subcontractor is performing Extra Work, the allowance for overhead and profit shall be applied to the labor, materials, and equipment costs of the Subcontractor as follows:
 - a) Regardless of the number of Subcontractor tasks for Extra Work, you may only apply 10% for the first \$50,000 of the Subcontractor's portion of accumulated total cost.
 - b) If the accumulated costs of single or subsequent tasks exceed the \$50,000 threshold, you shall instead only apply 5% to any amounts in excess of the \$50,000.
 - c) You shall not apply 10% to any costs after the first \$50,000 of accumulated total costs from performing Extra Work.
 - d) Regardless of the number of hierarchical tiers of Subcontractors, you may only markup a Subcontractor's Work once.

3-5.1 Claims. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

ADD:

3-5.1 Claims.

1. A Claim is a written demand by you that seeks an adjustment in the Contract Price, Contract Time, or other relief associated with a dispute arising under or relating to the Contract, including a breach of any provision thereof. A voucher, invoice, or other routine request for payment is not a Claim.
2. A Claim shall conform to these specifications and may be considered after the City has previously denied a request by you for a Change Order seeking the demanded relief.
3. You shall submit a Claim to the Engineer if a dispute occurs that arises from or relates to the Contract. The Claim shall seek all relief to which you assert you are entitled as a result of the event(s) giving rise to the dispute. Your failure to process a Claim in accordance with these specifications shall constitute a waiver of all relief associated with the dispute. Claims are subject to 6-11, "Right to Audit".

4. You shall continue to perform the Services and Work and shall maintain the Schedule during any dispute proceedings. The Engineer will continue to make payments for undisputed Services and Work.
5. The City's Claims process specified herein shall not relieve you of your statutory obligations to present claims prior to any action under the California Government Code.

3-5.1.1 Initiation of Claim.

1. You shall promptly, but no later than 30 Days after the event(s) giving rise to the Claim, deliver the Claim to the Engineer.
2. You shall not process a Claim unless the Engineer has previously denied a request by you for a Change Order that sought the relief to be pursued in the claim.

3-5.1.1.1 Claim Certification Submittal.

1. If your Claim seeks an increase in the Contract Price, the Contract Time, or both, submit with the Claim an affidavit certifying the following:
 - a) The Claim is made in good faith and covers all costs and delays to which you are entitled as a result of the event(s) giving rise to the Claim.
 - b) The amount claimed accurately reflects the adjustments in the Contract Price, the Contract Time, or both to which you believe you are entitled.
 - c) All supporting costs and pricing data are current, accurate, and complete to the best of your knowledge. The cost breakdown per item of Work shall be supplied.
 - d) You shall ensure that the affidavit is executed by an official who has the authority to legally bind you.

3-5.1.2 Initial Determination.

1. The Engineer will respond in writing to your Claim within 30 Days of receipt of the Claim.

3-5.1.3 Settlement Meeting.

1. If you disagree with the Initial Determination, you shall request a Settlement Meeting within 30 Days. Upon receipt of this request, the Engineer will schedule the Settlement Meeting within 15 Working Days.

3-5.1.4 City's Final Determination.

1. If a settle agreement is not reached, the City shall make a written Final Determination within 10 Working Days after the Settlement Meeting.
2. If you disagree with the City's Final Determination, notify the Engineer in writing of your objection within 15 Working Days after receipt of the written determination and file a "Request for Mediation" in accordance with 3-5.2, "Dispute Resolution Process".
3. Failure to give notice of objection within the 15 Working Days period shall waive your right to pursue the Claim.

3-5.1.5 Mandatory Assistance.

1. If a third party dispute, litigation, or both arises out of or relates in any way to the Services provided under the Contract, upon the City's request, you shall agree to assist in resolving the dispute or litigation. Your assistance includes, but is not limited to the following:
 - a) Providing professional consultations.
 - b) Attending mediations, arbitrations, depositions, trials, or any event related to the dispute resolution and litigation.

3-5.1.5.1 Compensation for Mandatory Assistance.

1. The City will reimburse you for reasonable fees and expenses incurred by you for any required assistance rendered in accordance with 3-5.1.8, "Mandatory Assistance" as Extra Work.
2. The Engineer will determine whether these fees and expenses were necessary due to your conduct or failure to act.
3. If the Engineer determines that the basis of the dispute or litigation in which these fees and expenses were incurred were the result of your conduct or your failure to act in part or in whole, you shall reimburse the City for any payments made for these fees and expenses.
4. Reimbursement may be through any legal means necessary, including the City's withholding of your payment.

3-5.2.3 Selection of Mediator. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. A single mediator, knowledgeable in construction aspects and acceptable to both parties, shall be used to mediate the dispute.

2. To initiate mediation, the initiating party shall serve a Request for Mediation at the American Arbitration Association (AAA) on the opposing party.
3. If AAA is used, the initiating party shall concurrently file with AAA a "Request for Mediation" along with the appropriate fees, a copy of requested mediators marked in preference order, and a preference for available dates.
4. If AAA is selected to coordinate the mediation (Administrator), within 10 Working Days from the receipt of the initiating party's Request for Mediation, the opposing party shall file the following:
 - a) A copy of the list of the preferred mediators listed in preference order after striking any mediators to which they have any objection.
 - b) A preference for available dates.
 - c) Appropriate fees.
5. If the parties cannot agree on a mediator, then each party shall select a mediator and those mediators shall select the neutral third party to mediate the matter.

3-5.3 Forum of Litigation. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. It is the express intention that all legal actions and proceedings related to the Contract or Agreement with the City or to any rights or any relationship between the parties arising therefrom shall be solely and exclusively initiated and maintained in courts of the State of California for the County of San Diego.

ADD:

3-5.4 Pre-judgment Interest.

1. The parties stipulate that if a judgment is entered against a party for breaching this Contract, the pre-judgment interest shall be two percent (2%) per annum.

SECTION 4 - CONTROL OF MATERIALS

4-1.3.3 Inspection of Items Not Locally Produced. To the "WHITEBOOK", DELETE in its entirety.

ADD:

4-1.3.3 Inspection of Items Not Locally Produced. To the "GREENBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. When you intend to purchase materials, fabricated products, or equipment from sources located more than 200 miles (321.9 km) outside the geographical limits of the City, City Lab staff or a qualified inspection agency approved by

the Engineer, shall be engaged at your expense to inspect the materials, equipment, or process.

2. This approval shall be obtained before producing any material or equipment. City Lab staff or inspector shall evaluate the materials for conformance with the requirements of the Plans and Specifications. You shall forward reports required by the Engineer. No materials or equipment shall be shipped nor shall any processing, fabrication or treatment of such materials be done without proper inspection by City Lab staff or the approved agent. Approval by said agent shall not relieve you of responsibility for complying with the requirements of the Contract Documents.
3. The Engineer may elect City Lab staff to perform inspection of an out-of-town manufacturer. You shall incur additional inspection costs of the Engineer including lodging, meals, and incidental expenses based on Federal Per Diem Rates, along with travel and car rental expenses. If the manufacturing plant operates a double shift, a double shift shall be figured in the inspection costs.
 - a) At the option of the Engineer, full time inspection shall continue for the length of the manufacturing period. If the manufacturing period will exceed 3 consecutive weeks, you shall incur additional inspection expenses of the Engineer's supervisor for a trip of 2 Days to the site per month.
 - b) When the Engineer elects City Lab staff to perform out-of-town inspections, the wages of staff employed by the City shall not be part of the additional inspection expenses paid by you.
 - c) Federal Per Diem Rates can be determined at the location below:

<https://www.gsa.gov/portal/content/104877>

4-1.3.4 Inspection Paid For By the Contractor. To the "WHITEBOOK", ADD the following:

1. The special inspections required are listed as follows:
 - a) See S0.1 of Plans D39742-31: "Statement of Special Inspections"

4-1.3.5 Special Inspection. To the "WHITEBOOK", ADD the following:

4. The payment for special inspection Work specified under this section shall be paid in accordance with 4-1.3.4.1, "Payment".

4-1.3.6 Preapproved Materials. To the "WHITEBOOK", ADD the following:

3. You shall submit in writing a list of all products to be incorporated in the Work that are on the AML.

4-1.6 Trade Names or Equals. To the "WHITEBOOK", ADD the following:

11. You shall submit your list of proposed substitutions for an "equal" item **no later than 5 Working Days after the determination of the Apparent Low Bidder** and on the City's Product Submittal Form available at:

<https://www.sandiego.gov/publicworks/edocref>

SECTION 5 - UTILITIES

5-1.1 General. To the "WHITEBOOK", ADD the following:

9. **90 Calendar Days** prior to any paving work, you shall notify the utility owner to provide them adequate time to adjust their utility box frame and cover to finish grade.

5-2 PROTECTION. To the "WHITEBOOK", ADD the following:

3. The Contractor shall coordinate with the San Diego Fire and Rescue Departments to maintain utility service (including but not limited to: water, sewer and electric) at the La Jolla Cove Life Guard Station
4. The Contractor shall maintain all service (including but not limited to: water, sewer and electric) to the Bridge Club. The Contractor shall notify the City of San Diego Resident Engineer if any coordination is needed. The Contractor shall maintain access to the Bridge Club and the lawn area abutting the entrance to the Bridge Club.

5-6 COOPERATION. To the "GREENBOOK", ADD the following:

1. Notify SDG&E at least 10 Working Days prior to excavating within 10 feet of SDG&E Underground High Voltage Transmission Power Lines (69 KV and higher).
2. The Contractor shall coordinate with SDG&E to discontinue and establish power (per the demo permit).
3. The Contractor shall coordinate with the San Diego Fire and Rescue Departments to maintain access for emergency staff including Fire and Rescue.
4. City Park and Recreation will provide Portable Toilets for public use only during construction. The Contractor shall coordinate with City RE and City Park and Recreation regarding needs location and access.

SECTION 6 - PROSECUTION, PROGRESS AND ACCEPTANCE OF WORK

6-1.1

Construction Schedule. To the "WHITEBOOK", item 5, 9, 20, and 22, DELETE in its entirety and SUBSTITUTE with the following:

5. Monthly progress payments are contingent upon the submittal of an updated Schedule and cash flow forecast as discussed in item 22 of 6-1.1, "Construction Schedule" to the Engineer. The Engineer may refuse to recommend the whole or part of any monthly payment if, in the Engineer's opinion, your failure or refusal to provide the required Schedule and cash flow forecast information precludes a proper evaluation of your ability to complete the Project within the Contract Time and amount.
9. Inclusive to the Contract Time, include 15 Working Days to the Schedule for the generation of the Punchlist. You shall Work diligently to complete all Punchlist items within 30 Working Days after the Engineer provides the Punchlist.
20. The **90 Calendar Day** for the Plant Establishment Period is included in the stipulated Contract Time and shall begin with the acceptance of installation of the vegetation plan in accordance with Section 801-6, "MAINTENANCE AND PLANT ESTABLISHMENT".
22. With every pay request, submit the following:
 - a) An updated cash flow forecast showing periodic and cumulative construction billing amounts for the duration of the Contract Time. If there has been any Extra Work since the last update, include only the approved amounts.
 - b) A curve value percentage comparison between the Contract Price and the updated cash flow forecast for each Project ID included in the Contract Documents. Curve values shall be set on a scale from 0% to 100% in intervals of 5% of the Contract Time. Refer to the Sample City Invoice materials in **Appendix D - Sample City Invoice** and use the format shown. Your invoice amounts shall be supported by this curve value percentage. For previous periods, use the actual values and percentages and update the curve value percentages accordingly. See "Cash Flow Curve Fitting Example" at the location below:

<https://www.sandiego.gov/publicworks/edocref>

6-1.2.1 CONSTRUCTION PHASING. To the "WHITEBOOK", ADD the following:

2. The recommended order of operation is: Construction of new Pump Station, Demolition of current Pump Station, Demolition of current Comfort Station and power, Construction of new Comfort Station.
3. It is recommended sidewalks along southerly and easterly sides of the proposed Comfort Station should be completed first to facilitate foot traffic through the park

ADD:

6-3.2.1.1 Environmental Document.

1. The City of San Diego has prepared a **Mitigated Negative Declaration** for **EB Scripps Comfort Station Project No. 553076** as referenced in the Contract Appendix. You shall comply with all requirements of the **Mitigated Negative Declaration** as set forth in **Appendix A**.
2. Compliance with the City's environmental document shall be included in the Contract Price.

6-3.2.2 Archaeological and Native American Monitoring Program. To the "WHITEBOOK", ADD the following:

4. The City will retain a qualified archaeologist for this Contract. You shall coordinate your activities and schedule with the activities and schedules of the archaeologist monitor. Notify the Engineer before noon of the Working Day before monitoring is required. See 2-11, "INSPECTION" for details.

ADD:

6-3.2.3.1 Paleontological Monitoring Program To the "WHITEBOOK", ADD the following:

3. The City will retain a qualified paleontologist for this Contract. You shall coordinate your activities and schedule with the activities and schedules of the paleontologist monitor. Notify the Engineer before noon of the Working Day before monitoring is required. See 2-11, "INSPECTION" for details.

SECTION 7 - RESPONSIBILITIES OF THE CONTRACTOR

7-3 INSURANCE. To the "GREENBOOK", DELETE in its entirety and SUBSTITUTE with the following:

7-3 INSURANCE.

1. The insurance provisions herein shall not be construed to limit your indemnity obligations contained in the Contract.

7-3.1 Policies and Procedures.

1. You shall 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 shall 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. The payment for insurance shall be included in the Contract Price as bid by you. 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 shall 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 shall 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 shall 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 shall be no endorsement or modification limiting the scope of coverage for either "insured vs. insured" claims or contractual liability. You shall maintain the same or equivalent insurance for at least 10 years following completion of the Work.

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

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

7-3.2.2 Commercial Automobile Liability Insurance.

1. You shall 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 shall be outside the limits of the policy.

7-3.2.3 Contractors Pollution Liability Insurance.

1. You shall procure and maintain at your expense or require your Subcontractor, as described below, to procure and maintain the Contractors Pollution Liability Insurance including contractual liability coverage to cover liability arising out of cleanup, removal, storage, or handling of hazardous or toxic chemicals, materials, substances, or any other pollutants by you or any Subcontractor in an amount not less than \$2,000,000 limit for bodily injury and property damage.
2. All costs of defense shall be outside the limits of the policy. Any such insurance provided by your Subcontractor instead of you shall be approved separately in writing by the City.
3. For approval of a substitution of your Subcontractor’s insurance, you shall certify that all activities for which the Contractors Pollution Liability Insurance will provide coverage will be performed exclusively by the Subcontractor providing the insurance. The deductible shall not exceed \$25,000 per claim.
4. Contractual liability shall include coverage of tort liability of another party to pay for bodily injury or property damage to a third person or organization. There shall be no endorsement or modification of the coverage limiting the scope of coverage for either “insured vs. insured” claims or contractual liability.
5. Occurrence based policies shall be procured before the Work commences and shall be maintained for the Contract Time. Claims Made policies shall be procured before the Work commences, shall be maintained for the Contract Time, and shall include a 12 month extended Claims Discovery Period

applicable to this contract or the existing policy or policies that shall continue to be maintained for 12 months after the completion of the Work without advancing the retroactive date.

6. Except as provided for under California law, the policy or policies shall provide that the City is entitled to 30 Days prior written notice (10 Days for cancellation due to non-payment of premium) of cancellation or non-renewal of the policy or policies.

7-3.2.5 Contractors Builders Risk Property Insurance..

1. You shall provide at your expense, and maintain until Final Acceptance of the Work, a Special Form Builders Risk Policy or Policies. This insurance shall be in an amount equal to the replacement cost of the completed Work (without deduction for depreciation) including the cost of excavations, grading, and filling. The policy or policies limits shall be 100% of this Contract value of the Work plus 15% to cover administrative costs, design costs, and the costs of inspections and construction management.
2. Insured property shall include material or portions of the Work located away from the Site but intended for use at the Site and shall cover material or portions of the Work in transit. The policy or policies shall include as insured property scaffolding, falsework, and temporary buildings located at the Site. The policy or policies shall cover the cost of removing debris, including demolition.
3. The policy or policies shall provide that all proceeds thereunder shall be payable to the City as Trustee for the insured, and shall name the City, the Contractor, Subcontractors, and Suppliers of all tiers as named insured. The City, as Trustee, will collect, adjust, and receive all monies which may become due and payable under the policy or policies, may compromise any and all claims thereunder, and will apply the proceeds of such insurance to the repair, reconstruction, or replacement of the Work.
4. Any deductible applicable to the insurance shall be identified in the policy or policies documents and responsibility for paying the part of any loss not covered because of the application of such deductibles shall be apportioned among the parties except for the City as follows: if there is more than one claimant for a single occurrence, then each claimant shall pay a pro-rata share of the per occurrence deductible based upon the percentage of their paid claim to the total paid for insured. The City shall be entitled to 100% of its loss. You shall pay the City any portion of that loss not covered because of a deductible at the same time the proceeds of the insurance are paid to the City as trustee.
5. Any insured, other than the City, making claim to which a deductible applies shall be responsible for 100% of the loss not insured because of the deductible. Except as provided for under California law, the policy or policies

shall provide that the City is entitled to 30 Days prior written notice (10 Days for cancellation due to non-payment of premium) of cancellation or non-renewal of the policy or policies.

7-3.3 Rating Requirements. Except for the State Compensation Insurance Fund, all insurance required by this Contract as described herein shall 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 shall 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 shall 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.

1. You shall 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.
2. To the fullest extent allowed by law e.g., California Insurance Code §11580.04, the policy shall be endorsed to include the City and its respective elected officials, officers, employees, agents, and representatives as additional insured.
3. The additional insured coverage for projects for which the Engineer's Estimate is \$1,000,000 or more shall 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.
4. The additional insured coverage for projects for which the Engineer's Estimate is less than \$1,000,000 shall 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 shall 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 shall provide that any insurance maintained by the City and its elected officials, officers, employees, agents and representatives shall be in excess of your insurance and shall not contribute to it.

7-3.5.1.3 Project General Aggregate Limit. The policy or policies shall 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 shall reduce the Designated Construction Project General Aggregate Limit. The Designated Construction Project General Aggregate Limit shall 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 shall be endorsed to include the City and its respective elected officials, officers, employees, agents, and representatives as additional insured, with respect to liability arising out of automobiles owned, leased, hired or borrowed by you or on your behalf. This endorsement is limited to the obligations permitted by California Insurance Code §11580.04.

7-3.5.3 Contractors Pollution Liability Insurance Endorsements.

7-3.5.3.1 Additional Insured.

1. The policy or policies shall be endorsed to include as an Insured the City and its respective elected officials, officers, employees, agents, and representatives, with respect to liability arising out of:
 - a) Ongoing operations performed by you or on your behalf,

- b) your products,
- c) your work, e.g., your completed operations performed by you or on your behalf, or
- d) premises owned, leased, controlled, or used by you.

Except that in connection with, collateral to, or affecting any construction contract to which the provisions of subdivision (b) of § 2782 of the California Civil Code apply, this endorsement shall not provide any duty of indemnity coverage for the active negligence of the City and its respective elected officials, officers, employees, agents, and representatives in any case where an agreement to indemnify the City and its respective elected officials, officers, employees, agents, and representatives would be invalid under subdivision (b) of §2782 of the California Civil Code.

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

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

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

7-3.5.5 Builders Risk Endorsements.

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

7-3.5.5.2 Builders Risk – Partial Utilization. If the City desires to occupy or use a portion or portions of the Work prior to Acceptance in accordance with this Contract, the City will notify you and you shall immediately notify your Builder's Risk insurer and obtain an endorsement that the policy or policies shall not be cancelled or lapse on account of

any such partial use or occupancy. You shall obtain the endorsement prior to the City's occupation and use.

7-3.6 Deductibles and Self-Insured Retentions. You shall pay for all deductibles and self-insured retentions. You shall 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 shall 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 shall follow the form of the primary policy or policies e.g., all endorsements.

7-4 NOT USED. To the "GREENBOOK", DELETE in its entirety and SUBSTITUTE with the following:

7-4 WORKERS' COMPENSATION INSURANCE AND EMPLOYERS LIABILITY INSURANCE.

1. In accordance with the provisions of §3700 of the California Labor Code, you shall 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 shall be not less than the following:

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

3. By signing and returning the Contract you certify that you are aware of the provisions of §3700 of the Labor Code which requires 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 shall comply with such provisions before commencing the Work as required by §1861 of the California Labor Code.

7-4.1. Waiver of Subrogation. The policy or policies shall 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.

7-4.2 Workers' Compensation Insurance for Work In, Over, or Alongside Navigable Waters. In addition to the Workers' Compensation Insurance required under the General Conditions of this contract, the you shall provide additional insurance coverage for claims brought under the Longshore and Harbor Workers' Compensation Act, the Jones Act, general maritime law, and any other federal or state laws, resulting from the your Work in, over, or alongside navigable waters.

7-5 PERMITS, FEES, AND NOTICES. To the "WHITEBOOK", ADD the following:

2. The City will obtain, at no cost to you, the following permits:
 - a) Site Development Permit No 2118249 – See **Appendix J**.
 - b) Coastal Development Permit No 1975357– See **Appendix J**.

7-5.3 Payment. To the "WHITEBOOK", ADD the following:

The Contractor shall obtain deferred permit as noted on the plans.

ADD:

7-6 THE CONTRACTORS REPRESENTATIVE. To the "GREENBOOK", ADD the following:

1. Both the representative and alternative representative shall be employees of the Contractor and shall not be assigned to a Subcontractor unless otherwise approved by the City in writing.

7-8.1 GENERAL. To the "WHITEBOOK", ADD the following:

2. The Contractor shall protect their equipment, the project work, and the park within the project limits.
3. It is recommended to have full site protection during Plant Establishment Period.
4. The Contractor shall provide a temporary foundation with gated, fenced, closure to house Park and Recreation dumpsters currently onsite. The Contractor shall coordinate with the RE and Park and Recreation on sizing, location, accessibility needs, and stormwater regulations.
5. The Contractor shall limit impact to public parking along Coast Blvd.

7-8.3 NOISE CONTROL. To the "GREENBOOK", ADD the following:

1. It is recommended to minimize construction noise prior to 9am.

7-8.6 Water Pollution Control. To the “WHITEBOOK”, ADD the following:

6. Based on a preliminary assessment by the City, this Contract is subject to **WPCP**.

7-10.6.2 Project Identification Sign. To the “WHITEBOOK”, item 1, DELETE in its entirety and SUBSTITUTE with the following:

1. The City shall provide 1 to 4 signs. Contact the Engineer to pick up the Project signs, install them at the Work location(s), and maintain them in a manner approved by the Engineer.

7-13.4 Contractor Standards and Pledge of Compliance. To the “WHITEBOOK”, DELETE in its entirety and SUBSTITUTE with the following:

1. The Contract is subject to City’s Municipal Code §22.3004 as amended 10/29/13 by ordinance O-20316.
2. You shall complete a Pledge of Compliance attesting under penalty of perjury that you complied with the requirements of this section.
3. You shall ensure that all Subcontractors complete a Pledge of Compliance attesting under penalty of perjury that they complied with the requirements of this section.
4. You shall require in each subcontract that the Subcontractor shall abide by the provisions of the City’s Municipal Code §22.3004. A sample provision is as follows:

“Compliance with San Diego Municipal Code §22.3004. The Subcontractor acknowledges that it is familiar with the requirements of San Diego Municipal Code §22.3004 (“Contractor Standards”), and agrees to comply with requirements of that section. The Subcontractor further agrees to complete the Pledge of Compliance, incorporated herein by reference.”

ADD:

7-13.8 Equal Pay Ordinance.

1. You shall comply with the Equal Pay Ordinance (EPO) codified in the San Diego Municipal Code (SDMC) in section 22.4801 through 22.4809, unless compliance is not required based on an exception listed in SDMC section 22.4804.
2. You shall require all of your Subcontractors to certify compliance with the EPO in their written subcontracts.
3. You shall post a notice informing your employees of their rights under the EPO in the workplace or job site.

4. By signing this Contract with the City of San Diego, you acknowledge the EPO requirements and pledge ongoing compliance with the requirements of SDMC Division 48, section 22.4801 et seq., throughout the duration of this Contract.

7-16.3 Exclusive Community Liaison Services. To the "WHITEBOOK", ADD the following:

2. The Contractor shall retain an Exclusive Community Liaison for the Project that shall implement Work in accordance with the specifications described in 7-16.2 "Community Outreach Services" and 7-16.3 "Exclusive Community Liaison Services".
3. The Exclusive Community Liaison shall coordinate with The City of San Diego Events Coordinator

Marylou Fedalizo, Permit Center Supervisor
mfedalizo@sandiego.gov
619-235-5929

7-20 ELECTRONIC COMMUNICATION. To the "WHITEBOOK", ADD the following:

2. Virtual Project Manager shall be used on this Contract.

7-21.1 General. To the "WHITEBOOK", item 3, DELETE in its entirety and SUBSTITUTE with the following:

3. During the construction phase of projects, the minimum waste management reduction goal is 90% of the inert material (a material not subject to decomposition such as concrete, asphalt, brick, rock, block, dirt, metal, glass, and etc.) and 65% of the remaining project waste. You shall provide appropriate documentation, including a Waste Management Form attached as an appendix, and evidence of recycling and reuse of materials to meet the waste reduction goals specified.

9-3.1 PAYMENT. To the "GREENBOOK", ADD the following:

The payment for the public pump station Work shall be included in the bid item for "Public Sewer Pump Station". The payment for constructing the sewer pump station shall include but not be limited to supplying and installing complete and in-place, sewage lift station as per plans and specifications including all labor and materials for civil work, mechanical/piping/valves work, odor control work, electrical work, instrumentation/communication work, power supply, excavation, restoration of existing landscape, concrete work, lift station testing, start-up, operational demonstration, and operator training, pavement restoration for final connection and all other ancillary equipment, labor, materials, and time needed for a complete, in-place, and operational pumping system, sewer lateral cleanout, sewer force main, sewer main and rehabilitate existing manhole.

SECTION 209 – PRESSURE PIPE

209 PRESSURE PIPE. To the “WHITEBOOK”, ADD the following:

2. PVC products, specifically type C900 and C905, as manufactured or distributed by J-M Manufacturing Company or JM Eagle shall not be used on the Contract for pressurized pipe.

SECTION 217 – BEDDING AND BACKFILL MATERIALS

217-2.2 Stones, Boulders, and Broken Concrete. To the “GREENBOOK”, Table 217-2.2, DELETE in its entirety and SUBSTITUTE with the following:

TABLE 217-2.2

Zone	Zone Limits	Maximum Size (greatest dimension)	Backfill Requirements in Addition to 217-2.1
Street or Surface Zone	From ground surface to 12" (300 mm) below pavement subgrade or ground surface	2.5" (63 mm)	As required by the Plans or Special Provisions.
Street or Surface Zone Backfill of Tunnels beneath Concrete Flatwork		Sand	Sand equivalent of not less than 30.
Trench Zone	From 12" (300 mm) below pavement subgrade or ground surface to 12" (300 mm) above top of pipe or box	6" (150 mm)	
Deep Trench Zone (Trenches 3' (0.9 m) wide or wider)	From 60" (1.5 m) below finished surface to 12" (300 mm) above top of pipe or box	Rocks up to 12" (300 mm) excavated from trench may be placed as backfill	
Pipe Zone	From 12" (300 mm) above top of pipe or box to 6" (150 mm) below bottom of pipe or box exterior	2.5" (63 mm)	Sand equivalent of not less than 30 or a coefficient of permeability greater than 1-½ inches/hour (35 mm per hour).
Overexcavation	Backfill more than 6" (150 mm) below bottom of pipe or box exterior	6" (150 mm)	Sand equivalent of not less than 30 or a coefficient of permeability greater than 1-½ inches/hour (35 mm per hour). Trench backfill slurry (100-E-100) per 201-1 may also be used.

SECTION 302 – ROADWAY SURFACING

302-5.9 Measurement and Payment. To the “WHITEBOOK”, item 2, DELETE in its entirety.

SECTION 304 –METAL FABRICATION AND CONSTRUCTION

304-5 PAYMENT. To the “WHITEBOOK”, REVISE section “304-5” to “304-6”.

SECTION 306 – OPEN TRENCH CONDUIT CONSTRUCTION

306-3.3.4.1 Non-Friable Asbestos Cement Pipe (ACP). To the “WHITEBOOK”, item 2, subsection “i”, DELETE in its entirety and SUBSTITUTE with the following:

- i) A minimum of 5 Working Days prior to the transportation of the ACP disposal bins or friable asbestos waste, you shall provide notice to and assist the Resident Engineer in completing the Inspection Work Request Form for the Asbestos, Lead, and Mold Program. The form is located below:

<https://forms.sandiego.gov/f/gS2064>

306-6.5.1 General. To the “WHITEBOOK”, DELETE in its entirety and SUBSTITUTE with the following:

1. For PVC water pipes:
 - a) Bedding material shall:
 - i. Either be sand, crushed aggregate, or native free-draining granular material.
 - ii. 100% of the bedding material shall pass the no. 4 sieve and shall have an expansion when saturated with water of not more than 0.5%.
 - iii. Have a sand equivalent of SE 50. SE 30 or higher may be substituted for SE 50 as bedding material if all of the following requirements are met:
 - The top of the pipe and haunch areas are mechanically compacted by means of tamping, vibrating roller, or other mechanical tamper.
 - Equipment is of size and type approved by the Engineer.
 - 90% relative compaction or better is achieved.
 - b) When jetting, care shall be exercised to avoid floating of the pipe.
2. PVC sewer pipes shall be bedded in 3/8 inch (9.5 mm) or 1/2 inch (12.5 mm) crushed rock in accordance with 200-1.2, “Crushed Rock and Rock Dust”. Crushed rock for PVC sewer pipes may contain recycled Portland Cement Concrete and shall conform to gradation requirements for 3/8 inch or 1/2 inch nominal size as shown in Table 200-1.2.1 (A).
3. Storm drains and all types of non-PVC sewer mains shall be bedded in 3/4 inch (19 mm) crushed rock in accordance with 200-1.2, “Crushed Rock and Rock Dust”.

Crushed rock for storm drains may contain recycled Portland Cement Concrete and shall conform to gradation requirements for 3/4 inch nominal size as shown in Table 200-1.2.1 (A). Bedding shall be placed to a depth of 4 inches (101.6 mm) below the outside diameter of the pipe or 1 inch (25.4 mm) below the bell of the pipe, whichever is greater.

SECTION 306 – OPEN TRENCH CONDUIT CONSTRUCTION

306-15.10 Thrust Blocks and Anchor Blocks. To the WHITEBOOK, ADD the following:

4. Thrust blocks and anchor blocks, and all appurtenant Work, for sewer main 12 inches (304.8 mm) and smaller shall be included in the Bid items for the sewer main Work.

SECTION 600 - ACCESS

ADD:

600-1 GENERAL. To the “WHITEBOOK”, item 5, DELETE in its entirety and SUBSTITUTE with the following:

5. If the City’s crews are unable to provide the citizens with the mandated services due to your failure to comply with these specifications, you shall collect trash, recyclables, and yard waste on the City’s schedule and deliver to the City’s designated locations. If you fail to perform this Work, you shall incur additional costs for the City to reschedule pick up of an area.

EQUAL OPPORTUNITY CONTRACTING PROGRAM (EOCP) SECTION A – GENERAL REQUIREMENTS

4.1 Nondiscrimination in Contracting Ordinance. To the “WHITEBOOK”, subsection 4.1.1, paragraph (2), sentence (1), DELETE in its entirety and SUBSTITUTE with the following:

You shall not discriminate on the basis of race, gender, gender expression, gender identity, religion, national origin, ethnicity, sexual orientation, age, or disability in the solicitation, selection, hiring, or treatment of subcontractors, vendors, or suppliers.

END OF SUPPLEMENTARY SPECIAL PROVISIONS (SSP)

TECHNICALS

SPECIFICATIONS:

EB SCRIPPS COMFORT STATION

City of San Diego

For Bidding Submittal
November 9, 2018

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SECTION 02 41 00

DEMOLITION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Building demolition excluding removal of hazardous materials and toxic substances.
- B. Abandonment and removal of existing utilities and utility structures.

1.02 REFERENCE STANDARDS

- A. 29 CFR 1926 - U.S. Occupational Safety and Health Standards; current edition.
- B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2013.

1.03 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: Company specializing in the type of work required.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 SCOPE

- A. Remove the entire building.
- B. Remove paving and curbs as required to accomplish new work.
- C. Break up paving within site boundaries to permit natural moisture drainage; leave pieces not larger than 1 square yard.
- D. Within area of new construction, remove foundation walls and footings to a minimum of 2 feet below finished grade.
- E. Outside area of new construction, remove foundation walls and footings to a minimum of 2 feet below finished grade.
- F. Remove concrete slabs on grade within site boundaries.
- G. Remove manholes and manhole covers, curb inlets and catch basins.
- H. Remove fences and gates.
- I. Remove creosote-treated wood utility poles.
- J. Remove other items indicated, for salvage, relocation, and recycling.
- K. Fill excavations, open pits, and holes in ground areas generated as result of removals, using specified fill; compact fill as required so that required rough grade elevations do not subside within one year after completion.

3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
 - 2. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 - 3. Provide, erect, and maintain temporary barriers and security devices.
 - 4. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
 - 5. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 - 6. Do not close or obstruct roadways or sidewalks without permit.
 - 7. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
 - 8. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.
- B. Do not begin removal until receipt of notification to proceed from Owner.
- C. Do not begin removal until vegetation to be relocated has been removed and specified measures have been taken to protect vegetation to remain.
- D. Protect existing structures and other elements that are not to be removed.
 - 1. Provide bracing and shoring.
 - 2. Prevent movement or settlement of adjacent structures.
 - 3. Stop work immediately if adjacent structures appear to be in danger.
- E. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- F. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.
- G. Perform demolition in a manner that maximizes salvage and recycling of materials.
 - 1. Dismantle existing construction and separate materials.
 - 2. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or point of reuse.
- H. Partial Removal of Paving and Curbs: Neatly saw cut at right angle to surface.

3.03 EXISTING UTILITIES

- A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.

- E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.
- F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.
- H. Prepare building demolition areas by disconnecting and capping utilities outside the demolition zone; identify and mark utilities to be subsequently reconnected, in same manner as other utilities to remain.

3.04 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Remove from site all materials not to be reused on site; do not burn or bury.
- C. Leave site in clean condition, ready for subsequent work.
- D. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION

SECTION 03 30 00

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and City of San Diego General Requirements, apply to this Section.

1.2 SUMMARY

- A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and floors.
- B. Related Requirements:
 - 1. Section 03 35 11 "Concrete Finishes" for general building applications of specialty finished formed concrete.
 - 2. Section 09 91 13 "Painting" for Graffiti Coating at concrete walls.
 - 3. "City of San Diego White Book" and "Supplementary Special Provisions to City of San Diego White Book" for all sidewalks, paving, drives, and curbs.

1.3 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash, slag cement, other pozzolans, and silica fume; materials subject to compliance with requirements.
- B. W/C Ratio: The ratio by weight of water to cementitious materials.

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Before submitting design mixtures, review concrete design mixture and examine procedures for ensuring quality of concrete materials. Require representatives of each entity directly concerned with cast-in-place concrete to attend, including the following:
 - a. Contractor's superintendent.
 - b. Independent testing agency responsible for concrete design mixtures.
 - c. Concrete Subcontractor.

2. Review special inspection and testing and inspecting agency procedures for field quality control, concrete finishes and finishing, cold- and hot-weather concreting procedures, curing procedures, construction contraction and isolation joints, and joint-filler strips, semirigid joint fillers, forms and form removal limitations, shoring and reshoring procedures, vapor-retarder installation, anchor rod and anchorage device installation tolerances, steel reinforcement installation, concrete repair procedures, and concrete protection.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments. All design mixtures must be compatible with concrete finish admixtures.
- C. Steel Reinforcement Shop Drawings: Placing Drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.
- D. Construction Joint Layout: Indicate proposed construction joints required to construct the structure.
 1. Location of construction joints is subject to approval of the Architect.
- E. Test Reports: Submit, for acceptance, complete test reports from approved independent testing laboratories certifying that waterproofing system conforms to performance characteristics and testing requirements specified herein.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For testing agency.
- B. Material Certificates: For each of the following, signed by manufacturers:
 1. Cementitious materials.
 2. Admixtures.
 3. Form materials and form-release agents.
 4. Steel reinforcement and accessories.
 5. Curing compounds.
 6. Floor and slab treatments.
 7. Bonding agents.
 8. Adhesives.
 9. Semirigid joint filler.
 10. Joint-filler strips.
 11. Repair materials.
 12. Waterproofing

- C. Material Test Reports: For the following, from a qualified testing agency:
 - 1. Aggregates.
 - 2. Cementitious materials.
- D. Field quality-control reports.
- E. Minutes of preinstallation conference.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified installer who employs on Project personnel qualified as ACI-certified Flatwork Technician and Finisher and a supervisor who is an ACI-certified Concrete Flatwork Technician.
- B. 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.
 - 1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."
- C. Coordinate all mixes and admixtures for compatibility of products
- D. Testing Agency Qualifications: An independent agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.
 - 1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification program.
 - 2. Personnel performing laboratory tests shall be ACI-certified Concrete Strength Testing Technician and Concrete Laboratory Testing Technician, Grade I. Testing agency laboratory supervisor shall be an ACI-certified Concrete Laboratory Testing Technician, Grade II.
- E. Mock up – Prior to installation, erect mock up samples of concrete to show actual condition of the final product.
 - 1. Prior to mock up submit actual color samples of wall with textures.
 - 2. At project site prepare a full size mock-up of a 4 foot wide full height section of wall with a wall corner showing final conditions of wall for review and approval prior to commencement of the formwork.
 - 3. Locate mock-ups on site in location and size indicated or if not indicated, as directed by Owners Authorized Representative.
 - 4. Erect mock-ups for each type and pattern of concrete required to verify selections made under sample submittals.
 - 5. Notify Owner's Representative one (1) week in advance of the dates and times when mock-ups will be erected.
 - 6. Demonstrate quality and range of aesthetic effects and workmanship that will be produced in final unit of work and accurately match pre-bid "referee sample".

7. Obtain Owner's Authorized Representative acceptance of mock-ups before start of work.
8. Mock up to be removed from site after approval.
9. Mock up Schedule:
 - Integrally colored flooring and paving with casting
 - Integrally colored polished concrete wall – medium texture finish
 - Integrally colored polished concrete wall – light texture finish
 - Integrally colored sandblast finish with seashell form
 - Integrally colored concrete vertical board form concrete
 - Any proposed repairs to concrete

1.8 PRECONSTRUCTION TESTING

- A. Preconstruction Testing Service: Engage a qualified testing agency to perform preconstruction testing on concrete mixtures.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage. Avoid damaging coatings on steel reinforcement.

1.10 FIELD CONDITIONS

- A. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
 1. When average high and low temperature is expected to fall below 40 deg F (4.4 deg C) for three successive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301 (ACI 301M).
 2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
 3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.
- B. Hot-Weather Placement: Comply with ACI 301 (ACI 301M) and as follows:
 1. Maintain concrete temperature below 90 deg F (32 deg C) at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
 2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

PART 2 - PRODUCTS

2.1 CONCRETE, GENERAL

- A. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:
 - 1. ACI 301 (ACI 301M).
 - 2. ACI 117 (ACI 117M).

2.2 FORM-FACING MATERIALS

- A. Special finishes and form liners for finished textures: See section 03 35 11.
- B. Smooth-Formed Finished Concrete: Form-facing panels that provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.
 - 1. Plywood, metal, or other approved panel materials.
- C. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.
- D. Void Forms: Biodegradable paper surface, treated for moisture resistance, structurally sufficient to support weight of plastic concrete and other superimposed loads.
- E. Chamfer Strips: Wood, metal, PVC, or rubber strips, 3/4 by 3/4 inch (19 by 19 mm), minimum.
- F. Rustication Strips: Wood, metal, PVC, or rubber strips, kerfed for ease of form removal.
- G. Form-Release Agent: Commercially formulated form-release agent that does not bond with, stain, or adversely affect concrete surfaces and does not impair subsequent treatments of concrete surfaces.
 - 1. Formulate form-release agent with rust inhibitor for steel form-facing materials.
- H. Form Ties: Factory-fabricated, removable or snap-off glass-fiber-reinforced plastic form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.
 - 1. Furnish units that leave no corrodible metal closer than 1 inch (25 mm) to the plane of exposed concrete surface.
 - 2. Furnish ties that, when removed, leave holes no larger than 1 inch (25 mm) in diameter in concrete surface.

2.3 REINFORCEMENT

- A. Epoxy-Coated Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed bars, ASTM A 775/A 775M or ASTM A 934/A 934M, epoxy coated, with less than 2 percent damaged coating in each 12-inch (300-mm) bar length.

2.4 REINFORCEMENT ACCESSORIES

- A. Epoxy-Coated Joint Dowel Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), plain-steel bars, ASTM A 775/A 775M epoxy coated.
- B. Epoxy Repair Coating: Liquid, two-part, epoxy repair coating; compatible with epoxy coating on reinforcement and complying with ASTM A 775/A 775M.
- C. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded-wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice," of greater compressive strength than concrete and as follows:
 - 1. For epoxy-coated reinforcement, use epoxy-coated or other dielectric-polymer-coated wire bar supports

2.5 CONCRETE MATERIALS

- A. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from single source, and obtain admixtures from single source from single manufacturer.
- B. Cementitious Materials:
 - 1. Portland Cement: ASTM C 150/C 150M, Type II, gray.
 - 2. Fly Ash: ASTM C 618, Class F or C.
 - 3. Slag Cement: ASTM C 989/C 989M, Grade 100 or 120.
 - 4. Silica Fume: ASTM C 1240, amorphous silica.
- C. Normal-Weight Aggregates: ASTM C 33/C 33M, Class 3M coarse aggregate or better, graded. Provide aggregates from a single source.
 - 1. Maximum Coarse-Aggregate Size: 3/4 inch (25 mm) nominal.
 - 2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.
- D. Air-Entraining Admixture: ASTM C 260/C 260M.
- E. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and that do 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.

4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
 5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
 6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.
 7. Waterproofing admixture – Cementitious Crystalline
 - a. XyPex – C500
 - b. Sika – Watertight concrete powder
 - c. Substitutions – or approved equal
- F. Non-Set-Accelerating Corrosion-Inhibiting Admixture: Commercially formulated, non-set-accelerating, anodic inhibitor or mixed cathodic and anodic inhibitor; capable of forming a protective barrier and minimizing chloride reactions with steel reinforcement in concrete.
- G. Water: ASTM C 94/C 94M and potable.

2.6 CURING MATERIALS

- A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.
- B. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. (305 g/sq. m) when dry.
- C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- D. Water: Potable.
- E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.
- F. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, nondissipating.
- G. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, 18 to 25 percent solids, nondissipating.

2.7 RELATED MATERIALS

- A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber or ASTM D 1752, cork or self-expanding cork.
- B. Semirigid Joint Filler: Two-component, semirigid, 100 percent solids, epoxy resin with a Type A shore durometer hardness of 80 according to ASTM D 2240.

2.8 CONCRETE MIXTURES, GENERAL

- A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301 (ACI 301M).
 - 1. Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures.
- B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:
 - 1. Fly Ash: 15 percent.
- C. Limit water-soluble, chloride-ion content in hardened concrete to 0.06 percent by weight of cement.
- D. Admixtures: Use admixtures according to manufacturer's written instructions.
 - 1. Use water-reducing, high-range water-reducing, or plasticizing admixture in concrete, as required, for placement and workability.
 - 2. Use water-reducing and -retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
 - 3. Use shrinkage reducing admixture in all concrete.
 - 4. Use corrosion-inhibiting admixture in all concrete mixtures.
 - 5. Use waterproofing admixture in all concrete mixtures.
- E. Color Pigment: Add color pigment to concrete mixture according to manufacturer's written instructions and to result in hardened concrete color consistent with approved mockup.

2.9 CONCRETE MIXTURES FOR BUILDING ELEMENTS

- A. All normal-weight concrete.
 - 1. Minimum Compressive Strength: 5000 psi (27.6 MPa) at 28 days.
 - 2. Maximum W/C Ratio: 0.40.
 - 3. Slump Limit: 8 inches (200 mm) for concrete with verified slump of 4 inches (50 to 100 mm) before adding high-range water-reducing admixture, plus or minus 1 inch (25 mm).
 - 4. Air Content: Do not allow air content of trowel-finished floors to exceed 3 percent.
 - 5. All above ground concrete shall have integral color and waterproofing admixture.

2.10 FABRICATING REINFORCEMENT

- A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.11 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 between 85 and 90 deg F (30 and 32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.

2.12 CONCRETE FLOOR SEALER

- A. Allow concrete flooring system and concrete benches to completely dry prior to application.
 - 1. All flooring surfaces and concrete benches shall be sealed with a clear sealer.
 - 2. Products: Apply per manufacturer's recommendation and safety requirements.
 - a. Miracle Cover, Inc., 19941 Beach Blvd., Huntington Beach, CA 92648
 - b. Glaze N Seal Penetrating Sealer (800) 486-1414
 - c. Substitutions: Or Approved Equal.

PART 3 - EXECUTION

3.1 FORMWORK INSTALLATION

- A. Design, erect, shore, brace, and maintain formwork, according to ACI 301 (ACI 301M), to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.
- B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117 (ACI 117M).
- C. Limit concrete surface irregularities, designated by ACI 347 as abrupt or gradual, as follows:
 - 1. Class A, 1/8 inch (3.2 mm) for smooth-formed finished surfaces.
 - 2. Class B, 1/4 inch (6 mm) for rough-formed finished surfaces.
- D. Construct forms tight enough to prevent loss of concrete mortar.
- E. Construct forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast-concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.
 - 1. Install keyways, reglets, recesses, and the like, for easy removal.
 - 2. Do not use rust-stained steel form-facing material.
- F. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.

- G. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.
- H. Chamfer exterior corners and edges of permanently exposed concrete.
- I. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.
- J. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
- K. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
- L. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.
- M. See Section 03 35 11 Concrete Finishes for concrete finishes and form liners.

3.2 EMBEDDED ITEM INSTALLATION

- A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
 1. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of AISC 303.
 2. Install reglets to receive waterproofing and to receive through-wall flashings in outer face of concrete frame at exterior walls, where flashing is shown at lintels, shelf angles, and other conditions.
 3. Install dovetail anchor slots in concrete structures as indicated.

3.3 REMOVING AND REUSING FORMS

- A. General: Formwork for sides of beams, walls, columns, and similar parts of the Work that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F (10 deg C) for 24 hours after placing concrete. Concrete has to be hard enough to not be damaged by form-removal operations, and curing and protection operations need to be maintained.
 1. Leave formwork for beam soffits, joists, slabs, and other structural elements that support weight of concrete in place until concrete has achieved its 28-day design compressive strength.
 2. Remove forms only if shores have been arranged to permit removal of forms without loosening or disturbing shores.

- B. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material are not acceptable for exposed surfaces. Apply new form-release agent.
- C. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Architect.

3.4 SHORING INSTALLATION

- A. Comply with ACI 318 (ACI 318M) and ACI 301 (ACI 301M) for design, installation, and removal of shoring.
 - 1. Do not remove shoring until measurement of slab tolerances is complete.
- B. Plan sequence of removal of shores to avoid damage to concrete. Locate and provide adequate shoring to support construction without excessive stress or deflection.

3.5 STEEL REINFORCEMENT INSTALLATION

- A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that reduce bond to concrete.
- C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.
- D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.
- E. Epoxy-Coated Reinforcement: Repair cut and damaged epoxy coatings with epoxy repair coating according to ASTM D 3963/D 3963M. Use epoxy-coated steel wire ties to fasten epoxy-coated steel reinforcement.

3.6 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.
 - 1. Place joints perpendicular to main reinforcement. Continue reinforcement across construction joints unless otherwise indicated. Do not continue reinforcement through sides of strip placements of floors and slabs.
 - 2. Locate horizontal joints in walls and columns at underside of floors, slabs, beams, and girders and at the top of footings or floor slabs.

3. Space vertical joints in walls as indicated. Locate joints beside piers integral with walls, near corners, and in concealed locations where possible.
 4. Use epoxy-bonding adhesive at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
- 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 to a radius of 1/8 inch (3.2 mm). Repeat grooving of contraction joints after applying surface finishes. Eliminate groover tool 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- (3.2-mm-) wide joints into concrete when cutting action does not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.

3.7 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections are completed.
- B. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Architect.
- C. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301 (ACI 301M).
 1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.
- D. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete is placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.
 1. Deposit concrete in horizontal layers of depth not to exceed formwork design pressures and in a manner to avoid inclined construction joints.
 2. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301 (ACI 301M).
 3. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches (150 mm) into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.
 4. Deposit concrete walls to full height in one continuous pour.
- E. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.

1. Consolidate concrete during placement operations, so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
2. Maintain reinforcement in position on chairs during concrete placement.
3. Screed slab surfaces with a straightedge and strike off to correct elevations.
4. Slope surfaces uniformly to drains where required.
5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.

3.8 FINISHING FORMED SURFACES

- A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
 1. Apply to concrete surfaces not exposed to public view.
- B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
 1. Apply to concrete surfaces exposed to public view, to be covered with a coating or covering material applied directly to concrete.
- C. Rubbed Finish - at Concrete Benches: Apply the following to smooth-formed-finished as-cast concrete where indicated:
 1. Smooth-Rubbed Finish: Not later than one day after form removal, moisten concrete surfaces and rub with carborundum brick or another abrasive until producing a uniform color and texture. Do not apply cement grout other than that created by the rubbing process.
 2. Grout-Cleaned Finish: Wet concrete surfaces and apply grout of a consistency of thick paint to coat surfaces and fill small holes. Mix 1 part portland cement to 1-1/2 parts fine sand with a 1:1 mixture of bonding admixture and water. Add colored portland cement in amounts determined by trial patches, so color of dry grout matches adjacent surfaces. Scrub grout into voids and remove excess grout. When grout whitens, rub surface with clean burlap and keep surface damp by fog spray for at least 36 hours.
- D. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.
- E. See Section 03 35 11 for Concrete Finishes.

3.9 FINISHING FLOORS AND SLABS

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

- B. Trowel Finish at Storage, Plumbing and Trash room: After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.
 - 1. Apply a trowel finish to surfaces to receive a trowel and fine-broom finish.
 - 2. Finish and measure surface, so gap at any point between concrete surface and an unlevelled, freestanding, 10-ft.- (3.05-m-) long straightedge resting on two high spots and placed anywhere on the surface does not exceed 1/4 inch (6 mm)].
- C. Public area floor finish - see section 03 35 11
- D. Sealer on concrete floor slabs and paving:
 - 1. Allow for concrete floors and paving systems to be completely dry prior to application
 - 2. Apply to all horizontal surfaces in and out of public view.

3.10 MISCELLANEOUS CONCRETE ITEM INSTALLATION

- A. Filling In: Fill in holes and openings left in concrete structures after work of other trades is in place unless otherwise indicated. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete the Work.
 - 1. Apply only to concrete surfaces not in public view.

3.11 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 ACI 301 (ACI 301M) for hot-weather protection during curing.
- B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h (1 kg/sq. m 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. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing for remainder of curing period.
- D. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, concrete floor toppings, and other surfaces.

- E. Cure concrete according to ACI 308.1, 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 (300-mm) 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 (300 mm), 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.
 - a. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive floor coverings.
 - b. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive penetrating liquid floor treatments.
 - c. Cure concrete surfaces to receive floor coverings with either a moisture-retaining cover or a curing compound that the manufacturer certifies does not interfere with bonding of floor covering used on Project.
 3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
 - a. Removal: After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer.
 4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

3.12 JOINT FILLING

- A. Prepare, clean, and install joint filler according to manufacturer's written instructions.
1. Defer joint filling until concrete has aged at least one month(s). Do not fill joints until construction traffic has permanently ceased.
- B. Remove dirt, debris, saw cuttings, curing compounds, and sealers from joints; leave contact faces of joints clean and dry.

- C. Install semirigid joint filler full depth in saw-cut joints and at least 2 inches (50 mm) deep in formed joints. Overfill joint and trim joint filler flush with top of joint after hardening.

3.13 CONCRETE SURFACE REPAIRS

- A. Defective Concrete: Repair and patch defective areas when approved by Architect. All repairs to match adjacent color and texture.
- B. Provide mockup of proposed repairs for approval by Architect. Where repairs do not match, areas of work must be replaced joint line to joint line. See section 1.7 Quality Assurance.
- C. Patching Mortar: Mix dry-pack patching mortar, consisting of 1 part portland cement to 2-1/2 parts fine aggregate passing a No. 16 (1.18-mm) sieve, using only enough water for handling and placing.
- D. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.
 - 1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch (13 mm) in any dimension to solid concrete. Limit cut depth to 3/4 inch (19 mm). Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
 - 2. Repair defects on surfaces exposed to view by blending white and colored portland cement and standard portland cement so that, when dry, patching mortar matches surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
 - 3. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by Architect.
- E. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and verify surface tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.
 - 1. Repair finished surfaces containing defects. Surface defects include spalls, popouts, honeycombs, rock pockets, crazing and cracks in excess of 0.01 inch (0.25 mm) wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions.
 - 2. Replace concrete floors that are not in compliance with flatness requirements or that do not allow water to flow to drains in public areas.
 - 3. Repair defective areas, except random cracks and single holes 1 inch (25 mm) or less in diameter, by cutting out and replacing with fresh concrete. Remove defective areas with clean, square cuts and expose steel reinforcement with at least a 3/4-inch (19-mm) clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials and mixture as original concrete, except without

coarse aggregate. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.

4. Repair random cracks and single holes 1 inch (25 mm) or less in diameter with patching mortar. Groove top of cracks and cut out holes to sound concrete and clean off dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding agent. Place patching mortar before bonding agent has dried. Compact patching mortar and finish to match adjacent concrete. Keep patched area continuously moist for at least 72 hours.
- F. Perform structural repairs of concrete, subject to Architect's approval, using epoxy adhesive and patching mortar.
- G. Repair materials and installation not specified above may be used, subject to Architect's approval.

3.14 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing and inspecting agency to perform tests and inspections and to submit reports.
- B. Inspections:
1. Steel reinforcement placement.
 2. Headed bolts and studs.
 3. Verification of use of required design mixture.
 4. Concrete placement, including conveying and depositing.
 5. Curing procedures and maintenance of curing temperature.
 6. Verification of concrete strength before removal of shores and forms from beams and slabs.
- C. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172/C 172M shall be performed according to the following requirements:
1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd. (4 cu. m), but less than 25 cu. yd. (19 cu. m), plus one set for each additional 50 cu. yd. (38 cu. m) or fraction thereof.
 2. Testing Frequency: Obtain at least one composite sample for each 100 cu. yd. (76 cu. m) or fraction thereof of each concrete mixture placed each day.
 - a. When frequency of testing provides fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
 3. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
 4. Air Content: ASTM C 231/C 231M, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.

5. Concrete Temperature: ASTM C 1064/C 1064M; one test hourly when air temperature is 40 deg F (4.4 deg C) and below or 80 deg F (27 deg C) and above, and one test for each composite sample.
6. Unit Weight: ASTM C 567/C 567M, fresh unit weight of structural lightweight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
7. Compression Test Specimens: ASTM C 31/C 31M.
 - a. Cast and laboratory cure two sets of two standard cylinder specimens for each composite sample.
 - b. Cast and field cure two sets of two standard cylinder specimens for each composite sample.
8. Compressive-Strength Tests: ASTM C 39/C 39M; test one set of two laboratory-cured specimens at 7 days and one set of two specimens at 28 days.
 - a. Test one set of two field-cured specimens at 7 days and one set of two specimens at 28 days.
 - b. A compressive-strength test shall be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.
9. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, Contractor shall evaluate operations and provide corrective procedures for protecting and curing in-place concrete.
10. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi (3.4 MPa).
11. Test results shall be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
12. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.
13. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42/C 42M or by other methods as directed by Architect.
14. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
15. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.

END OF SECTION

SECTION 03 35 11

CONCRETE FINISHES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface treatments for concrete.
- B. Concrete texture form liners.

1.02 RELATED REQUIREMENTS

- A. Section 03 30 00 Cast-in-Place Concrete: Finishing of concrete surface to tolerance; floating, troweling, and similar operations; curing.
- B. Section 03 30 00 Cast-in-Place Concrete: Curing compounds that also function as sealers.
- C. Section 09 91 13 "Painting" for Graffiti Coating at concrete walls.
- D. "City of San Diego White Book" and "Supplementary Special Provisions to City of San Diego White Book" for all sidewalks, paving, drives, and curbs.

1.03 SUBMITTALS

- A. Product Data: Manufacturer's published data on each finishing product, including information on compatibility of different products and limitations.
- B. *Manufacturer's Certification*: Provide document signed by manufacturer or manufacturer's representative certifying that the materials to be installed comply with the requirements of this specification.

1.04 MOCK-UP

- A. See Section 03 30 00 Cast-In-Place Concrete for mock up schedule.
- B. Each finish and repair type is to be demonstrated on mock up.

PART 2 PRODUCTS

2.01 CONCRETE FINISH APPLICATIONS

- A. Unless otherwise indicated, all concrete floors / walls are to be finished using the following:
- C. Penetrating Clear Sealer

2.02 DENSIFIERS AND HARDENERS

- A. Liquid Densifier/Hardener: Penetrating chemical compound that reacts with concrete, filling the pores and dustproofing; for application to concrete after set.
 - 1. Composition: Lithium silicate.
 - 2. Products:

- a. W.R. Meadows, Inc; Liqui-Hard Ultra: www.wrmeadows.com/sle.
- b. Substitutions: Or Approved Equal.

2.03 CONCRETE WALL SEALERS

- A. Penetrating Surface Sealer: Transparent, non-yellowing, water- or solvent-based coating.
 - 1. Composition: Silicate.
 - 2. Products:
 - a. Sika; SikaGuard 701W
 - b. W.R. Meadows, Inc; Intraguard
 - c. Aquaseal ME12 for vertical applications
 - c. Substitutions: Or Approved Equal.

2.04 DECORATIVE TOP SURFACE FLOOR SLABS

- A. Public area concrete floor – Integrally colored concrete with top-surface retarder on poured-in-place flatwork: walkable, decorative texture, with an exposed light aggregate finish.
 - 1. Composition: Water based retarder.
 - 2. Retarder Products:
 - a. Grace Top-Cast Top Surface Retarder by GCP Applied Technologies
 - b. Substitutions: Or Approved Equal.
 - 3. Color to match exterior paving - See Landscaping Construction Documents for additional information.
- B. Storage rooms, plumbing and trash rooms – Trowel finish per section 03 30 00

2.05 FORM WORK WITH LINERS - GENERAL

- A. Provide concrete form liners, accessories, shoring, and bracing as required to accomplish cast-in-place concrete work.
- B. Concrete form liners to be full height, and full length / width of walls / building breaks.
- C. Design and construct to provide resultant concrete that conforms to design with respect to shape, lines, and dimensions.

2.06 REMOVABLE PREFABRICATED FORMS

- A. Smooth Plywood Formed, See section 03 30 00 3.8.B
 - 1. Concrete finish Texture 1: Smooth formed
 - 2. Concrete finish Texture 4: Smooth formed (polished with exposed light aggregate finish).
 - 3. Concrete finish Texture 5: Smooth formed (polished with exposed medium aggregate finish).
- B. Preformed Plastic Form liners: Thermoplastic polystyrene form liner, tight fitting, stiffened to support weight of concrete without deflection detrimental to tolerances and appearance of finished surfaces.
 - 1. Concrete Finish Texture 2: Board Formed, vertical running wood pattern with narrow "fin" joints 4" oc.
 - a. Basis of design: US Formliners 2/97 "Kongo".
 - 2. Concrete Finish Texture 3: Sea Shell Stamp, Light sand texture with Sea Shell impressions.
 - a. Basis of design: Proline "Seamless Coquina Stone with Sea Shells".

2.07 FORMWORK ACCESSORIES

- A. Form Release Agent: Capable of releasing forms from hardened concrete without staining or discoloring concrete or forming bugholes and other surface defects, compatible with concrete and form materials, and not requiring removal for satisfactory bonding of coatings to be applied.

PART 3 EXECUTION:

THIS SECTION IS SUPPLEMENTAL TO SECTION 03 30 00 FOR SPECIAL FINISH CONCRETE

3.01 ERECTION - FORMWORK

- A. Arrange and assemble form liners patterns to permit dismantling and stripping. Do not damage concrete during stripping. Permit removal of remaining principal shores.
- B. Align joints and make watertight. Keep form joints to a minimum.
- C. Coordinate this section with other sections of work that require attachment of components to formwork.
- D. No horizontal seam joints in form liner.

3.02 APPLICATION - FORM RELEASE AGENT

- A. Apply form release agent on formwork in accordance with manufacturer's recommendations.

3.03 FORM REMOVAL

- A. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads.
- B. See Section 03 33 00 Cast-In-Place Concrete.

3.04 EXAMINATION

- A. Verify that wall surfaces are acceptable to receive the work of this section.
- B. Verify that flaws in concrete have been patched and joints filled with methods and materials suitable for further finishes.
- B. See Section 03 33 00 Cast-In-Place Concrete.

3.03 GENERAL

- A. Apply materials in accordance with manufacturer's instructions.

3.04 COATING APPLICATION

- A. Verify that surface is free of previous coatings, sealers, curing compounds, water repellents, laitance, efflorescence, fats, oils, grease, wax, soluble salts, residues from cleaning agents, and other impediments to adhesion.
- B. Protect adjacent non-coated areas from drips, overflow, and overspray; immediately remove excess material.

- C. Apply coatings in accordance with manufacturer's instructions, matching approved mock-ups for color, special effects, sealing and workmanship.

3.05 CONCRETE POLISHING

- A. Execute using materials, equipment, and procedures specified by manufacturer, using manufacturer approved installer.
 - 1. Final Polished Sheen: Satin finish; other sheens are included as comparison to illustrate required sheen; final sheen is before addition of any sealer or coating, regardless of whether that is also specified or not.
 - 2. Satin Finish: Reflecting images from side lighting.
- B. Protect finished surface as required and as recommended by manufacturer of polishing system.

3.06 CONCRETE FINISH SCHEDULE

- A. Refer to Construction Documents for additional information, including indication of finish locations.
 - 1. Concrete Finish Type 1: Storage, Plumbing, and Trash Room interior walls and Benches
 - a. Integrally color concrete
 - b. Waterproof additive
 - c. Plywood formed
 - d. See Section 03 30 00 3.8.B.
 - 2. Concrete Finish Type 2: Typical upper exterior wall
 - a. Integrally colored concrete
 - b. Waterproof additive
 - c. Sealer
 - d. Form liner – concrete finish texture #2: vertical board form
 - 3. Concrete Finish Type 3: Typical lower exterior wall
 - a. Integrally colored concrete
 - b. Waterproof additive
 - c. Sealer
 - d. Form liner – concrete finish texture #3: sandblast finish with seashell form.
 - 4. Concrete Finish Type 4: Exterior Upper Shower and Interior Showers
 - a. Integrally colored concrete
 - b. Waterproof additive
 - c. Densifier/hardener
 - d. Grind and polish to exposed light aggregate
 - e. Satin finish with sealer
 - 5. Concrete Finish type 5: Exterior Lower Shower
 - a. Integrally colored concrete
 - b. Waterproof additive
 - c. Densifier / hardener
 - d. Grind and polish to exposed medium aggregate
 - e. Densified satin finish with sealer
- B. All walls exposed to public view to receive graffiti coating. See Section 09 91 13.

END OF SECTION

SECTION 03 49 00

PRE-CAST CONCRETE COUNTERTOP / INTEGRAL SINK

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Architectural precast glass-fiber-reinforced concrete sink.
- B. Supports, anchors, and attachments.

1.02 RELATED REQUIREMENTS

- A. Section 22 13 00 Sanitary waste vent and specialties
- B. Section 22 40 00 Plumbing Fixtures
- C. Section 07 92 00 - Joint Sealants: Sealing perimeter and intermediate joints.

1.03 REFERENCE STANDARDS

- A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.
- B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016a.
- C. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2013.
- D. ASTM A563 - Standard Specification for Carbon and Alloy Steel Nuts; 2015.
- E. ASTM A563M - Standard Specification for Carbon and Alloy Steel Nuts (Metric); 2007 (Reapproved 2013).
- F. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2016.
- G. ASTM C150/C150M - Standard Specification for Portland Cement; 2016.
- H. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete; 2010a (Reapproved 2016).
- I. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete; 2016.
- J. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2015.
- K. ASTM C979/C979M - Standard Specification for Pigments for Integrally Colored Concrete; 2016.
- L. ASTM F3125/F3125M - Standard Specification for High Strength Structural Bolts, Steel and Alloy Steel, Heat Treated, 120 ksi (830 MPa) and 150 ksi (1040 MPa) Minimum Tensile Strength, Inch and Metric Dimensions; 2015a.
- M. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015 (Errata 2016).
- N. IAS AC157 - Accreditation Criteria for Fabricator Inspection Programs for Reinforced and Precast/Prestressed Concrete; 2010.

- O. PCI MNL-117 - Manual for Quality Control for Plants and Production of Architectural Precast Concrete Products; 2007.
- P. PCI MNL-128 - Recommended Practice for Glass Fiber Reinforced Concrete Panels; 2001, Fourth Edition.

1.04 SUBMITTALS

- A. See City of San Diego General Requirements for submittal procedures.
- B. Shop Drawings: Indicate locations, fabrication details, reinforcement, connection details, dimensions, and relationship to adjacent materials. Provide erection drawings.
- C. Samples: Submit two samples 12 inch by 12 inch in size illustrating surface color, finish and texture.
- D. Fabricator's Qualification Statement: Provide documentation showing precast concrete fabricator is accredited under IAS AC157.
- E. Installer Qualifications.

1.05 QUALITY ASSURANCE

- A. Pre-Cast Concrete Designer Qualifications: Precast fabricator shall be experienced in design and fabrication of precast concrete sinks.

1.06 PROJECT CONDITIONS

- A. Coordinate the Work with installation of backup supporting structure, concrete wall and plumbing.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Handle units to position, consistent with their shape and design. Lift and support only from support points.
- B. Blocking and Lateral Support During Transport and Storage: Clean, non-staining, without causing harm to exposed surfaces. Provide temporary lateral support to prevent bowing and warping. Place spacers in same location during transport and site storage.
- C. Protect edges of units to prevent staining, chipping, or spalling of concrete.

PART 2 PRODUCTS

2.01 GLASS-FIBER-REINFORCED CONCRETE UNITS

- A. Glass-Fiber-Reinforced Concrete Units: Factory-fabricated, complying with PCI MNL-128, using rigid molds, constructed to maintain unit panel uniform in shape, size and finish.
 - 1. Design and fabricate to comply with applicable code(s).
 - 2. Design to withstand dead loads and erection forces.
 - 3. Allow for adjustment of connections to accommodate misalignment of structure without permanent distortion.
 - 5. Concrete Mix: 5000 PSI high early strength.
 - 1. Quickcrete 5000
 - 2. Cheng - concrete countertop pro formula mix

3. Or approved equal
6. Welding: Comply with AWS D1.1/D1.1M.
7. Appearance: Ensure exposed-to-view finish surfaces of units are uniform in color and appearance.

2.02 CONCRETE MATERIALS

- A. Cement: ASTM C 387 ; white color.
- B. Concrete Aggregates: ASTM C33/C33M.
- C. Epoxy-Coated Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed bars, ASTM A 775/A 775M or ASTM A 934/A 934M, epoxy coated, with less than 2 percent damaged coating in each 12-inch (300-mm) bar length.
- D. Glass Reinforcement: Alkali resistant chopped glass fiber rovings specifically formulated for use in concrete, with lengths varying from 1-1/2 to 2 inches.
- E. Admixtures: Conforming to ASTM C260/C260M, ASTM C494/C494M, and ASTM C618.
- F. Color Additives: Pure, concentrated mineral pigments specifically intended for mixing into concrete and complying with ASTM C979/C979M.
 1. Color(s): As selected by Architect from manufacturer's full range.

2.03 SUPPORT DEVICES

- A. Connecting and Support Devices: ASTM A36/A36M steel; hot-dip galvanized in accordance with ASTM A153/A153M.
- B. Bolts, Nuts, and Washers: ASTM F3125/F3125M heavy hex structural bolts, Type 1, with matching ASTM A563 (ASTM A563M) nuts, and washers as follows:

2.04 FABRICATION

- A. Finish is to be smooth.
 1. Sink is to be fabricated as a single unit without joints in the basin.
- B. Spray-up concrete mix in multiple passes; maintain consistent quality during manufacture.
- C. Place metal framing members in position in mold.
- D. Embed anchors, inserts, plates, angles, and other cast-in items as indicated on shop drawings.
- E. Fabricate connecting devices, items fit to framing members, fasteners and accessories necessary for proper installation.
- F. Locate hoisting devices to permit device removal after erection.
- G. Cure units to minimize appearance blemishes such as non-uniformity, staining or surface cracking.
- H. Identify each unit with corresponding code on erection drawings, in location not visible in finish work.
- I. Exposed Non-Galvanized Steel Components: Clean surfaces of rust, scale, grease, and foreign matter; prime paint in one coat, except surfaces in direct contact with concrete or requiring field welding.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that building structure, anchors, devices, and openings are ready to receive work of this section.

3.02 PREPARATION

- A. Provide for erection procedures and induced loads during erection. Maintain temporary bracing in place until final support is provided.

3.03 ERECTION

- A. Coordinate installation with that of structural supports, backup, and opening framing, if any.
- B. Erect units without damage to shape or finish. Replace or repair damaged panels.
- C. Erect units level and plumb within allowable tolerances.
- D. Align and maintain uniform horizontal and vertical joints as erection progresses.
- E. Fasten units in place with mechanical connections.

3.04 TOLERANCES

- A. Maximum Variation from Plane of Location: 1/4 inch in 10 feet and 3/8 inch in 100 feet, non-cumulative.
- B. Maximum Out of Square: 1/8 inch in 10 feet, non-cumulative.
- C. Maximum Misalignment of Anchors, Inserts, Openings: 1/8 inch.
- D. Bowing of Units: Length of Unit/360.

3.05 FIELD QUALITY CONTROL

- A. Perform water absorption test in accordance with PCI MNL-117.

3.06 PROTECTION

- A. Protect installed units from damage.

END OF SECTION

SECTION 05 12 00
STRUCTURAL STEEL FRAMING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Structural steel.
 - 2. Grout.
- B. Related Requirements:
 - 1. Section 055000 "Metal Fabrications" for miscellaneous steel fabrications and other steel items not defined as structural steel.

1.3 DEFINITIONS

- A. Structural Steel: Elements of the structural frame indicated on Drawings and as described in AISC 303, "Code of Standard Practice for Steel Buildings and Bridges."
- B. Seismic-Load-Resisting System: Elements of structural-steel frame designated as "SLRS" or along grid lines designated as "SLRS" on Drawings, including columns, beams, and braces and their connections.
- C. Demand Critical Welds: Those welds, the failure of which would result in significant degradation of the strength and stiffness of the Seismic-Load-Resisting System and which are indicated as "Demand Critical" or "Seismic Critical" on Drawings.

1.4 COORDINATION

- A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.
- B. Coordinate installation of anchorage items to be embedded in or attached to other construction without delaying the Work. Provide setting diagrams, sheet metal templates, instructions, and directions for installation.

1.5 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.6 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Sustainable Design Submittals:
- C. Shop Drawings: Show fabrication of structural-steel components.
 - 1. Include details of cuts, connections, splices, camber, holes, and other pertinent data.
 - 2. Include embedment Drawings.
 - 3. Indicate welds by standard AWS symbols, distinguishing between shop and field welds, and show size, length, and type of each weld. Show backing bars that are to be removed and supplemental fillet welds where backing bars are to remain.
 - 4. Indicate type, size, and length of bolts, distinguishing between shop and field bolts. Identify pretensioned and slip-critical, high-strength bolted connections.
 - 5. Identify members and connections of the Seismic-Load-Resisting System.
 - 6. Identify demand critical welds.
- D. Welding Procedure Specifications (WPSs) and Procedure Qualification Records (PQRs): Provide according to AWS D1.1/D1.1M, "Structural Welding Code - Steel," for each welded joint qualified by testing, including the following:
 - 1. Power source (constant current or constant voltage).
 - 2. Electrode manufacturer and trade name, for demand critical welds.
- E. Delegated-Design Submittal: For structural-steel connections indicated to comply with design loads, include analysis data.

1.7 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For testing agency.
- B. Welding certificates.
- C. Paint Compatibility Certificates: From manufacturers of topcoats applied over shop primers, certifying that shop primers are compatible with topcoats.
- D. Mill test reports for structural steel, including chemical and physical properties.
- E. Product Test Reports: For the following:
 - 1. Bolts, nuts, and washers including mechanical properties and chemical analysis.
 - 2. Shop primers.
 - 3. Nonshrink grout.
- F. Survey of existing conditions.

- G. Source quality-control reports.
- H. Field quality-control and special inspection reports.

1.8 QUALITY ASSURANCE

- A. Fabricator Qualifications: A qualified fabricator that participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant, Category STD.
- B. Installer Qualifications: A qualified installer who participates in the AISC Quality Certification Program and is designated an AISC-Certified Erector, Category CSE.
- C. Shop-Painting Applicators: Qualified according to AISC's Sophisticated Paint Endorsement P3 or to SSPC-QP 3, "Standard Procedure for Evaluating Qualifications of Shop Painting Applicators."
- D. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."
 - 1. Welders and welding operators performing work on bottom-flange, demand-critical welds shall pass the supplemental welder qualification testing, as required by AWS D1.8/D1.8M. FCAW-S and FCAW-G shall be considered separate processes for welding personnel qualification.
- E. Comply with applicable provisions of the following specifications and documents:
 - 1. AISC 303.
 - 2. AISC 341 and AISC 341s1.
 - 3. AISC 360.
 - 4. RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Store materials to permit easy access for inspection and identification. Keep steel members off ground and spaced by using pallets, dunnage, or other supports and spacers. Protect steel members and packaged materials from corrosion and deterioration.
 - 1. Do not store materials on structure in a manner that might cause distortion, damage, or overload to members or supporting structures. Repair or replace damaged materials or structures as directed.
- B. Store fasteners in a protected place in sealed containers with manufacturer's labels intact.
 - 1. Fasteners may be repackaged provided Owner's testing and inspecting agency observes repackaging and seals containers.
 - 2. Clean and relubricate bolts and nuts that become dry or rusty before use.
 - 3. Comply with manufacturers' written recommendations for cleaning and lubricating ASTM F 1852 fasteners and for retesting fasteners after lubrication.

PART 2 - PRODUCTS

2.1 STRUCTURAL-STEEL MATERIALS

- A. Angles: ASTM A 36/A 36M.
- B. Plate and Bar: ASTM A 36/A 36M.
- C. Corrosion-Resisting Structural-Steel Shapes, Plates, and Bars: ASTM A 588/A 588M, Grade 50 (345).
- D. Cold-Formed Hollow Structural Sections: ASTM A 500/A 500M, Grade B, structural tubing.
- E. Corrosion-Resisting, Cold-Formed Hollow Structural Sections: ASTM A 847/A 847M, structural tubing.
- F. Welding Electrodes: Comply with AWS requirements.

2.2 BOLTS, CONNECTORS, AND ANCHORS

- A. Headed Anchor Rods: ASTM F 1554, Grade 36, straight.
 - 1. Nuts: ASTM A 563 (ASTM A 563M) heavy-hex carbon steel.
 - 2. Plate Washers: ASTM A 36/A 36M carbon steel.
 - 3. Washers: ASTM F 436 (ASTM F 436M), Type 1, hardened carbon steel.
 - 4. Finish: Hot-dip zinc coating, ASTM A 153/A 153M, Class C.
- B. Threaded Rods: ASTM A 36/A 36M.
 - 1. Nuts: ASTM A 563 (ASTM A 563M) heavy-hex carbon steel.
 - 2. Washers: ASTM A 36/A 36M carbon steel.
 - 3. Finish: Hot-dip zinc coating, ASTM A 153/A 153M, Class C.
- C. Eye Bolts and Nuts: Made from cold-finished carbon steel bars, ASTM A 108, Grade 1030.

2.3 GROUT

- A. Metallic, Shrinkage-Resistant Grout: ASTM C 1107/C 1107M, factory-packaged, metallic aggregate grout, mixed with water to consistency suitable for application and a 30-minute working time.
- B. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107/C 1107M, factory-packaged, nonmetallic aggregate grout, noncorrosive and nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

2.4 FABRICATION

- A. Structural Steel: Fabricate and assemble in shop to greatest extent possible. Fabricate according to AISC 303, "Code of Standard Practice for Steel Buildings and Bridges," and to AISC 360.
 - 1. Camber structural-steel members where indicated.
 - 2. Fabricate beams with rolling camber up.
 - 3. Identify high-strength structural steel according to ASTM A 6/A 6M and maintain markings until structural steel has been erected.
 - 4. Mark and match-mark materials for field assembly.
 - 5. Complete structural-steel assemblies, including welding of units, before starting shop-priming operations.
- B. Thermal Cutting: Perform thermal cutting by machine to greatest extent possible.
 - 1. Plane thermally cut edges to be welded to comply with requirements in AWS D1.1/D1.1M.
- C. Bolt Holes: Cut, drill, mechanically thermal cut, or punch standard bolt holes perpendicular to metal surfaces.
- D. Finishing: Accurately finish ends of columns and other members transmitting bearing loads.
- E. Welded Door Frames: Build up welded door frames attached to structural-steel frame. Weld exposed joints continuously and grind smooth. Plug-weld fixed steel bar stops to frames. Secure removable stops to frames with countersunk machine screws, uniformly spaced not more than 10 inches (250 mm) o.c. unless otherwise indicated.
- F. Holes: Provide holes required for securing other work to structural steel and for other work to pass through steel members.
 - 1. Cut, drill, or punch holes perpendicular to steel surfaces. Do not thermally cut bolt holes or enlarge holes by burning.
 - 2. Baseplate Holes: Cut, drill, mechanically thermal cut, or punch holes perpendicular to steel surfaces.
 - 3. Weld threaded nuts to framing and other specialty items indicated to receive other work.

2.5 SHOP CONNECTIONS

- A. Weld Connections: Comply with AWS D1.1/D1.1M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.
 - 1. Assemble and weld built-up sections by methods that maintain true alignment of axes without exceeding tolerances in AISC 303 for mill material.

2.6 GALVANIZING

- A. Hot-Dip Galvanized Finish: Apply zinc coating by the hot-dip process to structural steel according to ASTM A 123/A 123M.
 - 1. Fill vent and drain holes that are exposed in the finished Work unless they function as weep holes, by plugging with zinc solder and filing off smooth.

2.7 SOURCE QUALITY CONTROL

- A. Welded Connections: Visually inspect shop-welded connections according to AWS D1.1/D1.1M and the following inspection procedures, at testing agency's option:
 - 1. Liquid Penetrant Inspection: ASTM E 165.
 - 2. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration are not accepted.
 - 3. Ultrasonic Inspection: ASTM E 164.
 - 4. Radiographic Inspection: ASTM E 94.
- B. Prepare test and inspection reports.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify, with certified steel erector present, elevations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments for compliance with requirements.
 - 1. Prepare a certified survey of existing conditions. Include bearing surfaces, anchor rods, bearing plates, and other embedments showing dimensions, locations, angles, and elevations.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Provide temporary shores, guys, braces, and other supports during erection to keep structural steel secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural steel, connections, and bracing are in place unless otherwise indicated.
 - 1. Do not remove temporary shoring supporting composite deck construction until cast-in-place concrete has attained its design compressive strength.

3.3 ERECTION

- A. Set structural steel accurately in locations and to elevations indicated and according to AISC 303 and AISC 360.
- B. Baseplates Bearing Plates and Leveling Plates: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.
 - 1. Set plates for structural members on wedges, shims, or setting nuts as required.
 - 2. Weld plate washers to top of baseplate.
 - 3. Snug-tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.
 - 4. Promptly pack grout solidly between bearing surfaces and plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.
- C. Maintain erection tolerances of structural steel within AISC 303, "Code of Standard Practice for Steel Buildings and Bridges."
- D. Align and adjust various members that form part of complete frame or structure before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that are in permanent contact with members. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.
 - 1. Level and plumb individual members of structure.
- E. Splice members only where indicated.
- F. Do not use thermal cutting during erection.
- G. Do not enlarge unfair holes in members by burning or using drift pins. Ream holes that must be enlarged to admit bolts.

3.4 FIELD CONNECTIONS

- A. Weld Connections: Comply with AWS D1.1/D1.1M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.
 - 1. Comply with AISC 303 and AISC 360 for bearing, alignment, adequacy of temporary connections, and removal of paint on surfaces adjacent to field welds.
 - 2. Remove backing bars or runoff tabs where indicated, back gouge, and grind steel smooth.
 - 3. Assemble and weld built-up sections by methods that maintain true alignment of axes without exceeding tolerances in AISC 303, "Code of Standard Practice for Steel Buildings and Bridges," for mill material.

3.5 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Welded Connections: Visually inspect field welds according to AWS D1.1/D1.1M.

3.6 REPAIRS AND PROTECTION

- A. Galvanized Surfaces: Clean areas where galvanizing is damaged or missing and repair galvanizing to comply with ASTM A 780/A 780M.

END OF SECTION 05 12 00

SECTION 05 50 00

METAL FABRICATIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Shop fabricated steel and aluminum items.

1.02 RELATED REQUIREMENTS

- A. Section 03 30 00 - Cast-in-Place Concrete: Placement of metal fabrications in concrete.
- B. Section 03 45 00 - Precast Architectural Concrete: Placement of metal fabrication in precast architectural concrete.
- C. Section 05 12 00 - Structural Steel Framing: Structural steel column anchor bolts.
- D. Section 07 71 23 - Manufactured Gutters and Downspouts: Downspout boots.
- E. Section 09 91 13 - Exterior Painting: Paint finish.

1.03 REFERENCE STANDARDS

- A. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum; 2014 (2015 Errata).
- B. AAMA 2603 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2015.
- C. AAMA 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2013.
- D. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.
- E. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2015.
- F. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2015.
- G. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2014.
- H. ASTM B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate (Metric); 2014.
- I. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2014.
- J. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric); 2013.

- K. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2012.
- L. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015 (Errata 2016).
- M. AWS D1.2/D1.2M - Structural Welding Code - Aluminum; 2008.
- N. IAS AC172 - Accreditation Criteria for Fabricator Inspection Programs for Structural Steel; International Accreditation Service, Inc; 2011.
- O. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer; 1999 (Ed. 2004).
- P. SSPC-SP 2 - Hand Tool Cleaning; 1982 (Ed. 2004).

1.04 SUBMITTALS

- A. See City of San Diego General Requirements for submittal procedures.
- B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.
 - 1. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.
- C. Welders' Certificates: Submit certification for welders employed on the project, verifying AWS qualification within the previous 12 months.
- D. Fabricator's Qualification Statement: Provide documentation showing steel fabricator is accredited under IAS AC172.

1.05 QUALITY ASSURANCE

- A. Fabricator Qualifications: A qualified steel fabricator that is accredited by IAS AC172.

PART 2 PRODUCTS

2.01 MATERIALS - STEEL

- A. Steel Sections: ASTM A36/A36M.
- B. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.
- C. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.

2.02 MATERIALS - ALUMINUM

- A. Extruded Aluminum: ASTM B221 (ASTM B221M), 6063 alloy, T6 temper.
- B. Sheet Aluminum: ASTM B209 (ASTM B209M), 5052 alloy, H32 or H22 temper.
- C. Bolts, Nuts, and Washers: Stainless steel.
- D. Welding Materials: AWS D1.2/D1.2M; type required for materials being welded.

2.03 FABRICATION

- A. Fit and shop assemble items in largest practical sections, for delivery to site.
- B. Fabricate items with joints tightly fitted and secured.

- C. Continuously seal joined members by continuous welds.
- D. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- E. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.
- F. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

2.04 FABRICATED ITEMS

- A. Perforated Stainless Steel Removeable Cover at sink and Removeable Vent Pipe Cover.
 - 1. Thickness: 10 Gauge.
 - 2. Pattern: Staggered 0.25 Round on 0.38 with 40% Open.
 - 3. Ends: Finished.
- B. Stainless Steel Roof Vent Cover with Screen
 - 1. 16 gauge with crimped corners.
 - 2. Round connection with minimum 8" throat size.
 - 3. 1/4" screen for pest prevention.
 - 4. Maximum total height from roof surface: 6 inches.

2.05 FINISHES - STEEL

- A. Prime paint steel items.
- B. Prepare surfaces to be primed in accordance with SSPC-SP2.
- C. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.
- D. Prime Painting: One coat.
- E. High Performance Organic Coating System: AAMA 2604 multiple coat, thermally cured fluoropolymer system; color as scheduled.

2.06 FINISHES - ALUMINUM

- A. Exterior Aluminum Surfaces: Class I natural anodized.
- B. Class I Natural Anodized Finish: AAMA 611 AA-M12C22A41 Clear anodic coating not less than 0.7 mils thick.
- C. High Performance Organic Coating System: AAMA 2604 multiple coat, thermally cured fluoropolymer system; color as scheduled.

2.07 FABRICATION TOLERANCES

- A. Squareness: 1/8 inch maximum difference in diagonal measurements.
- B. Maximum Offset Between Faces: 1/16 inch.
- C. Maximum Misalignment of Adjacent Members: 1/16 inch.
- D. Maximum Bow: 1/8 inch in 48 inches.

- E. Maximum Deviation From Plane: 1/16 inch in 48 inches.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive work.

3.02 PREPARATION

- A. Clean and strip primed steel items to bare metal where site welding is required.
- B. Supply setting templates to the appropriate entities for steel items required to be cast into concrete or embedded in masonry.

3.03 INSTALLATION

- A. Install items plumb and level, accurately fitted, free from distortion or defects.
- B. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
- C. Perform field welding in accordance with AWS D1.1/D1.1M.
- D. Obtain approval prior to site cutting or making adjustments not scheduled.

END OF SECTION

SECTION 06 10 00

ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and City of San Diego General Requirements, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Framing with dimension lumber.
 - 2. Framing with timber.
 - 3. Framing with engineered wood products.
 - 4. Wood blocking and nailers.
 - 5. Wood furring.
- B. Related Requirements:
 - 1. Section 06 16 00 "Sheathing" for sheathing, subflooring, and underlayment.

1.3 DEFINITIONS

- A. Boards or Strips: Lumber of less than 2 inches nominal (38 mm actual) size in least dimension.
- B. Dimension Lumber: Lumber of 2 inches nominal (38 mm actual) size or greater but less than 5 inches nominal (114 mm actual) size in least dimension.
- C. Exposed Framing: Framing not concealed by other construction.
- D. OSB: Oriented strand board.
- E. Timber: Lumber of 5 inches nominal (114 mm actual) size or greater in least dimension.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
 2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.
 3. For fire-retardant treatments, include physical properties of treated lumber both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D 5664.
 4. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
- B. Fastener Patterns: Full-size templates for fasteners in exposed framing.

1.5 INFORMATIONAL SUBMITTALS

- A. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.
- B. Evaluation Reports: For the following, from ICC-ES:
1. Wood-preservative-treated wood.
 2. Fire-retardant-treated wood.
 3. Engineered wood products.
 4. Power-driven fasteners.
 5. Post-installed anchors.
 6. Metal framing anchors.

1.6 QUALITY ASSURANCE

- A. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Stack wood products flat with spacers beneath and between each bundle to provide air circulation. Protect wood products from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, comply with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Grade lumber by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
 - 1. Factory mark each piece of lumber with grade stamp of grading agency.
 - 2. Dress lumber, S4S, unless otherwise indicated.
- B. Maximum Moisture Content of Lumber: 15 percent for 2-inch nominal (38-mm actual) thickness or less; 19 percent for more than 2-inch nominal (38-mm actual) thickness unless otherwise indicated.
- C. Engineered Wood Products: Acceptable to authorities having jurisdiction and for which current model code research or evaluation reports exist that show compliance with building code in effect for Project.
 - 1. Allowable design stresses, as published by manufacturer, shall meet or exceed those indicated. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2 for interior construction not in contact with ground, Use Category UC3b for exterior construction not in contact with ground, and Use Category UC4a for items in contact with ground.
 - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium. Retain subparagraph below for exposed framing if considered necessary.
 - 2. For exposed items indicated to receive a stained or natural finish, chemical formulations shall not require incising, contain colorants, bleed through, or otherwise adversely affect finishes.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or that does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
 - 1. For exposed lumber indicated to receive a stained or natural finish, mark end or back of each piece or omit marking and provide certificates of treatment compliance issued by inspection agency.
- D. Application: Treat items indicated on Drawings, and the following:

1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
2. Wood sills, sleepers, blocking, and similar concealed members in contact with masonry or concrete.
3. Wood framing and furring attached directly to the interior of below-grade exterior masonry or concrete walls.
4. Wood framing members that are less than 18 inches (460 mm) above the ground in crawlspaces or unexcavated areas.
5. Wood floor plates that are installed over concrete slabs-on-grade.

2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. General: Where fire-retardant-treated materials are indicated, materials shall comply with requirements in this article, that are acceptable to authorities having jurisdiction, and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.
- B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Products with a flame-spread index of 25 or less when tested according to ASTM E 84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet (3.2 m) beyond the centerline of the burners at any time during the test.
 1. Treatment shall not promote corrosion of metal fasteners.
 2. Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-treated lumber and plywood by pressure process after being subjected to accelerated weathering according to ASTM D 2898. Use for exterior locations and where indicated.
 3. Interior Type A: Treated materials shall have a moisture content of 28 percent or less when tested according to ASTM D 3201 at 92 percent relative humidity. Use where exterior type is not indicated.
 4. Design Value Adjustment Factors: Treated lumber shall be tested according to ASTM D 5664 and design value adjustment factors shall be calculated according to ASTM D 6841.
- C. Kiln-dry lumber after treatment to maximum moisture content of 19 percent. Kiln-dry plywood after treatment to maximum moisture content of 15 percent.
- D. Identify fire-retardant-treated wood with appropriate classification marking of qualified testing agency.
 1. For exposed lumber indicated to receive a stained or natural finish, mark end or back of each piece or omit marking and provide certificates of treatment compliance issued by testing agency.
- E. For exposed items indicated to receive a stained or natural finish, chemical formulations shall not bleed through, contain colorants, or otherwise adversely affect finishes.
- F. Application: Treat items indicated on Drawings, and the following:
 1. Concealed blocking.

2. Concealed roof construction.

2.4 DIMENSION LUMBER FRAMING

- A. Joists, Rafters, and Other Framing: No. 1 grade.
 1. Species:
 - a. Douglas Fir-Larch; WCLIB.

2.5 DIMENSION LUMBER FRAMING

- A. Joists, Rafters, and Other Framing Not Listed Above: No. 1 grade.
 1. Species:
 - a. Alaskan Yellow Cedar; WCLIB.
- B. Joists, Rafters, and Other Framing Not Listed Above: Any species and grade with a modulus of elasticity of at least 1,100,000 psi (7590 MPa) and an extreme fiber stress in bending of at least 1000 psi (6.9 MPa) for 2-inch nominal (38-mm actual) thickness and 12-inch nominal (286-mm actual) width for single-member use.

2.6 ENGINEERED WOOD PRODUCTS

- A. Source Limitations: Obtain each type of engineered wood product from single source from a single manufacturer.

2.7 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
 1. Blocking.
 2. Nailers.
 3. Rooftop equipment bases and support curbs.
 4. Cants.
 5. Furring.
 6. Grounds.
 7. Utility shelving.
- B. Dimension Lumber Items: Construction or No. 2 grade lumber of any of the following species:
 1. Hem-fir (north); NLGA.
 2. Mixed southern pine or southern pine; SPIB.
 3. Spruce-pine-fir; NLGA.
 4. Hem-fir; WCLIB or WWPA.
 5. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.

6. Western woods; WCLIB or WWPA.
 7. Northern species; NLGA.
 8. Eastern softwoods; NeLMA.
- C. For blocking not used for attachment of other construction, Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.
 - D. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.
 - E. For furring strips for installing plywood or hardboard paneling, select boards with no knots capable of producing bent-over nails and damage to paneling.

2.8 FASTENERS

- A. General: Fasteners shall be of size and type indicated and shall comply with requirements specified in this article for material and manufacture.
 1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M or of Type 304 stainless steel.
- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.
- D. Post-Installed Anchors: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC01 ICC-ES AC58 ICC-ES AC193 or ICC-ES AC308 as appropriate for the substrate.
 1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.
 2. Material: Stainless steel with bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2 (ASTM F 738M and ASTM F 836M, Grade A1 or A4).

2.9 METAL FRAMING ANCHORS

- A. Allowable design loads, as published by manufacturer, shall meet or exceed those indicated. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency. Framing anchors shall be punched for fasteners adequate to withstand same loads as framing anchors.
- B. Galvanized-Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 (Z180) coating designation.
 1. Use for interior locations unless otherwise indicated.

- C. Hot-Dip, Heavy-Galvanized Steel Sheet: ASTM A 653/A 653M; structural steel (SS), high-strength low-alloy steel Type A (HSLAS Type A), or high-strength low-alloy steel Type B (HSLAS Type B); G185 (Z550) coating designation; and not less than 0.036 inch (0.9 mm) thick.
 - 1. Use for wood-preservative-treated lumber and where indicated.
- D. Stainless-Steel Sheet: ASTM A 666, Type 316.
 - 1. Use for exterior locations and where indicated.
- E. Joist Hangers: U-shaped joist hangers with 2-inch- (50-mm-) long seat and 1-1/4-inch- (32-mm-) wide nailing flanges at least 85 percent of joist depth.
 - 1. Thickness: As indicated .
- F. Post Bases: Adjustable-socket type for bolting in place with standoff plate to raise post 1 inch (25 mm) above base and with 2-inch- (50-mm-) minimum side cover, socket 0.062 inch (1.6 mm) thick, and standoff and adjustment plates 0.108 inch (2.8 mm) thick.
- G. Joist Ties: Flat straps, with holes for fasteners, for tying joists together over supports.
 - 1. Width: As indicated .
 - 2. Thickness: As indicated .
 - 3. Length: As indicated.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- B. Framing with Engineered Wood Products: Install engineered wood products to comply with manufacturer's written instructions.
- C. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry accurately to other construction. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- D. Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through each fastener hole.
- E. Install sill sealer gasket to form continuous seal between sill plates and foundation walls.
- F. Do not splice structural members between supports unless otherwise indicated.
- G. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.

1. Provide metal clips for fastening gypsum board or lath at corners and intersections where framing or blocking does not provide a surface for fastening edges of panels. Space clips not more than 16 inches (406 mm) o.c.
- H. Provide fire blocking in furred spaces, stud spaces, and other concealed cavities as indicated and as follows:
1. Fire block furred spaces of walls, at each floor level, at ceiling, and at not more than 96 inches (2438 mm) o.c. with solid wood blocking or noncombustible materials accurately fitted to close furred spaces.
 2. Fire block concealed spaces of wood-framed walls and partitions at each floor level, at ceiling line of top story, and at not more than 96 inches (2438 mm) o.c. Where fire blocking is not inherent in framing system used, provide closely fitted solid wood blocks of same width as framing members and 2-inch nominal (38-mm actual) thickness.
 3. Fire block concealed spaces between floor sleepers with same material as sleepers to limit concealed spaces to not more than 100 sq. ft. (9.3 sq. m) and to solidly fill space below partitions.
 4. Fire block concealed spaces behind combustible cornices and exterior trim at not more than 20 feet (6 m) o.c.
- I. Sort and select lumber so that natural characteristics do not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- J. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
1. Use inorganic boron for items that are continuously protected from liquid water.
 2. Use copper naphthenate for items not continuously protected from liquid water.
- K. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.
- L. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
1. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code (IBC).
 2. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.
 3. ICC-ES evaluation report for fastener.
- M. Use steel common nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood. Drive nails snug but do not countersink nail heads unless otherwise indicated.
- N. For exposed work, arrange fasteners in straight rows parallel with edges of members, with fasteners evenly spaced, and with adjacent rows staggered.

1. Comply with indicated fastener patterns where applicable.
2. Use finishing nails unless otherwise indicated. Countersink nail heads and fill holes with wood filler.
3. Use common nails unless otherwise indicated. Drive nails snug but do not countersink nail heads.

3.2 WOOD BLOCKING, AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.
- C. Provide permanent grounds of dressed, pressure-preservative-treated, key-beveled lumber not less than 1-1/2 inches (38 mm) wide and of thickness required to bring face of ground to exact thickness of finish material. Remove temporary grounds when no longer required.

3.3 WOOD FURRING INSTALLATION

- A. Install level and plumb with closure strips at edges and openings. Shim with wood as required for tolerance of finish work.

3.4 CEILING JOIST AND RAFTER FRAMING INSTALLATION

- A. Rafters: Notch to fit exterior wall plates and toe nail or use metal framing anchors. Double rafters to form headers and trimmers at openings in roof framing, if any, and support with metal hangers. Where rafters abut at ridge, place directly opposite each other and nail to ridge member or use metal ridge hangers.
 1. At valleys, provide double-valley rafters of size indicated or, if not indicated, of same thickness as regular rafters and 2 inches (50 mm) deeper. Bevel ends of jack rafters for full bearing against valley rafters.
 2. At hips, provide hip rafter of size indicated or, if not indicated, of same thickness as regular rafters and 2 inches (50 mm) deeper. Bevel ends of jack rafters for full bearing against hip rafter.
- B. Provide collar beams (ties) as indicated or, if not indicated, provide 1-by-6-inch nominal- (19-by-140-mm actual-) size boards between every third pair of rafters, but not more than 48 inches (1219 mm) o.c. Locate below ridge member, at third point of rafter span. Cut ends to fit roof slope and nail to rafters.
- C. Provide special framing as indicated for eaves, overhangs, dormers, and similar conditions if any.

3.5 PROTECTION

- A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.
- B. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet , apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 06 10 00

SECTION 06 16 00

SHEATHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and City of San Diego General Requirements, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 1. Roof sheathing.
 2. Sheathing joint and penetration treatment.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
 1. Include data for wood-preserved treatment from chemical treatment manufacturer and certification by treating plant that treated plywood complies with requirements. Indicate type of preservative used and net amount of preservative retained.
 2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated plywood complies with requirements. Include physical properties of treated materials.
 3. For fire-retardant treatments, include physical properties of treated plywood both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D 5516.
 4. For products receiving waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.

1.4 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: For the following, from ICC-ES:
 1. Wood-preserved-treated plywood.
 2. Fire-retardant-treated plywood.
 3. Foam-plastic sheathing.

1.5 QUALITY ASSURANCE

- A. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant-treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Stack panels flat with spacers beneath and between each bundle to provide air circulation. Protect sheathing from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Resistance Ratings: As tested according to ASTM E 119; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - 1. Fire-Resistance Ratings: Indicated by design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency.

2.2 WOOD PANEL PRODUCTS

- A. Emissions: Products shall meet the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- B. Thickness: As needed to comply with requirements specified, but not less than thickness indicated.
- C. Factory mark panels to indicate compliance with applicable standard.

2.3 PRESERVATIVE-TREATED PLYWOOD

- A. Preservative Treatment by Pressure Process: AWP A U1; Use Category UC2 for interior construction not in contact with ground, Use Category UC3b for exterior construction not in contact with ground, and Use Category UC4a for items in contact with ground.
 - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
- B. Mark plywood with appropriate classification marking of an inspection agency acceptable to authorities having jurisdiction.

- C. Application: Treat items indicated on Drawings and plywood in contact with masonry or concrete or used with roofing, flashing, vapor barriers, and waterproofing.

2.4 ROOF SHEATHING

- A. Plywood Sheathing: Exterior, Structural I sheathing.
 - 1. Span Rating: Not less than 32/16.
 - 2. Nominal Thickness: Not less than 15/32 inch (11.9 mm).

2.5 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
 - 1. For roof sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M or of Type 304 stainless steel.
 - 2. For roof sheathing, provide fasteners with organic-polymer or other corrosion-protective coating having a salt-spray resistance of more than 800 hours according to ASTM B 117.
- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.
- D. Screws for Fastening Sheathing to Wood Framing: ASTM C 1002.

2.6 MISCELLANEOUS MATERIALS

- A. Adhesives for Field Gluing Panels to Wood Framing: Formulation complying with APA AFG-01 or ASTM D 3498 that is approved for use with type of construction panel indicated by manufacturers of both adhesives and panels.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span between fewer than three support members.
- B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.
- C. Securely attach to substrate by fastening as indicated, complying with the following:
 - 1. Table 2304.9.1, "Fastening Schedule," in the ICC's International Building Code.

2. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in the ICC's International Residential Code for One- and Two-Family Dwellings.
 3. ICC-ES evaluation report for fastener.
- D. Use common wire nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections. Install fasteners without splitting wood.
 - E. Coordinate roof sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.
 - F. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.
 - G. Coordinate sheathing installation with installation of materials installed over sheathing so sheathing is not exposed to precipitation or left exposed at end of the workday when rain is forecast.

3.2 WOOD STRUCTURAL PANEL INSTALLATION

- A. General: Comply with applicable recommendations in APA Form No. E30, "Engineered Wood Construction Guide," for types of structural-use panels and applications indicated.
- B. Fastening Methods: Fasten panels as indicated below:
 1. Wall and Roof Sheathing:
 - a. Nail to wood framing.
 - b. Screw to cold-formed metal framing.
 - c. Space panels 1/8 inch (3 mm) apart at edges and ends.

END OF SECTION 06 16 00

SECTION 06 18 00

GLUED-LAMINATED CONSTRUCTION

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 framing using structural glued-laminated timber.
- B. Related Requirements:
 - 1. Section 061000 "Rough Carpentry" for dimension lumber items associated with structural glued-laminated timber.

1.3 DEFINITIONS

- A. Structural Glued-Laminated (Glulam) Timber: An engineered, stress-rated timber product assembled from selected and prepared wood laminations bonded together with adhesives and with the grain of the laminations approximately parallel longitudinally.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include data on lumber, adhesives, fabrication, and protection.
 - 2. For preservative-treated wood products. Include chemical treatment manufacturer's written instructions for handling, storing, installing, and finishing treated material.
 - 3. For connectors. Include installation instructions.
- B. Shop Drawings:
 - 1. Show layout of structural glued-laminated timber system and full dimensions of each member.
 - 2. Indicate species and laminating combination.
 - 3. Include large-scale details of connections.
- C. Samples: Full width and depth, 24 inches (600 mm) long, showing the range of variation to be expected in appearance of structural glued-laminated timber.

1. Apply specified factory finish to three sides of half length of each Sample.

1.5 INFORMATIONAL SUBMITTALS

- A. Certificates of Conformance: Issued by a qualified testing and inspecting agency indicating that structural glued-laminated timber complies with requirements in AITC A190.1.
- B. Material Certificates: For preservative-treated wood products, from manufacturer. Indicate type of preservative used and net amount of preservative retained.
- C. Research/Evaluation Reports: For structural glued-laminated timber, from ICC-ES.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: An AITC- or APA-EWS-licensed firm.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. General: Comply with provisions in AITC 111.
- B. Individually wrap members using plastic-coated paper covering with water-resistant seams.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:
- B. Basis-of-Design Products: Subject to compliance with requirements, provide products indicated on Drawings.

2.2 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Division 01 Section "Quality Requirements," to design structural glued-laminated timber and connectors.
- B. Structural Performance: Structural glued-laminated timber and connectors shall withstand the effects of structural loads shown on Drawings without exceeding allowable design working stresses listed in AITC 117 or determined according to ASTM D 3737 and acceptable to authorities having jurisdiction.

- C. Seismic Performance: Structural glued-laminated timber and connectors shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

2.3 STRUCTURAL GLUED-LAMINATED TIMBER

- A. General: Provide structural glued-laminated timber that complies with AITC A190.1 and AITC 117 or research/evaluation reports acceptable to authorities having jurisdiction.
 - 1. Factory mark each piece of structural glued-laminated timber with AITC Quality Mark or APA-EWS trademark. Place mark on surfaces that are not exposed in the completed Work.
 - 2. Provide structural glued-laminated timber made from single species.
 - 3. Provide structural glued-laminated timber made from solid lumber laminations; do not use laminated veneer lumber.
 - 4. Provide structural glued-laminated timber made with wet-use adhesive complying with AITC A190.1.
- B. Species and Grades for Structural Glued-Laminated Timber: Alaska cedar in grades needed to comply with "Performance Requirements" Article.
- C. Species and Grades for Structural Glued-Laminated Timber: Alaska cedar that complies with structural properties combination symbols beam stress classifications indicated.
- D. Species and Grades for Beams and Purlins:
 - 1. Species and Beam Stress Classification: Alaska cedar, 20F-1.5E
 - 2. Lay-up: Balanced.
 - 3. Species and Combination Symbol: 20F-V13.
- E. Appearance Grade: Premium, Architectural or Framing, complying with AITC 110.
 - 1. For Premium and Architectural appearance grades, fill voids as required by AITC 110. For Premium appearance grade, use clear wood inserts, of matching grain and color, for filling voids and knot holes more than 1/4 inch (6 mm) wide.

2.4 TIMBER CONNECTORS

- A. Manufacturers: Subject to compliance with requirements, [provide products by the following] [provide products by one of the following] [available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following]:
- B. Basis-of-Design Products: Subject to compliance with requirements, provide products indicated on Drawings or comparable product by one of the following:
 - 1. Cleveland Steel Specialty Co. or approved equal.
 - 2. Simpson Strong-Tie Co., Inc. or approved equal.
 - 3. USP Structural Connectors. or approved equal.

- C. Fabricate beam seats from steel with 1/2-inch (9.5-mm) bearing plates, 3/4-inch- (19-mm-) diameter-by-12-inch- (300-mm-) long deformed bar anchors, and 0.239-inch (6-mm) side plates.
- D. Provide bolts, 3/4 inch (19 mm) unless otherwise indicated, complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); nuts complying with ASTM A 563 (ASTM A 563M); and, where indicated, flat washers.
- E. Materials: Unless otherwise indicated, fabricate from the following materials:
 - 1. Structural-steel shapes, plates, and flat bars complying with ASTM A 36/A 36M.
 - 2. Round steel bars complying with ASTM A 575, Grade M 1020.
 - 3. Hot-rolled steel sheet complying with ASTM A 1011/A 1011M, Structural Steel, Type SS, Grade 33.
 - 4. Stainless-steel plate and flat bars complying with ASTM A 666, Type 316.
 - 5. Stainless-steel bars and shapes complying with ASTM A 276, Type 316.
 - 6. Stainless-steel sheet complying with ASTM A 240/A 240M or ASTM A 666, Type 316.
- F. Finish steel assemblies and fasteners with rust-inhibitive primer, 2-mil (0.05-mm) dry film thickness.
- G. Hot-dip galvanize steel assemblies and fasteners after fabrication to comply with ASTM A 123/A 123M or ASTM A 153/A 153M.

2.5 MISCELLANEOUS MATERIALS

- A. End Sealer: Manufacturer's standard, transparent, colorless wood sealer that is effective in retarding the transmission of moisture at cross-grain cuts and is compatible with indicated finish.
- B. Penetrating Sealer: Manufacturer's standard, transparent, penetrating wood sealer that is compatible with indicated finish.

2.6 FABRICATION

- A. Shop fabricate for connections to greatest extent possible, including cutting to length and drilling bolt holes.
 - 1. Dress exposed surfaces as needed to remove planing and surfacing marks.
- B. Camber: Fabricate horizontal and inclined members of less than 1:1 slope with either circular or parabolic camber equal to 1/500 of span.
- C. Where preservative-treated members are indicated, fabricate (cut, drill, surface, and sand) before treatment to greatest extent possible. Where fabrication must be done after treatment, apply a field-treatment preservative to comply with AWWA M4.
 - 1. Use inorganic boron (SBX) treatment for members not in contact with the ground and continuously protected from liquid water.
 - 2. Use copper naphthenate treatment for members in contact with the ground or not continuously protected from liquid water.

- D. End-Cut Sealing: Immediately after end cutting each member to final length, apply a saturation coat of end sealer to ends and other cross-cut surfaces, keeping surfaces flood coated for not less than 10 minutes.
- E. Seal Coat: After fabricating, sanding, and end-coat sealing, apply a heavy saturation coat of penetrating sealer on surfaces of each unit.

2.7 FACTORY FINISHING

- A. Wiped Stain Finish: Manufacturer's standard, dry-appearance, penetrating acrylic stain and sealer; oven dried and resistant to mildew and fungus.
- B. Clear Finish: Manufacturer's standard, two-coat, clear varnish finish; resistant to mildew and fungus.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates in areas to receive structural glued-laminated timber, with Installer present, for compliance with requirements, installation tolerances, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Erect structural glued-laminated timber true and plumb and with uniform, close-fitting joints. Provide temporary bracing to maintain lines and levels until permanent supporting members are in place.
 - 1. Handle and temporarily support glued-laminated timber to prevent surface damage, compression, and other effects that might interfere with indicated finish.
- B. Framing Built into Masonry: Provide 1/2-inch (13-mm) clearance at tops, sides, and ends of members built into masonry; bevel cut ends 3 inches (76 mm); and do not embed more than 4 inches (102 mm) unless otherwise indicated.
- C. Cutting: Avoid extra cutting after fabrication. Where field fitting is unavoidable, comply with requirements for shop fabrication.
- D. Fit structural glued-laminated timber by cutting and restoring exposed surfaces to match specified surfacing and finishing.
 - 1. Predrill for fasteners using timber connectors as templates.
 - 2. Finish exposed surfaces to remove planing or surfacing marks and to provide a finish equivalent to that produced by machine sanding with No. 120 grit sandpaper.

3. Coat cross cuts with end sealer.
 4. Where preservative-treated members must be cut during erection, apply a field-treatment preservative to comply with AWPA M4.
 - a. Use inorganic boron (SBX) treatment for members not in contact with the ground and continuously protected from liquid water.
 - b. Use copper naphthenate treatment for members in contact with the ground or not continuously protected from liquid water.
- E. Install timber connectors as indicated.
1. Unless otherwise indicated, install bolts with same orientation within each connection and in similar connections.
 2. Install bolts with orientation as indicated or, if not indicated, as directed by Architect.

3.3 ADJUSTING

- A. Repair damaged surfaces and finishes after completing erection. Replace damaged structural glued-laminated timber if repairs are not approved by Architect.

3.4 PROTECTION

- A. Do not remove wrappings on individually wrapped members until they no longer serve a useful purpose, including protection from weather, sunlight, soiling, and damage from work of other trades.
1. Coordinate wrapping removal with finishing work. Retain wrapping where it can serve as a painting shield.
 2. Slit underside of wrapping to prevent accumulation of moisture inside the wrapping.

END OF SECTION 06 18 00

SECTION 06 41 00

ARCHITECTURAL WOOD CASEWORK

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Specially fabricated cabinet units.
- B. Countertops.
- C. Cabinet hardware.

1.02 RELATED REQUIREMENTS

- A. Section 06 10 00 - Rough Carpentry: Support framing, grounds, and concealed blocking.

1.03 REFERENCE STANDARDS

- A. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards; 2014.
- B. AWI (QCP) - Quality Certification Program; current edition at www.awiqcp.org.
- C. AWMAC (GIS) - Guarantee and Inspection Services Program; current edition at www.awmac.com/gis.php.
- D. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards, U.S. Version 3.0; 2016.
- E. BHMA A156.9 - American National Standard for Cabinet Hardware; 2015.
- F. HPVA HP-1 - American National Standard for Hardwood and Decorative Plywood; 2016.
- G. ISFA 2-01 - Classification and Standards for Solid Surfacing Material; 2013.
- H. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.
- I. UL (DIR) - Online Certifications Directory; current listings at database.ul.com.
- J. WI (CCP) - Certified Compliance Program (CCP); current edition at www.woodworkinstitute.com.
- K. WI (CSIP) - Certified Seismic Installation Program (CSIP); current edition at www.woodworkinstitute.com.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Convene a preinstallation meeting not less than one week before starting work of this section; require attendance by all affected installers.

1.05 SUBMITTALS

- A. See City of San Diego General Requirements for submittal procedures.
- B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.

1. Scale of Drawings: 1-1/2 inch to 1 foot, minimum.
 2. Provide the information required by AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS).
 3. Include certification program label.
- C. Product Data: Provide data for hardware accessories.
- D. Samples: Submit actual samples of architectural cabinet construction, minimum 12 inches square, illustrating proposed cabinet, countertop, and shelf unit substrate and finish.
- E. Samples: Submit actual sample items of proposed pulls, hinges, shelf standards, and locksets, demonstrating hardware design, quality, and finish.

1.06 QUALITY ASSURANCE

- A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section.
1. Accredited participant in the specified certification program prior to the commencement of fabrication and throughout the duration of the project.
- B. Quality Certification: Comply with AWI (QCP) woodwork association quality certification service/program in accordance with requirements for work specified in this section.
1. Provide labels or certificates indicating that the installed work complies with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS) requirements for grade or grades specified.
 2. Provide designated labels on shop drawings as required by certification program.
 3. Provide designated labels on installed products as required by certification program.
 4. Submit certifications upon completion of installation that verifies this work is in compliance with specified requirements.
 5. Replace, repair, or rework all work for which certification is refused.

1.07 MOCK-UP

- A. Provide mock-up of typical base cabinet, wall cabinet, and countertop, including hardware, finishes, and plumbing accessories.
- B. See City of San Diego General Requirements for submittal procedures.
- C. Locate where directed.
- D. Mock-up may remain as part of the Work.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Protect units from moisture damage.

1.09 FIELD CONDITIONS

- A. During and after installation of custom cabinets, maintain temperature and humidity conditions in building spaces at same levels planned for occupancy.

PART 2 PRODUCTS

2.01 WOOD-BASED COMPONENTS

- A. Wood fabricated from old growth timber is not permitted.

2.02 COUNTERTOPS

- A. Solid Surfacing Countertops: Solid surfacing sheet or plastic resin casting over continuous substrate.
 - 1. Flat Sheet Thickness: 1/4 inch, minimum.
 - 2. Solid Surfacing Sheet and Plastic Resin Castings: Complying with ISFA 2-01 and NEMA LD 3; acrylic or polyester resin, mineral filler, and pigments; homogenous, non-porous and capable of being worked and repaired using standard woodworking tools; no surface coating; color and pattern consistent throughout thickness.
 - a. Manufacturers:
 - 1) Avonite Surfaces: www.avonitesurfaces.com.
 - 2) Dupont: www.corian.com.
 - 3) Formica Corporation: www.formica.com.
 - 4) Substitutions: Or Approved Equal.
 - b. Exposed Edge Treatment: Built up to minimum 1-1/4 inch thick; square edge.
 - c. Color: Per Finish Schedule.
 - d. Fabricate in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), Section 11 - Countertops, Premium Grade.

2.03 ACCESSORIES

- A. Adhesive: Type recommended by fabricator to suit application.
 - 1. Manufacturers:
 - a. Franklin International, Inc; Titebond Original Wood Glue: www.titebond.com/sle.
 - b. Substitutions: Or Approved Equal.
- B. Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application; galvanized or chrome-plated finish in concealed locations and stainless steel or chrome-plated finish in exposed locations.
- C. Concealed Joint Fasteners: Threaded steel.

2.04 SHOP TREATMENT OF WOOD MATERIALS

- A. Provide UL (DIR) listed and approved identification on fire retardant treated material.
- B. Deliver fire retardant treated materials cut to required sizes. Minimize field cutting.

2.05 SITE FINISHING MATERIALS

- A. Stain, Shellac, Varnish, and Finishing Materials: In compliance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.

2.06 FABRICATION

- A. Assembly: Shop assemble cabinets for delivery to site in units easily handled and to permit passage through building openings.

- B. Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.
 - 1. Join lengths of tops using best method recommended by manufacturer.
 - 2. Fabricate to overhang fronts and ends of cabinets 1 inch except where top butts against cabinet or wall.
 - 3. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.
- C. Solid Surfacing: Fabricate tops up to 144 inches long in one piece; join pieces with adhesive sealant in accordance with manufacturer's recommendations and instructions.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify adequacy of backing and support framing.
- B. Verify location and sizes of utility rough-in associated with work of this section.

3.02 INSTALLATION

- A. Install work in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS) requirements for grade indicated.
- B. Set and secure custom cabinets in place, assuring that they are rigid, plumb, and level.
- C. Use fixture attachments in concealed locations for wall mounted components.
- D. Use concealed joint fasteners to align and secure adjoining cabinet units.
- E. Carefully scribe casework abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim for this purpose.
- F. Secure cabinets to floor using appropriate angles and anchorages.
- G. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level; shim where required.

3.03 ADJUSTING

- A. Adjust installed work.
- B. Adjust moving or operating parts to function smoothly and correctly.

3.04 CLEANING

- A. Clean casework, counters, shelves, hardware, fittings, and fixtures.

END OF SECTION

SECTION 07 54 23

THERMOPLASTIC POLYOLEFIN (TPO) MEMBRANE ROOFING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. TPO Adhered membrane roofing system.
- B. Cover board.

1.02 RELATED SECTIONS

- A. Division 06 Section "Miscellaneous Rough Carpentry" for wood nailers, cants, curbs, blocking, and for wood-based, structural-use roof deck panels.
- B. Division 07 Section "Sheet Metal Flashing and Trim" for metal roof penetration flashings, flashings, and counter flashings.
- C. Division 22 Section "Storm Drainage Piping Specialties" for roof drains.

1.03 REFERENCES

- A. Roofing Terminology: Refer to the following publications for definitions of roofing work related terms in this Section:
 - 1. ASTM D 1079 "Terminology Relating to Roofing and Waterproofing."
 - 2. Glossary of NRCA's "The NRCA Roofing and Waterproofing Manual."
 - 3. Roof Consultants Institute "Glossary of Roofing Terms."
- B. Sheet Metal Terminology and Techniques: SMACNA "Architectural Sheet Metal Manual."

1.04 DESIGN CRITERIA

- A. General: Installed roofing membrane system shall remain watertight; and resist specified wind uplift pressures, thermally induced movement, and exposure to weather without failure.
- B. Material Compatibility: Roofing materials shall be compatible with one another under conditions of service and application required, as demonstrated by roofing system manufacturer based on testing and field experience.
 - 1. Wind Uplift Performance: Roofing system shall be installed following manufacturer's installation requirements to meet the required uplift pressures calculated in accordance with ASCE 7.
 - 2. California Title 24/CRRC-1:
 - a. Roofing system shall comply with the requirements of Title 24.
 - b. Roofing membrane shall be tested by CRRC-1.

1.05 SUBMITTALS

- A. Product Data: Manufacturer's data sheets for each product to be provided.
- B. Detail Drawings: Provide roofing system plans, elevations, sections, details, and details of attachment to other Work, including:
 - 1. Base flashings and membrane terminations.

2. Crickets, saddles, and tapered edge strips.
 3. Coverboard adhesion patterns.
- C. Installer Certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install roofing system.
- D. Maintenance Data: Refer to Johns Manville's latest published documents on www.JM.com.
- E. Guarantees: Provide manufacturer's current guarantee specimen.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: Qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive the specified manufacturer's guarantee.
1. Manufacturer Qualifications: Qualified manufacturer that has UL listing for roofing system identical to that used for this Project.
- B. Testing Agency Qualifications: Contractor to hire an independent testing agency with the experience and capability to conduct the testing indicated, as documented according to ASTM E329.
- C. Test Reports:
1. Roof drain and leader test or submit plumber's verification.
- D. Source Limitations: Obtain all components from the single source roofing manufacturer guaranteeing the roofing system. All products used in the system must be labeled by the single source roofing manufacturer issuing the guarantee.
- E. Fire-Test-Response Characteristics: Provide roofing materials with the fire-test-response characteristics indicated as determined by testing identical products per test method below by UL or FMG, or another testing and inspecting agency acceptable to authorities having jurisdiction. Materials shall be identified with appropriate markings of applicable testing and inspecting agency.
1. Exterior Fire-Test Exposure: Class A; ASTM E 108, for application and roof slopes indicated.
 2. Fire-Resistance Ratings: ASTM E 119, for fire-resistance-rated roof assemblies of which roofing system is a part.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storage.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

1.08 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when current and forecasted weather conditions permit roofing system to be installed in accordance with manufacturer's written instructions and guarantee requirements.

1.09 GUARANTEE

- A. Provide manufacturer's system guarantee.
 - 1. Single-Source special guarantee includes roofing membrane, base flashings, liquid applied flashing, roofing membrane accessories, roof insulation, fasteners, cover board, walkway products, and other single-source components of roofing system marketed by the manufacturer.
 - 2. Guarantee Period: 20 years from date of Substantial Completion.
- B. Installer's Guarantee: Submit roofing Installer's guarantee, including all components of roofing system for the following guarantee period:
 - 1. Guarantee Period: Two Years from date of Substantial Completion.

PART 2 PRODUCTS

2.01 THERMOPLASTIC POLYOLEFIN ROOFING MEMBRANE - TPO

- A. Fabric-Reinforced Thermoplastic Polyolefin Sheet: ASTM D 6878, uniform, flexible sheet formed from a thermoplastic polyolefin, internally fabric or scrim reinforced. Basis of Design: JM TPO.
 - 1. Thickness: 60 mils (1.52 mm), nominal.
 - 2. Exposed Face Color: Light Tan. Color to be approved by Architect.

2.02 AUXILIARY ROOFING MATERIALS – SINGLE PLY

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with membrane roofing.
 - 1. Liquid-type auxiliary materials shall meet VOC limits of authorities having jurisdiction.
 - 2. Sheet Flashing: Manufacturer's internally reinforced or scrim reinforced, smooth backed membrane with same thickness and color as sheet membrane. Basis of Design: JM TPO, or equal.
 - 3. Bonding Adhesive: Manufacturer's standard solvent or water-based bonding adhesive for membrane, and base flashings. Basis of Design: JM TPO Low VOC Membrane Adhesive, JM TPO Water Based Membrane Adhesive, or equal.
 - 4. Metal Termination Bars: Manufacturer's standard predrilled stainless-steel or aluminum bars, with anchors. Basis of Design: JM Termination Systems, or equal.
 - 5. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening membrane to substrate, and acceptable to membrane roofing system manufacturer. Basis of Design: High Load Fasteners and Plates, or equal.
 - 6. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, cover strips, and other manufacturer approved membranes and accessories as required by submitted manufacturer.

2.03 AUXILIARY ROOFING SYSTEM COMPONENTS

- A. Metal Flashing Sheet: Metal flashing sheet is specified in Division 07 Section "Sheet Metal Flashing and Trim."

2.04 WALKWAYS

- A. Flexible Walkways: Factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured walkway pads sourced from membrane roofing system manufacturer. Basis of Design: JM TPO Walkpad, or Approved Equal.

2.05 COVER BOARD

- A. High-Density Polyisocyanurate: ASTM C 1289, Type II, Class 4, Grade 3, High-density Polyisocyanurate technology bonded in-line to mineral-surfaced, fiber glass reinforced facers with greater than 140 lbs of compressive strength. Coverboard must be 4'X4' panels. Basis of Design: Invinsa FR, or Approved Equal.
- B. Gypsum Board: ASTM C 1278, non-faced, gypsum and cellulose fiber substrate, 1/4 inch (6 mm) thick. Coverboard must be 4'X4' panels. Basis of Design: JM Securock Gypsum-Fiber Roof Board, or Approved Equal.
- C. Gypsum Board: ASTM C 1177, glass-mat faced, water-resistant gypsum substrate, 1/4 inch (6 mm). Coverboard must be 4'X4' panels. Basis of Design: JM DEXcell FA Roof Board, or Approved Equal.

2.06 TAPERED INSULATION

- A. Tapered Insulation for crickets if required: ASTM C 1289, Type II, Class 1, Grade 2 (20 psi), provide factory-tapered insulation boards fabricated to slope as indicated on drawings. Basis of Design: Tapered ENRGY 3 or Approved Equal.

2.07 INSULATION - COVERBOARD ACCESSORIES

- A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatible with membrane roofing.
- B. Urethane Adhesive: Manufacturer's two component polyurethane adhesive formulated to adhere insulation to substrate. Basis of Design: Roofing Systems Urethane Adhesive (RSUA) or Approved Equal.
- C. Wood Nailer Strips: Comply with requirements in Division 06 Section "Miscellaneous Rough Carpentry."

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine substrates, areas, and conditions for compliance with the requirements affecting performance of roofing system.
 - 1. General:
 - a. Verify that roof openings and penetrations are in place and set and braced and that roof drains are securely clamped in place.
 - b. Verify that wood cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
 - c. Ensure general rigidity and proper slope for drainage.

- d. Verify that deck is securely fastened with no projecting fasteners and with no adjacent units in excess of 1/16 inch (1.6 mm) out of plane relative to adjoining deck.
- B. Unacceptable panels should be brought to the attention of the General Contractor and Project Owner's Representative and must be corrected prior to installation of roofing system.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Clean and remove from substrate sharp projections, dust, debris, moisture, and other substances detrimental to roofing installation in accordance with roofing system manufacturer's written instructions.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction.
 - 1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.03 COVER BOARD INSTALLATION

- A. Coordinate installing membrane roofing system components so cover board is not exposed to precipitation or left exposed at the end of the workday.
- B. Comply with membrane roofing system manufacturer's written instructions for installing roof cover board.
- C. Install cover board with long joints of cover board in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch (6 mm) with cover board.
 - 1. Cut and fit cover board within 1/4 inch (6 mm) of nailers, projections, and penetrations.
 - 2. Trim surface of cover board where necessary at roof drains so completed surface is flush and does not restrict flow of water.
 - a. Install tapered edge strips at perimeter edges of roof that do not terminate at vertical surfaces.
 - 3. Adhered Cover Board: Adhere cover board to insulation as follows:
 - a. Install in a two-part urethane adhesive according to roofing system manufacturer's instruction.
 - b. Adhere to resist uplift pressure at corners, perimeter, and field of roof.
 - 4. Proceed with installation only after unsatisfactory conditions have been corrected.

3.04 ROOFING MEMBRANE INSTALLATION, GENERAL

- A. Install roofing membrane in accordance with roofing system manufacturer's written instructions, applicable recommendations of the roofing manufacturer and requirements in this Section.
- B. Where roof slope exceeds 1/2 inch per 12 inches (1:24), contact the membrane manufacturer for installation instructions regarding installation direction and backnailing.
- C. Cooperate with testing and inspecting agencies engaged or required to perform services for installing roofing system.

- D. Coordinate installing roofing system so insulation and other components of the roofing membrane system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is imminent.
 - 1. Provide tie-offs at end of each day's work to cover exposed roofing membrane sheets and insulation with joints and edges sealed.
 - 2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system.
 - 3. Remove and discard temporary seals before beginning work on adjoining roofing.
- E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.05 ADHERED ROOFING MEMBRANE INSTALLATION

- A. Install roofing membrane over area to receive roofing in accordance with membrane roofing system manufacturer's written instructions.
 - 1. Unroll roofing membrane and allow to relax before installing.
 - 2. Install sheet in accordance with roofing system manufacturer's written instructions.
 - 3. Accurately align roofing membrane and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
 - 4. Bonding Adhesive: Apply bonding adhesive to substrate and underside of roofing membrane at rate required by manufacturer and allow to partially dry before installing roofing membrane. Do not apply bonding adhesive to splice area of roofing membrane.
 - 5. Mechanically fasten roofing membrane securely at terminations, penetrations, and perimeter of roofing.
 - 6. Apply roofing membrane with side laps shingled with slope of roof deck where possible.
 - 7. Seams: Clean seam areas, overlap roofing membrane, and hot-air weld side and end laps of roofing membrane according to manufacturer's written instructions to ensure a watertight seam installation.
 - a. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of roofing membrane.
 - b. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
 - 1) Remove and repair any unsatisfactory sections before proceeding with Work.
 - c. Repair tears, voids, and lapped seams in roofing membrane that do not meet requirements.
 - 8. Internal Gutter: Install TPO membrane through gutter following manufacturer's requirements.
 - 9. Weld TPO membrane over TPO Clad deck drain flange at deck.
 - 10. Proceed with installation only after unsatisfactory conditions have been corrected.

3.06 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.
- B. Apply bonding adhesive at required rate and allow to partially dry. Do not apply bonding adhesive to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners per manufacturer's installation instructions.

- D. Clean seam areas and overlap and firmly roll sheet flashings into the adhesive. Weld side and end laps to ensure a watertight seam installation.
- E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.
- F. Proceed with installation only after unsatisfactory conditions have been corrected.

3.07 WALKWAY INSTALLATION

- A. Flexible Walkways: Install walkway products in locations indicated. Heat-weld walkway products to substrate according to roofing system manufacturer's written instructions.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.08 FIELD QUALITY CONTROL

- A. Testing Agency: Contractor to engage a qualified independent testing and inspecting agency to perform roof tests and inspections and to prepare test reports.
- B. Final Roof Inspection: Arrange for roofing system manufacturer's Registered Roof Observer (RRO) to inspect roofing installation on completion and submit report to Architect.
 - 1. Notify Architect / Owner 48 hours in advance of date and time of inspection.
- C. Repair or remove and replace components of roofing system where test results or inspections indicate that they do not comply with specified requirements.
- D. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.09 PROTECTION AND CLEANING

- A. Protect roofing system from damage and wear during remainder of construction period.
- B. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION

SECTION 07 62 00

SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fabricated sheet metal items, including flashings, counterflashings, gutters, downspouts, sheet metal roofing, and other items indicated in Schedule.
- B. Sealants for joints within sheet metal fabrications.

1.02 RELATED REQUIREMENTS

- A. Section 06 10 00 - Rough Carpentry: Wood nailers for sheet metal work.
- B. Section 06 10 00 - Rough Carpentry: Wood blocking for batten seams.
- C. Section 06 10 00 - Rough Carpentry: Field fabricated roof curbs.
- D. Section 07 92 00 - Joint Sealants: Sealing non-lap joints between sheet metal fabrications and adjacent construction.

1.03 REFERENCE STANDARDS

- A. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum; 2014 (2015 Errata).
- B. AAMA 2603 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2015.
- C. AAMA 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2013.
- D. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2013.
- E. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2015.
- F. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2014.
- G. ASTM B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate (Metric); 2014.
- H. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2014a.
- I. ASTM D4586/D4586M - Standard Specification for Asphalt Roof Cement, Asbestos-Free; 2007 (Reapproved 2012).
- J. CDA A4050 - Copper in Architecture - Handbook; current edition.
- K. SMACNA (ASMM) - Architectural Sheet Metal Manual; 2012.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Convene one week before starting work of this section.

1.05 SUBMITTALS

- A. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.
- B. Samples: Submit two samples 6 by 6 inch in size illustrating metal finish color.

1.06 QUALITY ASSURANCE

- A. Perform work in accordance with SMACNA (ASMM) and CDA A4050 requirements and standard details, except as otherwise indicated.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- B. Prevent contact with materials that could cause discoloration or staining.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Sheet Metal Flashing and Trim Manufacturers:
 - 1. Fairview Architectural LLC: www.fairviewarchitecturalusa.com/sle.
 - 2. Petersen Aluminum Corporation: www.pac-clad.com/sle.
 - 3. Substitutions: Or Approved Equal.

2.02 SHEET MATERIALS

- A. Stainless Steel: ASTM A666, Type Kynar Coated 316 alloy, soft temper, 28 gage, (0.0156 inch) thick; smooth No. 4 - Brushed finish.

2.03 FABRICATION

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- B. Form pieces in longest possible lengths.
- C. Hem exposed edges on underside 1/2 inch; miter and seam corners.
- D. Form material with flat lock seams, except where otherwise indicated; at moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.
- E. Fabricate corners from one piece with minimum 18 inch long legs; seam for rigidity, seal with sealant.
- F. Fabricate flashings to allow toe to extend 2 inches over roofing gravel. Return and brake edges.

2.04 GUTTER AND DOWNSPOUT FABRICATION

- A. Gutters: SMACNA (ASMM), Rectangular profile.

- B. Downspouts: Rectangular profile.
- C. Gutters and Downspouts: Size for rainfall intensity determined by a storm occurrence of 1 in 10 years in accordance with SMACNA (ASMM).
- D. Accessories: Profiled to suit gutters and downspouts.
 - 1. Anchorage Devices: In accordance with SMACNA (ASMM) requirements.
 - 2. Gutter Supports: Brackets.
 - 3. Downspout Supports: Brackets.
- E. Splash Pads: Precast concrete type, of size and profiles indicated; minimum 3000 psi at 28 days, with minimum 5 percent air entrainment.
- F. Downspout Boots: Stainless Steel.
- G. Seal metal joints.

2.05 ACCESSORIES

- A. Fasteners: Stainless steel, with soft neoprene washers.
- B. Primer: Zinc chromate type.
- C. Concealed Sealants: Non-curing butyl sealant.
- D. Exposed Sealants: ASTM C920; elastomeric sealant, with minimum movement capability as recommended by manufacturer for substrates to be sealed; color to match adjacent material.
 - 1. Products:
- E. Plastic Cement: ASTM D4586/D4586M, Type I.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, reglets in place, and nailing strips located.
- B. Verify roofing termination and base flashings are in place, sealed, and secure.

3.02 PREPARATION

- A. Install starter and edge strips, and cleats before starting installation.
- B. Back paint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 15 mil.

3.03 INSTALLATION

- A. Secure flashings in place using concealed fasteners, and use exposed fasteners only where permitted..
- B. Fit flashings tight in place; make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- C. Seal metal joints watertight.
- D. Secure gutters and downspouts in place with concealed fasteners.

- E. Slope gutters 1/4 inch per 10 feet, minimum.
- F. Connect downspouts to downspout boots, and grout connection watertight.

3.04 FIELD QUALITY CONTROL

- A. Inspection will involve surveillance of work during installation to ascertain compliance with specified requirements.

END OF SECTION

SECTION 07 92 00

JOINT SEALANTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Nonsag gunnable joint sealants.
- B. Self-leveling pourable joint sealants.
- C. Joint backings and accessories.

1.02 RELATED REQUIREMENTS

- A. Section 08 71 00 - Door Hardware: Setting exterior door thresholds in sealant.

1.03 REFERENCE STANDARDS

- A. ASTM C661 - Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer; 2015.
- B. ASTM C794 - Standard Test Method for Adhesion-In-Peel of Elastomeric Joint Sealants; 2015a.
- C. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2014a.
- D. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2016.
- E. ASTM C1248 - Standard Test Method for Staining of Porous Substrate by Joint Sealants; 2008 (Reapproved 2012).
- F. ASTM C1311 - Standard Specification for Solvent Release Sealants; 2014.

1.04 SUBMITTALS

- A. Product Data for Sealants: Submit manufacturer's technical data sheets for each product to be used, that includes the following.
 - 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
 - 2. List of backing materials approved for use with the specific product.
 - 3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
 - 4. Substrates the product should not be used on.
 - 5. Installation instructions, including precautions, limitations, and recommended backing materials and tools.
 - 6. Sample product warranty.
 - 7. Certification by manufacturer indicating that product complies with specification requirements.
- B. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation instructions, and recommended tools.

- C. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.
- D. Samples for Verification: Where custom sealant color is specified, obtain directions from Architect and submit at least two physical samples for verification of color of each required sealant.

1.05 QUALITY ASSURANCE

- A. Maintain one copy of each referenced document covering installation requirements on site.

1.06 WARRANTY

- A. Correct defective work within a five year period after Date of Substantial Completion.
- B. Warranty: Include coverage for installed sealants and accessories that fail to achieve watertight seal , exhibit loss of adhesion or cohesion, or do not cure.

PART 2 PRODUCTS

2.01 JOINT SEALANT APPLICATIONS

- A. Scope:
 1. Exterior Joints: Seal open joints, whether or not the joint is indicated on the drawings, unless specifically indicated not to be sealed. Exterior joints to be sealed include, but are not limited to, the following items.
 - a. Wall expansion and control joints.
 - b. Joints between door, window, and other frames and adjacent construction.
 - c. Joints between different exposed materials.
 - d. Openings below ledge angles in masonry.
 - e. Other joints indicated below.
 2. Interior Joints: Do not seal interior joints unless specifically indicated to be sealed. Interior joints to be sealed include, but are not limited to, the following items.
 - a. Joints between door, window, and other frames and adjacent construction.
 - b. Other joints indicated below.
 3. Do not seal the following types of joints.
 - a. Intentional weepholes in masonry.
 - b. Joints indicated to be treated with manufactured expansion joint cover or some other type of sealing device.
 - c. Joints where sealant is specified to be provided by manufacturer of product to be sealed.
 - d. Joints where installation of sealant is specified in another section.
 - e. Joints between suspended panel ceilings/grid and walls.
- B. Exterior Joints: Use non-sag non-staining silicone sealant, Type A, unless otherwise indicated.
 1. Lap Joints in Sheet Metal Fabrications: Butyl rubber, non-curing; Type B.
 2. Control and Expansion Joints in Concrete Paving: Self-leveling polyurethane "traffic-grade" sealant; Type C.
- C. Interior Joints: Use non-sag polyurethane sealant, Type D, unless otherwise indicated.
 1. Joints between Fixtures in Wet Areas and Floors, Walls, and Ceilings: Mildew-resistant silicone sealant; clear; Type E.

2.02 NONSAG JOINT SEALANTS

- A. Type A - Non-Staining Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic.
 - 1. Movement Capability: Plus and minus 50 percent, minimum.
 - 2. Non-Staining To Porous Stone: Non-staining to light-colored natural stone when tested in accordance with ASTM C1248.
 - 3. Dirt Pick-Up: Reduced dirt pick-up compared to other silicone sealants.
- B. Type E - Mildew-Resistant Silicone Sealant: ASTM C920, Grade NS, Uses M and A; single component, mildew resistant; not expected to withstand continuous water immersion or traffic.
 - 1. Color: Clear.
- C. Type D - Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multi-component; not expected to withstand continuous water immersion or traffic.
 - 1. Movement Capability: Plus and minus 25 percent, minimum.
 - 2. Hardness Range: 20 to 35, Shore A, when tested in accordance with ASTM C661.
 - 3. Color: Match adjacent finished surfaces.
- D. Type B - Non-Curing Butyl Sealant: Solvent-based; ASTM C1311; single component, non-sag, non-skinning, non-hardening, non-bleeding; vapor-impermeable; intended for fully concealed applications.

2.03 SELF-LEVELING SEALANTS

- A. Type C - Self-Leveling Polyurethane Sealant: ASTM C920, Grade P, Uses M and A; single or multi-component; explicitly approved by manufacturer for traffic exposure; not expected to withstand continuous water immersion.
 - 1. Movement Capability: Plus and minus 25 percent, minimum.
 - 2. Color: To be selected by Architect from manufacturer's standard range.

2.04 ACCESSORIES

- A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.
- B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that joints are ready to receive work.
- B. Verify that backing materials are compatible with sealants.
- C. Verify that backer rods are of the correct size.

3.02 PREPARATION

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.

- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.
- E. Concrete Floor Joints That Will Be Exposed in Completed Work: Test joint filler in inconspicuous area to verify that it does not stain or discolor slab.

3.03 INSTALLATION

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C1193.
- C. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer.
- D. Install bond breaker backing tape where backer rod cannot be used.
- E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- F. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.
- G. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.
- H. Concrete Floor Joint Filler: After full cure, shave joint filler flush with top of concrete slab.

END OF SECTION

SECTION 08 16 13

FIBERGLASS DOORS AND FRAMES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fiberglass doors.
- B. Fiberglass door frames.

1.02 RELATED REQUIREMENTS

- A. Section 08 71 00 - Door Hardware.

1.03 REFERENCE STANDARDS

- A. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors; 2011.
- B. ASTM D256 - Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics; 2010.
- C. ASTM D570 - Standard Test Method for Water Absorption of Plastics; 1998 (Reapproved 2010).
- D. ASTM D635 - Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position; 2014.
- E. ASTM D638 - Standard Test Method for Tensile Properties of Plastics; 2014.
- F. ASTM D790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials; 2016.
- G. ASTM D2583 - Standard Test Method for Indentation Hardness of Rigid Plastics by Means of Barcol Impressor; 2013a.
- H. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2016.
- I. ASTM E283 - Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen; 2004 (Reapproved 2012).
- J. ASTM E330/E330M - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference; 2014.
- K. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference; 2000 (Reapproved 2016).
- L. ICC (IBC) - International Building Code; 2015.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination: Obtain hardware templates from hardware manufacturer prior to starting fabrication.

1.05 SUBMITTALS

- A. Product Data: Provide manufacturer's standard details, installation instructions, hardware and anchor recommendations.
- B. Shop Drawings: Indicate layout and profiles; include assembly methods.
 - 1. Indicate product components, including hardware reinforcement locations and preparations, accessories, finish colors, patterns, and textures.
 - 2. Indicate wall conditions, door and frame elevations, sections, materials, gages, finishes, location of door hardware by dimension, and details of openings; use same reference numbers indicated on drawings to identify details and openings.
- C. Selection Samples: Submit two complete sets of color chips, illustrating manufacturer's available finishes, colors, and textures.
- D. Verification Samples: Submit door surface samples for each finish specified, 10 inch by 10 inch in size, illustrating finishes, colors, and textures.
- E. Manufacturer's Qualification Statement.
- F. Installer's Qualification Statement.
- G. Maintenance Data: Include instructions for repair of minor scratches and damage.
- H. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer; include detailed terms of warranty.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- B. Store materials in original packaging, under cover, protected from exposure to harmful weather conditions and from direct contact with water.
 - 1. Store at temperature and humidity conditions recommended by manufacturer.
 - 2. Do not use non-vented plastic or canvas shelters.
 - 3. Immediately remove wet wrappers.
- C. Store in position recommended by manufacturer, elevated minimum 4 inch above grade, with minimum 1/4 inch space between doors.

1.07 WARRANTY

- A. Provide five (5) year manufacturer warranty covering materials and workmanship, including degradation or failure due to chemical contact.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Molded Fiberglass Doors:
 - 1. ChemPruf Door Company, Ltd: www.chem-pruf.com.
 - 2. Tiger Door, LLC: www.tigerdoor.com.

3. Substitutions: Or Approved Equal.

2.02 DOOR AND FRAME ASSEMBLIES

- A. Door and Frame Assemblies: Factory-fabricated, prepared and machined for hardware.
 1. Physical Endurance: Swinging door cycle test to ANSI/SDI A250.4, Level A (1,000,000 cycles) minimum; tested with hardware and fasteners intended for use on project.
 2. Screw-Holding Capacity: Tested to 890 lbs, minimum.
 3. Surface Burning Characteristics: Flame spread index (FSI) of 0 to 25, Class A, and smoke developed index (SDI) of 450 or less, when tested in accordance with ASTM E84.
 4. Flammability: Self-extinguishing when tested in accordance with ASTM D635.
 5. Chemical Resistance: Resist degradation due to exposure to tap water and distilled water.
 - a. Chlorine-treated moisture in air.
 - b. Ocean salt spray.
 6. Clearance Between Door and Frame: 1/8 inch, maximum.
 7. Clearance Between Bottom of Door and Finished Floor: Per Architectural Drawings.

2.03 COMPONENTS

- A. Doors: Fiberglass construction with reinforced core.
 1. Thickness: 1-3/4 inch, nominal.
 2. Core Material: Manufacturer's standard core material for application indicated.
 3. Construction:
 - a. Molded in one piece including through color gel coating on each side; manufacturer's standard subframe, core and faces fused during curing; hardware reinforcements.
 - b. Fiberglass ultraviolet resistant mylar coated, with 1/8 inch thick through color face sheets laminated to core.
 4. Face Sheet Texture: Smooth at Rest Room doors.
 5. Face Sheet Texture: Wood Grain at Barn door.
 6. Subframe and Reinforcements: Manufacturer's standard materials.
 7. Waterproof Integrity: Provide factory fabricated edges, cut-outs, and hardware preparations of fiberglass reinforced plastic (FRP); provide cut-outs with joints sealed independently of glazing, louver inserts, or trim.
 8. Hardware Preparations: Factory reinforce, machine, and prepare for door hardware including field installed items; provide solid blocking for each item; field cutting, drilling or tapping is not permitted; obtain manufacturer's hardware templates for preparation as necessary.
- B. Door Frames: Provide type in compliance with performance requirements specified for doors.
 1. Type: Factory assembled with chemically welded joints.
 2. Profiles: As indicated on drawings.

2.04 PERFORMANCE REQUIREMENTS

- A. Provide door assemblies that have been designed and fabricated in compliance with specified performance requirements.

- B. Water Leakage: No uncontrolled leakage on interior face when tested in accordance with ASTM E331 at differential pressure of 7.5 psf.
- C. Air Leakage: Maximum of 0.1 cu ft/min/sq ft at 6.27 psf differential pressure, when tested in accordance with ASTM E283.
- D. Structural Performance: Withstand positive and negative wind loads equal to 1.5 times design wind loads specified by local code without damage or permanent set, when tested in accordance with ASTM E330/E330M, using 10 second duration of maximum load.
- E. Fiberglass Reinforced Plastic (FRP) Face Sheet Properties:
 - 1. Izod Impact Resistance: ASTM D256, 7 ft lbf/inch of width, minimum, with notched izod.
 - 2. Tensile Strength at Break: ASTM D638, 13,250 psi, minimum.
 - 3. Water Absorption: ASTM D570, 0.16 percent, maximum, after 24 hours at 74 degrees F.
 - 4. Flexural Strength: ASTM D790, 27,000 psi, minimum.
 - 5. Barcol Hardness: ASTM D2583, minimum of 40 units.

2.05 FINISHES

- A. Gel Coating: Ultraviolet (UV) stabilized polyester finish.
 - 1. Thickness: Minimum 15 mils wet thickness, plus/minus 3 mils.
 - 2. Color: As selected by Architect from manufacturer's full line of colors.

2.06 ACCESSORIES

- A. Stops for Glazing and Louver: Fiberglass, unless otherwise indicated or required by fire rating; provided by door manufacturer to fit factory made openings, with color and texture to match door; fasteners shall maintain waterproof integrity.
 - 1. Glazed Openings: Provide removable stops on interior side.
 - 2. Opening Sizes and Shapes: As indicated on drawings.
- B. Louvers: Same materials, construction, finish, and color as door; fixed vanes, 45 degree sloped vanes.
 - 1. At door Type E only, per Schedule.
- C. Door Hardware: As specified in Section 08 71 00.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify actual dimensions of openings by field measurements before door fabrication; show recorded measurements on shop drawings.
- B. Do not begin installation until substrates have been properly prepared.

3.02 PREPARATION

- A. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- B. Clean and prepare substrate in accordance with manufacturer's directions.
- C. Protect adjacent work and finish surfaces from damage during installation.

3.03 INSTALLATION

- A. Install in accordance with manufacturer's instructions; do not penetrate frames with anchors.
- B. Install door hardware as specified in Section 08 71 00.
- C. Set units plumb, level, and true-to-line, without warping or racking doors, and with specified clearances; anchor in place.
- D. Separate aluminum and other metal surfaces from sources of corrosion of electrolytic action at points of contact with other materials.
- E. Repair or replace damaged installed products.

3.04 ADJUSTING

- A. Lubricate, test, and adjust doors to operate easily, free from warp, twist or distortion, and to fit watertight for entire perimeter.
- B. Adjust hardware for smooth and quiet operation.
- C. Adjust doors to fit snugly and close without sticking or binding.

3.05 CLEANING

- A. Clean installed products in accordance with manufacturer's instructions prior to owner's acceptance.

3.06 PROTECTION

- A. Protect installed products from damage until Date of Substantial Completion.

END OF SECTION

SECTION 08 63 00

METAL-FRAMED SKYLIGHTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Aluminum skylight framing system.
- B. Skylight glazing.
- C. Fasteners, anchors, reinforcement, and flashings.

1.02 RELATED REQUIREMENTS

- A. Section 05 50 00 - Metal Fabrications: Fabricated steel attachment devices.
- B. Section 06 10 00 - Rough Carpentry: Wood support curbs.
- C. Section 07 54 23: Roofing system and base flashing at skylight curb.
- D. Section 07 62 00 - Sheet Metal Flashing and Trim: Skylight counterflashing.
- E. Section 07 92 00 - Joint Sealants: Sealing joints between skylight frames and adjacent construction.

1.03 REFERENCE STANDARDS

- A. AAMA 501.1 - Standard Test Method for Water Penetration of Windows, Curtain Walls and Doors Using Dynamic Pressure; 2005.
- B. AAMA 501.2 - Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems; 2015.
- C. AAMA 609 & 610 - Cleaning and Maintenance Guide for Architecturally Finished Aluminum (Combined Document); 2015.
- D. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum; 2014 (2015 Errata).
- E. AAMA 2603 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2015.
- F. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2014.
- G. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2014.
- H. ASTM C661 - Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer; 2015.
- I. ASTM C793 - Standard Test Method for Effects of Laboratory Accelerated Weathering on Elastomeric Joint Sealants; 2005 (Reapproved 2010).
- J. ASTM C794 - Standard Test Method for Adhesion-In-Peel of Elastomeric Joint Sealants; 2015a.

- K. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2014a.
- L. ASTM C1184 - Standard Specification for Structural Silicone Sealants; 2014.
- M. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference; 2000 (Reapproved 2016).
- N. ASTM E1105 - Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls, by Uniform or Cyclic Static Air Pressure Difference; 2015.
- O. ASTM E2112 - Standard Practice for Installation of Exterior Windows, Doors and Skylights; 2007 (Reapproved 2016).
- P. ICC (IBC) - International Building Code; 2015.

1.04 SUBMITTALS

- A. Product Data: Provide manufacturer's specifications, standard details, and installation requirements.
- B. Shop Drawings: Indicate framed opening requirements and tolerances, spacing of members, anticipated deflection under load, affected related work, expansion and contraction joint locations and details, and sizes and locations for field welding.
 - 1. Show field measurements on shop drawings.
- C. Shop Drawings: Provide details of proposed structural sealant glazing (SSG) and weather sealant joints indicating dimensions, materials, bite, thicknesses, profile, and support framing.
- D. Selection Samples: Submit full range of aluminum finish samples for Architect's color selection.
- E. Samples: Submit two samples, not less than 12 by 12 inch in size illustrating appearance of prefinished aluminum and specified glazing system, including glazed edge and corner.
- F. Manufacturer's Certificate: Certify that the products supplied meet or exceed the specified requirements.
- G. Design Data: Provide framing member structural and physical characteristics and engineering calculations, and identify dimensional limitations.
- H. Manufacturer's Installation Instructions: Indicate special procedures, safety precautions, and perimeter conditions requiring special attention.
- I. Field Quality Control Submittals: Report of field testing for water leakage.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section.
- B. Verify that each component is appropriate for use in structural sealant glazing (SSG) application in regards to at least the following properties; size, shape, dimensions, material, shelf-life, storage conditions, and color.
- C. Installer Qualifications: Company specializing in performing the type of work specified in this section.

1.06 MOCK-UP

- A. Construct mock-up that includes examples of materials and conditions required in finished skylight installation. Size mock-up 3 by 3 feet.
- B. Locate where directed by Architect.
- C. Mock-up may remain as part of the Work.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Provide wrapping to protect prefinished aluminum surfaces. Do not use adhesive papers or spray coatings that bond when exposed to sunlight or weather.

1.08 FIELD CONDITIONS

- A. Do not install sealants when ambient temperature is less than 40 degrees F. Maintain this minimum temperature during and 48 hours after installation.

1.09 WARRANTY

- A. Correct defective work, including leaks, discoloration, failure of seal at insulated glazing units, and excessive thermal or structural movement, within a five year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Metal-Framed Skylights:
 - 1. Leslie Skylights.
 - 2. Substitutions: Or Approved Equal.

2.02 METAL-FRAMED SKYLIGHTS

- A. Metal Framed Skylights: Factory-fabricated, glazed.
 - 1. Frame: Extruded aluminum structural members with integral condensation collection and guttering system thermally separated from exterior pressure bar.
 - 2. Glazing System: Pressure glazing bar system for sloped joints and two (2)-sided structural sealant glazing (SSG) for horizontal joints.
 - 3. Glazing: Insulating Plastic Moxie Panels or Approved Equal.
 - 4. Aluminum Finish: Kynar coated.
 - 5. Fabricate to prevent vibration harmonics, thermal movement transmitted to other building elements, and loosening, weakening, or fracturing of attachments or components of system.

2.03 PERFORMANCE REQUIREMENTS

- A. Provide metal-framed skylights that comply with the following:
 - 1. Structural Design: Design and size components to withstand dead loads and specified live loads without damage or permanent set.
 - 2. Wind Loads: Test in accordance with ASTM E330/E330M, using loads 1.5 times the specified design pressures and 10 second duration of maximum load.
 - 3. Design Pressure (DP): In accordance with applicable codes.
 - 4. Glazing Support Member Deflection Under Wind Load: 1/180 of span, maximum.

5. Thermal Movement: Design system to accommodate thermal expansion and contraction over ambient temperature range of 100 degrees F, dynamic loading and release of loads, creep of concrete structural members and deflection of structural support framing without damage to skylight system components or loss of weathertightness.
6. Energy Code Compliance: Comply with ICC (IBC), ASHRAE Std 90.1 I-P, or the authorities having jurisdiction as required for metal-framed skylights.
7. Structural Sealant Glazing (SSG) System: For individual glass lites, design framing members to not exceed a deflection normal to the wall of L/175 between supports with 3/4 inch maximum, and a deflection parallel to the wall of L/360 with 1/8 inch maximum, whichever is less.

2.04 MATERIALS

- A. Aluminum Extrusions: Alloy and temper 6063-T5, 6063-T6, or 6061-T6 members complying with ASTM B221 (ASTM B221M), with minimum thickness 1/8 inch for structural members and 1/16 inch for non-structural members.
- B. Formed Aluminum: Sheet material of alloy 5052, 5005, or 6061-T651 members complying with ASTM B209 (ASTM B209M), with minimum thickness 1/8 inch for structural members and 1/16 inch for non-structural members.
- C. Internal Reinforcement: ASTM A36/A36M; Steel shapes as required for strength and mullion size limitations, hot-dip galvanized after fabrication in accordance with ASTM A123/A123M.
- D. Plastic Glazing: Insulating Plastic Moxie Panels or Approved Equal.
- E. Insulating Plastic Glazing: Outer pane of acrylic, clear transparent plastic; inner pane of acrylic, clear transparent plastic, each pane glazed separately.
- F. Glazing Accessories: Snap In type.
- G. Glazing Accessories: As recommended by manufacturer of skylight system.
- H. Structural Sealant Glazing (SSG) Adhesive: Neutral curing, silicone sealant formulated for SSG applications in compliance with ASTM C1184 and structural glazing industry guidelines, ASTM C1401.
 1. SSG adhesive in compliance with ASTM C920; Type M - Multicomponent, Grade NS, Class 50, Use NT, G, and A.
 2. Ultimate Tensile Strength: Minimum of 50 psi as determined by test method ASTM C1135 under the following conditions.
 - a. Exposure to air temperatures of 190 degrees F and minus 20 degrees F.
 - b. Water Immersion for seven (7) days, minimum.
 - c. Exposure to weathering for 5,000 hours, minimum.
 3. Sealant Design Tensile Strength: 20 psi, maximum.
 4. Hardness: 20 to 60 with Type A-2 durometer in compliance with test method ASTM C661.
 5. SSG sealant tested for compatibility with glazing accessories in compliance with ASTM C1087, tested for accelerated weathering in compliance with ASTM C793, and in compliance with insulating glass secondary sealant design standards of ASTM C1249.
- I. Weatherseal Sealant: Silicone, with adhesion in compliance with ASTM C794; compatible with glazing accessories.

- J. Touch-Up Primer for Galvanized Steel Surfaces: Zinc rich type.
- K. Protective Back Coating: Asphaltic mastic, ASTM D4479/D4479M, Type I.
- L. Fasteners: Stainless steel.
- M. Flashing: Matching finish of skylight frame system components; secure using un-concealed fastening method, and seal with weather-tight sealant.
 - 1. Galvanized steel, 26 gage, 0.0179 inch minimum base metal thickness.

2.05 FABRICATION

- A. Rigidly fit and secure joints and corners with screw and spline; fabricate rigid joints with connections that are flush, hairline, and weatherproof.
- B. Fabricate components to allow for expansion and contraction with minimum clearance and shim spacing around perimeter of assembly.
- C. Drain to exterior any water entering exterior joints, condensation occurring in glazing channels, or migrating moisture occurring within system.
- D. Prepare components to receive concealed anchorage devices, and ensure that fasteners will be concealed upon completion of installation.

2.06 FINISHES

- A. Color: To be selected by Architect from manufacturer's standard range.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that structural curb is ready to receive skylight system. Coordinate installation of roofing and other adjacent work to ensure weathertight construction.

3.02 PREPARATION

- A. Apply 1 coat of Kynar protective coating to concealed aluminum and steel surfaces in contact with dissimilar materials.

3.03 INSTALLATION

- A. Install metal-framed skylights in accordance with manufacturer's instructions.
- B. Install metal-framed skylights in accordance with ASTM E2112.
- C. Set skylight structure plumb, level, and true to line, without warp or rack of frames or glazing panels. Anchor securely in place in accordance with approved shop drawings.
- D. Maintain assembly dimensional tolerances, aligning with adjacent work.
- E. Install base flashings in accordance with Section 07 62 00.
- F. Pack fibrous insulation in shim spaces at perimeter of assembly to ensure continuity of thermal barrier.
- G. Structural Sealant Glazing (SSG) Adhesive: Install structural sealant glazing adhesive and weather-tight sealant in accordance with manufacturer's instructions.

- H. Touch up damaged finishes so repair is imperceptible from 6 feet distance, and remove and replace components that cannot be acceptably touched up.

3.04 FIELD QUALITY CONTROL

- A. Test installed skylight for water leakage in accordance with AAMA 501.2.
- B. Test installed skylight for water leakage in accordance with ASTM E1105 with a uniform static air pressure difference of 2.86 lbf/sq ft.

3.05 CLEANING

- A. Upon completion of installation, thoroughly clean skylight aluminum surfaces in accordance with AAMA 609 & 610.
- B. Remove protective material from prefinished aluminum surfaces.
- C. Wash down exposed surfaces; wipe surfaces clean.
- D. Remove excess sealant by methods recommended by skylight manufacturer.

END OF SECTION

SECTION 087100 – DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes:
 - 1. Mechanical door hardware for:
 - a. Swinging doors.
- B. Related Sections:
 - 1. Division 07 Section "Joint Sealants" for sealant requirements applicable to threshold installation specified in this section.
 - 2. Division 09 sections for touchup finishing or refinishing of existing openings modified by this section.

1.3 REFERENCES

- A. UL - Underwriters Laboratories
 - 1. UL 10B - Fire Test of Door Assemblies
 - 2. UL 10C - Positive Pressure Test of Fire Door Assemblies
 - 3. UL 1784 - Air Leakage Tests of Door Assemblies
 - 4. UL 305 - Panic Hardware
- B. DHI - Door and Hardware Institute
 - 1. Sequence and Format for the Hardware Schedule
 - 2. Recommended Locations for Builders Hardware
 - 3. Key Systems and Nomenclature
- C. ANSI - American National Standards Institute
 - 1. ANSI/BHMA A156.1 - A156.29, and ANSI/BHMA A156.31 - Standards for Hardware and Specialties

1.4 SUBMITTALS

- A. General:

1. Submit in accordance with Conditions of Contract requirements.
2. Highlight, encircle, or otherwise specifically identify on submittals deviations from Contract Documents, issues of incompatibility or other issues which may detrimentally affect the Work.
3. Prior to forwarding submittal, comply with procedures for verifying existing door and frame compatibility for new hardware, as specified in PART 3, "EXAMINATION" article, herein.

B. Action Submittals:

1. Product Data: Product data including manufacturers' technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
2. Samples for Verification: If requested by Architect, submit production sample or sample installations of each type of exposed hardware unit in finish indicated, and tagged with full description for coordination with schedule.
 - a. Samples will be returned to supplier in like-new condition. Units that are acceptable to Architect may, after final check of operations, be incorporated into Work, within limitations of key coordination requirements.
3. Door Hardware Schedule: Submit schedule with hardware sets in vertical format as illustrated by Sequence of Format for the Hardware Schedule as published by the Door and Hardware Institute. Indicate complete designations of each item required for each door or opening, include:
 - a. Door Index; include door number, heading number, and Architects hardware set number.
 - b. Opening Lock Function Spreadsheet: List locking device and function for each opening.
 - c. Type, style, function, size, and finish of each hardware item.
 - d. Name and manufacturer of each item.
 - e. Fastenings and other pertinent information.
 - f. Location of each hardware set cross-referenced to indications on Drawings.
 - g. Explanation of all abbreviations, symbols, and codes contained in schedule.
 - h. Mounting locations for hardware.
 - i. Door and frame sizes and materials.
 - j. Name and phone number for local manufacturer's representative for each product.
 - k. Operational Description of openings with any electrified hardware (locks, exits, electromagnetic locks, electric strikes, automatic operators, door position switches, magnetic holders or closer/holder units, and access control components). Operational description should include how door will operate on egress, ingress, and fire and smoke alarm connection.
 - 1) Submittal Sequence: Submit door hardware schedule concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate fabrication of other work that is critical in Project construction schedule.
4. Key Schedule [CONTACT CITY OF SAN DIEGO LOCK SHOP TO CONFIRM REQUIREMENT]:

- a. After Keying Conference, provide keying schedule listing levels of keying as well as explanation of key system's function, key symbols used and door numbers controlled.
 - b. Use ANSI/BHMA A156.28 "Recommended Practices for Keying Systems" as guideline for nomenclature, definitions, and approach for selecting optimal keying system.
 - c. Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations.
 - d. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.
 - e. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion.
 - 1) Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.
 - f. Prepare key schedule by or under supervision of supplier, detailing Owner's final keying instructions for locks.
5. Templates: After final approval of hardware schedule, provide templates for doors, frames and other work specified to be factory prepared for door hardware installation.

C. Informational Submittals:

1. Qualification Data: For Supplier, Installer and Architectural Hardware Consultant.
2. Product Certificates for electrified door hardware, signed by manufacturer:
 - a. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.
3. Certificates of Compliance:
 - a. Certificates of compliance for fire-rated hardware and installation instructions if requested by Architect or Authority Having Jurisdiction.
 - b. Installer Training Meeting Certification: Letter of compliance, signed by Contractor, attesting to completion of installer training meeting specified in "QUALITY ASSURANCE" article, herein.
 - c. Electrified Hardware Coordination Conference Certification: Letter of compliance, signed by Contractor, attesting to completion of electrified hardware coordination conference, specified in "QUALITY ASSURANCE" article, herein.
4. Product Test Reports: For compliance with accessibility requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by qualified testing agency, for door hardware on doors located in accessible routes.
5. Warranty: Special warranty specified in this Section.

D. Closeout Submittals:

1. Operations and Maintenance Data : Provide and include:

- a. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
- b. Catalog pages for each product.
- c. Name, address, and phone number of local representative for each manufacturer.
- d. Parts list for each product.
- e. Final approved hardware schedule, edited to reflect conditions as-installed.
- f. Final keying schedule
- g. Copies of floor plans with keying nomenclature
- h. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.
- i. Copy of warranties including appropriate reference numbers for manufacturers to identify project.

1.5 QUALITY ASSURANCE

- A. Product Substitutions: Comply with product requirements and as specified herein.
 1. Where products indicate "acceptable manufacturers" or "approved equal", provide product from specified manufacturers, subject to compliance with specified requirements and "Single Source Responsibility" requirements stated herein.
- B. Supplier Qualifications and Responsibilities: Recognized architectural hardware supplier with record of successful in-service performance for supplying door hardware similar in quantity, type, and quality to that indicated for this Project and that provides certified Architectural Hardware Consultant (AHC) available to Owner, Architect, and Contractor, at reasonable times during the Work for consultation.
 1. Warehousing Facilities: In Project's vicinity.
 2. Scheduling Responsibility: Preparation of door hardware and keying schedules.
 3. Engineering Responsibility: Preparation of data for electrified door hardware, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.
 4. Coordination Responsibility: Coordinate installation of electronic security hardware with Architect and electrical engineers and provide installation and technical data to Architect and other related subcontractors.
 - a. Upon completion of electronic security hardware installation, inspect and verify that all components are working properly.
- C. Installer Qualifications: Qualified tradesmen, skilled in application of commercial grade hardware with record of successful in-service performance for installing door hardware similar in quantity, type, and quality to that indicated for this Project.
- D. Architectural Hardware Consultant Qualifications: Person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and meets these requirements:
 1. For door hardware, DHI-certified, Architectural Hardware Consultant (AHC).

2. Can provide installation and technical data to Architect and other related subcontractors.
 3. Can inspect and verify components are in working order upon completion of installation.
 4. Capable of producing wiring diagrams.
 5. Capable of coordinating installation of electrified hardware with Architect and electrical engineers.
- E. Single Source Responsibility: Obtain each type of door hardware from single manufacturer.
1. Provide electrified door hardware from same manufacturer as mechanical door hardware, unless otherwise indicated.
 2. Manufacturers that perform electrical modifications and that are listed by testing and inspecting agency acceptable to authorities having jurisdiction are acceptable.
- F. Fire-Rated Door Openings: Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed and are identical to products tested by Underwriters Laboratories, Intertek Testing Services, or other testing and inspecting organizations acceptable to authorities having jurisdiction for use on types and sizes of doors indicated, based on testing at positive pressure and according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.
- G. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.
1. Air Leakage Rate: Maximum air leakage of 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) at tested pressure differential of 0.3-inch wg (75 Pa) of water.
- H. Means of Egress Doors: Latches do not require more than 15 lbf (67 N) to release latch. Locks do not require use of key, tool, or special knowledge for operation.
- I. Accessibility Requirements: For door hardware on doors in an accessible route, comply with governing accessibility regulations cited in "REFERENCES" article, herein.
1. Provide operating devices that do not require tight grasping, pinching, or twisting of wrist and that operate with force of not more than 5 lbf (22.2 N).
 2. Maximum opening-force requirements:
 - a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf (22.2 N) applied perpendicular to door.
 - b. Sliding or Folding Doors: 5 lbf (22.2 N) applied parallel to door at latch.
 - c. Fire Doors: Minimum opening force allowable by authorities having jurisdiction.
 3. Bevel raised thresholds with slope of not more than 1:2. Provide thresholds not more than 1/2 inch (13 mm) high.

4. Adjust door closer sweep periods so that, from open position of 70 degrees, door will take at least 3 seconds to move to 3 inches (75 mm) from latch, measured to leading edge of door.
- J. Keying Conference [CONTACT CITY OF SAN DIEGO LOCK SHOP TO CONFIRM REQUIREMENT]: Conduct conference at Project site to comply with requirements.
1. Attendees: Owner, Contractor, Architect, Installer, [Owner's security consultant,] and Supplier's Architectural Hardware Consultant.
 2. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including:
 - a. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
 - b. Preliminary key system schematic diagram.
 - c. Requirements for key control system.
 - d. Requirements for access control.
 - e. Address for delivery of keys.
- K. Pre-installation Conference: Conduct conference at Project site <Insert alternate location>.
1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 2. Inspect and discuss preparatory work performed by other trades.
 3. Review required testing, inspecting, and certifying procedures.
- L. Coordination Conferences:
1. Installation Coordination Conference: Prior to hardware installation, schedule and hold meeting to review questions or concerns related to proper installation and adjustment of door hardware.
 - a. Attendees: Door hardware supplier, door hardware installer, Contractor.
 - b. After meeting, provide letter of compliance to Architect, indicating when meeting was held and who was in attendance.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site.
- B. Tag each item or package separately with identification coordinated with final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package.
1. Deliver each article of hardware in manufacturer's original packaging.
- C. Project Conditions:
1. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.

2. Provide secure lock-up for door hardware delivered to Project, but not yet installed. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.
- D. Protection and Damage:
1. Promptly replace products damaged during shipping.
 2. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during Work.
 3. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.
- E. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.
- F. Deliver keys[and permanent cores] to City of San Diego Lock Shop by registered mail or overnight package service.

1.7 COORDINATION

- A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete. Concrete, reinforcement, and formwork requirements are specified in Division 03.
- B. Installation Templates: Distribute for doors, frames, and other work specified to be factory prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- C. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.
- D. Direct shipments not permitted, unless approved by Contractor.

1.8 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.
 1. Warranty Period: Years from date of Substantial Completion, for durations indicated.
 - a. Closers:
 - 1) Mechanical: 30 years.
 - b. Exit Devices:
 - 1) Mechanical: 3 years.
 - c. Locksets:
 - 1) Mechanical: 3 years.
 - d. Continuous Hinges: Lifetime warranty.

- e. Key Blanks: Lifetime
- 2. Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Approval of manufacturers and/or products other than those listed as "Scheduled Manufacturer " or "Acceptable Manufacturers" in the individual article for the product category shall be in accordance with QUALITY ASSURANCE article, herein.
- B. Approval of products from manufacturers indicated in "Acceptable Manufacturers" is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer's product.
- C. Hand of Door: Drawings show direction of slide, swing, or hand of each door leaf. Furnish each item of hardware for proper installation and operation of door movement as shown.
- D. Where specified hardware is not adaptable to finished shape or size of members requiring hardware, furnish suitable types having same operation and quality as type specified, subject to Architect's approval.

2.2 MATERIALS

- A. Fasteners
 - 1. Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation.
 - 2. Furnish screws for installation with each hardware item. Finish exposed (exposed under any condition) screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work including prepared for paint surfaces to receive painted finish.
 - 3. Provide concealed fasteners for hardware units exposed when door is closed except when no standard units of type specified are available with concealed fasteners. Do not use thru-bolts for installation where bolt head or nut on opposite face is exposed in other work unless thru-bolts are required to fasten hardware securely. Review door specification and advise Architect if thru-bolts are required.
 - 4. Install hardware with fasteners provided by hardware manufacturer.
- B. Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation.
 - 1. Where fasteners are exposed to view: Finish to match adjacent door hardware material.

2.3 HINGES

- A. Provide three-knuckle, concealed bearing hinges.
 - 1. Manufacturers and Products:
 - a. Scheduled Manufacturer and Product: Ives 3CB series – Or Approved Equal
- B. Requirements:
 - 1. 1-3/4 inch (44 mm) thick doors, up to and including 36 inches (914 mm) wide:
 - a. Exterior: Standard weight, bronze or stainless steel, 4-1/2 inches (114 mm) high
 - b. Interior: Standard weight, steel, 4-1/2 inches (114 mm) high
 - 2. 1-3/4 inch (44 mm) thick doors over 36 inches (914 mm) wide:
 - a. Exterior: Heavy weight, bronze/stainless steel, 5 inches (127 mm) high
 - b. Interior: Heavy weight, steel, 5 inches (127 mm) high
 - 3. 2 inches or thicker doors:
 - a. Exterior: Heavy weight, bronze or stainless steel, 5 inches (127 mm) high
 - b. Interior: Heavy weight, steel, 5 inches (127 mm) high
 - 4. Provide three hinges per door leaf for doors 90 inches (2286 mm) or less in height, and one additional hinge for each 30 inches (762 mm) of additional door height.
 - 5. Where new hinges are specified for existing doors or existing frames, provide new hinges of identical size to hinge preparation present in existing door or existing frame.
 - 6. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:
 - a. Steel Hinges: Steel pins
 - b. Non-Ferrous Hinges: Stainless steel pins
 - c. Out-Swinging Exterior Doors: Non-removable pins
 - d. Out-Swinging Interior Lockable Doors: Non-removable pins
 - e. Interior Non-lockable Doors: Non-rising pins
 - 7. Width of hinges: 4-1/2 inches (114 mm) at 1-3/4 inch (44 mm) thick doors, and 5 inches (127 mm) at 2 inches (51 mm) or thicker doors. Adjust hinge width as required for door, frame, and wall conditions to allow proper degree of opening.
 - 8. Doors 36 inches (914 mm) wide or less furnish hinges 4-1/2 inches (114 mm) high; doors greater than 36 inches (914 mm) wide furnish hinges 5 inches (127 mm) high, heavy weight or standard weight as specified.
 - 9. Provide hinges with electrified options as scheduled in the hardware sets. Provide with sufficient number and wire gage to accommodate electric function of specified hardware. Locate electric hinge at second hinge from bottom or nearest to electrified locking component.
 - 10. Provide mortar guard for each electrified hinge specified, unless specified in hollow metal frame specification.
 - 11. Provide spring hinges where specified. Provide two spring hinges and one bearing hinge per door leaf for doors 90 inches (2286 mm) or less in height. Provide one additional bearing hinge for each 30 inches (762 mm) of additional door height.

2.4 CONTINUOUS HINGES

A. Stainless Steel

1. Manufacturers:

- a. Scheduled Manufacturer: Ives - Or Approved Equal

2. Requirements:

- a. Provide pin and barrel continuous hinges conforming to ANSI/BHMA A156.26, Grade 2.
- b. Provide pin and barrel continuous hinges fabricated from 14 gauge, type 304 stainless steel.
- c. Provide twin self-lubricated nylon bearings at each hinge knuckle, with 0.25-inch (6 mm) diameter stainless steel pin.
- d. Provide hinges capable of supporting door weights up to 600 pounds, and successfully tested for 1,500,000 cycles.
- e. On fire-rated doors, provide pin and barrel continuous hinges that are classified for use on rated doors by testing agency acceptable to authority having jurisdiction.
- f. Provide pin and barrel continuous hinges with electrified options as scheduled in the hardware sets. Provide with sufficient number and wire gage to accommodate electric function of specified hardware.
- g. Install hinges with fasteners supplied by manufacturer.
- h. Provide hinges with symmetrical hole pattern.

2.5 FLUSH BOLTS

A. Manufacturers:

- 1. Scheduled Manufacturer: Ives – Or Approved Equal

B. Requirements:

- 1. Provide automatic, constant latching, and manual flush bolts with forged bronze or stainless steel face plates, extruded brass levers, and with wrought brass guides and strikes. Provide 12 inch (305 mm) steel or brass rods at doors up to 90 inches (2286 mm) in height. For doors over 90 inches (2286 mm) in height increase top rods by 6 inches (152 mm) for each additional 6 inches (152 mm) of door height. Provide dust-proof strikes at each bottom flush bolt.

2.6 COORDINATORS

A. Manufacturers:

- 1. Scheduled Manufacturer: Ives - Or Approved Equal

B. Requirements:

1. Where pairs of doors are equipped with automatic flush bolts, an astragal, or other hardware that requires synchronized closing of the doors, provide bar-type coordinating device, surface applied to underside of stop at frame head.
2. Provide filler bar of correct length for unit to span entire width of opening, and appropriate brackets for parallel arm door closers and surface vertical rod exit device strikes. Factory-prep coordinators for vertical rod devices if required.

2.7 MORTISE LOCKS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: Best 45H Series – Or Approved Equal

B. Requirements:

1. Provide mortise locks conforming to ANSI/BHMA A156.13 Series 1000, Grade 1 Operational, Grade 1 Security, and manufactured from heavy gauge steel, containing components of steel with a zinc dichromate plating for corrosion resistance. Provide lock case that is multi-function and field reversible for handling without opening case. Cylinders: Refer to "KEYING" article, herein.
2. Provide locks with standard 2-3/4 inches (70 mm) backset with full 3/4 inch (19 mm) throw stainless steel mechanical anti-friction latchbolt. Provide deadbolt with full 1 inch (25 mm) throw, constructed of stainless steel.
3. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
4. Lever Trim: Solid brass, bronze, or stainless steel, cast or forged in design specified, with wrought roses and external lever spring cages. Provide thru-bolted levers with 2-piece spindles.
 - a. Lever/Escutcheon Design: Best 14J.

2.8 EXIT DEVICES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: Precision Apex 2000 Series – Or Approved Equal

B. Requirements:

1. Provide exit devices tested to ANSI/BHMA A156.3 Grade 1, and UL listed for Panic Exit or Fire Exit Hardware. Cylinders: Refer to "KEYING" article, herein.
2. Provide touchpad type exit devices, fabricated of brass, bronze, stainless steel, or aluminum, plated to standard architectural finishes to match balance of door hardware.
3. Touchpad: Extend minimum of one half of door width. Match exit device finish, stainless steel for US26, US26D, US28, US32, and US32D finishes; and for all other finishes, provide compatible finish to exit device. Provide compression springs in devices, latches, and outside trims or controls; tension springs also acceptable.
4. Provide exit devices with deadlatching feature for security and for future addition of alarm kits and/or other electrified requirements.

5. Provide exit devices with manufacturer's approved strikes.
6. Provide exit devices cut to door width and height. Locate exit devices at height recommended by exit device manufacturer, allowable by governing building codes, and approved by Architect.
7. Mount mechanism case flush on face of doors, or provide spacers to fill gaps behind devices. Where glass trim or molding projects off face of door, provide glass bead kits.
8. Provide UL labeled fire exit hardware for fire rated openings.

2.9 CYLINDERS [EXISTING BEST KEY SYSTEM, CONTACT CITY OF SAN DIEGO LOCK SHOP FOR REQUIREMENTS]

A. Manufacturers:

1. Scheduled Manufacturer: Best – Or Approved Equal

B. Requirements:

1. Provide cylinders/cores, from the same manufacturer of locksets, compliant with ANSI/BHMA A156.5; latest revision, Section 12, Grade 1; permanent cylinders; cylinder face finished to match lockset, manufacturer's series as indicated. Refer to "KEYING" article, herein.
2. Provide cylinders in the below-listed configuration(s), distributed throughout the Project as indicated.
 - a. Conventional cylinder with interchangeable core (SFIC) core as directed by city locksmith.
 - b. Keying: Manufacturer-keyed permanent cylinders/cores, configured into keying system per "KEYING" article herein.
 - c. Features: Cylinders/cores shall incorporate the following features.
3. Nickel silver bottom pins.
4. Temporary Construction Cylinder Keying. OPTION, AS DIRECTED BY CITY LOCK SHOP
 - a. Provide construction cores that permit voiding construction keys without cylinder removal, furnished in accordance with the following requirements.
 - 1) Split Key Construction Keying System.
 - 2) 3 "split" construction control keys and extractor tool.
 - 3) 12 construction change (day) keys.
 - b. Owner or Owner's Representative will void operation of temporary construction keys.
5. Replaceable Construction Cores. OPTION if using temporary construction cores in IC core cylinder in either F/S or S/F.
 - a. Provide temporary construction cores replaceable by permanent cores, furnished in accordance with the following requirements.
 - 1) 12 construction change (day) keys.
 - b. Owner or Owner's Representative will replace temporary construction cores with permanent cores.

2.10 KEYING [EXISTING BEST KEY SYSTEM, CONTACT CITY OF SAN DIEGO LOCK SHOP FOR REQUIREMENTS]

- A. Provide a factory registered keying system, complying with guidelines in ANSI/BHMA A156.28, incorporating decisions made at keying conference.
 - B. Requirements:
 - 1. Provide permanent cylinders/cores keyed by the manufacturer according to the following key system.
 - a. Keying system as directed by the Owner.
 - 2. Forward bitting list and keys separately from cylinders, by means as directed by Owner. Failure to comply with forwarding requirements shall be cause for replacement of cylinders/cores involved at no additional cost to Owner.
 - 3. Provide keys with the following features.
 - a. Material: Nickel silver; minimum thickness of .107-inch (2.3mm)
 - 4. Identification:
 - a. Mark permanent cylinders/cores and keys with applicable blind code per DHI publication "Keying Systems and Nomenclature" for identification. Blind code marks shall not include actual key cuts.
 - b. Identification stamping provisions must be approved by the Architect and Owner.
 - c. Stamp cylinders/cores and keys with Owner's unique key system facility code as established by the manufacturer; key symbol and embossed or stamped with "DO NOT DUPLICATE" along with the "PATENTED" or patent number to enforce the patent protection.
 - d. Failure to comply with stamping requirements shall be cause for replacement of keys involved at no additional cost to Owner.
 - e. Forward permanent cylinders/cores to Owner, separately from keys, by means as directed by Owner.
 - 5. Quantity: Furnish in the following quantities.
 - a. Change (Day) Keys: 3 per cylinder/core.
 - b. Permanent Control Keys: 3.
 - c. Master Keys: 6.
 - d. Unused balance of key blanks shall be furnished to Owner with the cut keys.
- NOTE: construction keys are for temporary construction keying option; presentation keys are for presenting to Owner for ceremonial purposes.
- e. Extra Keys:
 - 1) 2 Presentation Keys
 - 2) 2 Construction Keys

2.11 DOOR CLOSERS

- A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: LCN 4040XP series.
2. Acceptable Manufacturers and Products: Or Approved Equal.

B. Requirements:

1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory. ISO 9000 certify closers. Stamp units with date of manufacture code.
2. Provide door closers with fully hydraulic, full rack and pinion action with high strength cast iron cylinder, and full complement bearings at shaft.
3. Cylinder Body: 1-1/2 inch (38 mm) diameter with 3/4 inch (19 mm) diameter double heat-treated pinion journal.
4. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck.
7. Provide closers with solid forged steel main arms and factory assembled heavy-duty forged forearms for parallel arm closers.
8. Pressure Relief Valve (PRV) Technology: Not permitted.
9. Finish for Closer Cylinders, Arms, Adapter Plates, and Metal Covers: Powder coating finish which has been certified to exceed 100 hours salt spray testing as described in ANSI Standard A156.4 and ASTM B117, or has special rust inhibitor (SRI).
10. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

2.12 DOOR CLOSERS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: LCN 4010/4110/4020 series.
2. Acceptable Manufacturers and Products: Or Approved Equal.

B. Requirements:

1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory. Certify surface mounted mechanical closers to meet fifteen million (15,000,000) full load cycles. ISO 9000 certify closers. Stamp units with date of manufacture code.
2. Provide door closers with fully hydraulic, full rack and pinion action with high strength cast iron cylinder, and full complement bearings at shaft.
3. Cylinder Body: 1-1/2 inch (38 mm) diameter with 11/16 inch (17 mm) diameter double heat-treated pinion journal.
4. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.

5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck.
7. Provide closers with solid forged steel main arms and factory assembled heavy-duty forged forearms for parallel arm closers. When closers are parallel arm mounted, provide closers which mount within 6-inch (152 mm) top rail without use of mounting plate so that closer is not visible through vision panel from pull side.
8. Pressure Relief Valve (PRV) Technology: Not permitted.
9. Finish for Closer Cylinders, Arms, Adapter Plates, and Metal Covers: Powder coating finish which has been certified to exceed 100 hours salt spray testing as described in ANSI/BHMA Standard A156.4 and ASTM B117, or has special rust inhibitor (SRI).
10. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

2.13 VANDAL TRIM

A. Manufacturers:

1. Scheduled Manufacturer: Trimco – Or Approved Equal

2.14 PROTECTION PLATES

A. Manufacturers:

1. Scheduled Manufacturer: Ives – Or Approved Equal

B. Requirements:

1. Provide kick plates, mop plates, and armor plates minimum of 0.050 inch (1 mm) thick as scheduled. Furnish with sheet metal or wood screws, finished to match plates.
2. Sizes of plates:
 - a. Kick Plates: 10 inches (254 mm) high by 2 inches (51 mm) less width of door on single doors, 1 inch (25 mm) less width of door on pairs
 - b. Mop Plates: 4 inches (102 mm) high by 2 inches (51 mm) less width of door on single doors, 1 inch (25 mm) less width of door on pairs
 - c. Armor Plates: 36 inches (914 mm) high by 2 inches (51 mm) less width of door on single doors, 1 inch (25 mm) less width of door on pairs

2.15 DOOR STOPS AND HOLDERS

A. Manufacturers:

1. Scheduled Manufacturer: Ives – Or Approved Equal

B. Provide door stops at each door leaf:

1. Provide wall stops wherever possible. Provide convex type where mortise type locks are used and concave type where cylindrical type locks are used.
2. Where a wall stop cannot be used, provide universal floor stops for low or high rise options.
3. Where wall or floor stop cannot be used, provide medium duty surface mounted overhead stop.

2.16 THRESHOLDS, SEALS, DOOR SWEEPS, AUTOMATIC DOOR BOTTOMS, AND GASKETING

A. Manufacturers:

1. Scheduled Manufacturer: Zero International
2. Acceptable Manufacturers: NGP, Pemko - Or Approved Equal

B. Requirements:

1. Provide thresholds, weatherstripping (including door sweeps, seals, astragals) and gasketing systems (including smoke, sound, and light) as specified and per architectural details. Match finish of other items.
2. Size of thresholds::
 - a. Saddle Thresholds: 1/2 inch (13 mm) high by jamb width by door width
 - b. Bumper Seal Thresholds: 1/2 inch (13 mm) high by 5 inches (127 mm) wide by door width
3. Provide door sweeps, seals, astragals, and auto door bottoms only of type where resilient or flexible seal strip is easily replaceable and readily available.

2.17 SILENCERS

A. Manufacturers:

1. Scheduled Manufacturer: Ives -Or Approved Equal

B. Requirements:

1. Provide "push-in" type silencers for hollow metal or wood frames.
2. Provide one silencer per 30 inches (762 mm) of height on each single frame, and two for each pair frame.
3. Omit where gasketing is specified.

2.18 LATCH PROTECTORS

A. Manufacturers:

1. Scheduled Manufacturer: Ives – Or Approved Equal

B. Provide latch protectors of type required to function with specified lock.

2.19 FINISHES

- A. Finish: BHMA 626/652 (US26D); except:
 - 1. Hinges at Exterior Doors: BHMA 630 (US32D)
 - 2. Continuous Hinges: BHMA 630 (US32D)
 - 3. Push Plates, Pulls, and Push Bars: BHMA 630 (US32D)
 - 4. Protection Plates: BHMA 630 (US32D)
 - 5. Overhead Stops and Holders: BHMA 630 (US32D)
 - 6. Door Closers: Powder Coat to Match
 - 7. Wall Stops: BHMA 630 (US32D)
 - 8. Latch Protectors: BHMA 630 (US32D)
 - 9. Weatherstripping: Clear Anodized Aluminum
 - 10. Thresholds: Mill Finish Aluminum

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Existing Door and Frame Compatibility: Field verify existing doors and frames receiving new hardware and existing conditions receiving new openings. Verify that new hardware is compatible with existing door and frame preparation and existing conditions.
- C. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Mounting Heights: Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.
 - 1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
 - 2. Custom Steel Doors and Frames: HMMA 831.
 - 3. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
- B. Install each hardware item in compliance with manufacturer's instructions and recommendations, using only fasteners provided by manufacturer.
- C. Do not install surface mounted items until finishes have been completed on substrate. Protect all installed hardware during painting.

- D. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.
- E. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
- F. Install operating parts so they move freely and smoothly without binding, sticking, or excessive clearance.
- G. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than quantity recommended by manufacturer for application indicated or one hinge for every 30 inches (750 mm) of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.
- H. Lock Cylinders: Install construction cores to secure building and areas during construction period.
 - 1. Replace construction cores with permanent cores as indicated in keying section.
 - 2. . OPTION: Furnish permanent cores to Owner for installation.
- I. Door Closers: Mount closers on room side of corridor doors, inside of exterior doors, and stair side of stairway doors from corridors. Closers shall not be visible in corridors, lobbies and other public spaces unless approved by Architect.
- J. Thresholds: Set thresholds in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."
- K. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they may impede traffic or present tripping hazard.
- L. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
- M. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
- N. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

3.3 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
 - 1. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.

- B. Occupancy Adjustment: Approximately three months after date of Substantial Completion, Installer's Architectural Hardware Consultant shall examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors, door hardware, and electrified door hardware.

3.4 CLEANING AND PROTECTION

- A. Clean adjacent surfaces soiled by door hardware installation.
- B. Clean operating items as necessary to restore proper function and finish.
- C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

3.5 DEMONSTRATION

- A. Provide training for Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes.

3.6 DOOR HARDWARE SCHEDULE

- A. Locksets, exit devices, and other hardware items are referenced in the following hardware sets for series, type and function. Refer to the above-specifications for special features, options, cylinders/keying, and other requirements.
- B. Hardware Sets:

Hardware Group 01 - TOILET ROOM DOORS

Door(s):

01 02 07 08

Qty		Description	Catalog Number	Finish	Mfr
1	EA	CONT. HINGE	700	630	IVE
1	EA	DORMITORY LOCK	45H-7-T-14J-VIT	630	BES
		W/DB			
1	EA	MORT. CYLINDER	BLDG STANDARD	626	
1	EA	LOCK GUARD	LG12	630	IVE
1	EA	SURFACE CLOSER	4111 SHCUSH	689	LCN
1	EA	RAIN DRIP	142A	AL	ZER
3	EA	SILENCER	SR64	GRY	IVE
1	EA	UNISEX ADA SIGNAGE	SBH12U-1 X SB444	BLK	SBH

Undercut door 6"

Hardware Group 02 - TOILET ROOM DOORS (IS)

Door(s):

EB Scripps Park Comfort Station
14010.60

08 71 00 - 19

DOOR HARDWARE

03	04	05	06		
Qty		Description	Catalog Number	Finish	Mfr
1	EA	CONT. HINGE	700	630	IVE
1	EA	DORMITORY LOCK W/DB	45H-7-T-14J-VIT	630	BES
1	EA	MORT. CYLINDER	BLDG STANDARD	626	
1	EA	SURFACE CLOSER	4011 H	689	LCN
1	EA	WALL STOP	WS406/407CVX [REQUIRES WALL BACKING]	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

Undercut door 6"

Hardware Group 03 - PARK STORAGE

Door(s):

18

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HINGE	3CB1 4.5 X 4.5	630	IVE
1	EA	STOREROOM LOCK	45H-7-D-14J	630	BES
1	EA	MORT. CYLINDER	BLDG STANDARD	626	
1	EA	WALL STOP	WS406/407CVX [REQUIRES WALL BACKING]	630	IVE
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	546A-226	A	ZER
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group 04 - PLUMBING CHASE DOORS

Door(s):

11

16

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HINGE	3CB1 4.5 X 4.5 NRP	630	IVE
1	EA	MORTISE LOCK	45H-7-TD-14J (LESS O.S. TRIM)	630	BES
1	EA	MORT. CYLINDER	BLDG STANDARD	626	
1	EA	ANTI-VANDAL PULL	1096HA	630	TRI
1	EA	SURFACE CLOSER	4111 SHCUSH	689	LCN
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	546A-226	A	ZER
1	EA	RAIN DRIP	142A (OMIT WHERE OVERHANG OCCURS)	A	ZER
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group 05 - STORAGE/TRASH ROOM DOORS

Door(s):

17 19

Qty		Description	Catalog Number	Finish	Mfr
6	EA	HINGE	3CB1 4.5 X 4.5 NRP	630	IVE
1	SET	AUTO FLUSH BOLT	FB31P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	MORTISE LOCK	45H-7-TD-14J (LESS O.S. TRIM)	630	BES
1	EA	MORT. CYLINDER	BLDG STANDARD	626	
1	EA	ANTI-VANDAL PULL	1097HA	630	TRI
1	EA	COORDINATOR	COR X FL	628	IVE
2	EA	MOUNTING BRACKET	MB	689	IVE
2	EA	SURFACE CLOSER	4111 SHCUSH	689	LCN
2	EA	ARMOR PLATE	8400 34" X 2" LDW B-CS	630	IVE
1	EA	THRESHOLD	546A-V3-226	A	ZER
2	EA	SILENCER	SR64	GRY	IVE

FACTORY INSTALLED ASTRAGAL AT PULL SIDE OF THE ACTIVE DOOR

Hardware Group SL-01 - SLIDING DOOR SYSTEM

Door(s):

09 20

Qty		Description	Catalog Number	Finish	Mfr
2	EA	SLIDING DOOR HARDWARE	ZERO CLEARANCE 180 COMPLETE SYSTEM	630	BRI
2	EA	DOOR PULL	8103EZHD 10" STD	630-316	IVE
1	EA	DOOR TOP WEATHERSTRIP	142*	AL	ZER
1	EA	CYLINDER OPERATED FLUSHBOLT	1870-3	628	ADA
1	EA	MORT. CYLINDER W/ADA CAM	BLDG STANDARD	626	UNK
1	EA	CONSTANT LATCH FLUSH BOLT	FB51P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	ASTRAGAL	43STST	630	ZER

*OR CUSTOM BRAKE-SHAPED METAL TO CONFORM TO ARCHITECTURAL DETAIL

End of Section

PROJECT: EB Scripps Park Comfort Station
 PROJECT NO.: 14010.60
 DATE: January 25, 2018



FINISH SCHEDULE

EB Scripps Park Comfort Station

EXTERIOR

C1	Concrete Paving + Floors	Integral Color Concrete Davis Colors: San Diego Buff, 5237 Finish 6: Medium Broom Finish Top Coat: Grace Top Cast #5
C2	Concrete Walls	Integral Color Concrete Solomon Colors: Desert Tan Finish 1: Smooth Plywood Formed Finish 2: Board Formed, Vertical US Formliners: Kongo Finish 3: Sea Shell Stamp Proline, Seamless Coquina Stone with Sea Shells Finish 4: Smooth with Light Aggregate Smooth Plywood Formed, Polished Finish 5: Smooth with Medium Aggregate Smooth Plywood Formed, Polished
CB	Natural Cobble Stone	Per Landscape Drawings
CP	Cement Plaster	Omega Products International Color: Floral White, 420 Finish: Santa Barbara
FG	Fiberglass (Doors + Frames)	Chem-Pruf Door Co. Barn Doors: Wood Grain Finish, Cut the Mustard, SW 6384 Toilet Room Doors: Matte Finish, Cut the Mustard, SW 6384 Service Doors: Matte Finish, Cocoa Whip, SW 9084
P1	Paint (Columns)	PPG, Corafon Coating System Color: Champagne Bronze, SRI 40 Finish: Satin
P2	Paint (Misc. Metal)	PPG, Corafon Coating System Color: Champagne Bronze, SRI 40 Finish: Satin

PC	PreCast Concrete Trough Sink	DC Custom Concrete Color: San Diego Buff, 5237 Finish: Satin
TSP1	Translucent Panel Skylight Frame	Moxie Air Board UV, 3/4" Color: Satin Opal (top) and Light Blue (bottom) Edge: Ext 4 Finish Edge – Silicon Leslie Skylights PPG, Corafalon Coating System Color: Champagne Bronze, SRI 40 Finish: Satin
W1	Wood (Trellis)	Alaskan Yellow Cedar Sherwin Williams SuperDeck Exterior WB Semi Solid Stain Bamboo, SW 3565SS

INTERIOR

SS	Solid Surface Desk	Silestone Color: Blanco Maple, 14 Finish: Matte, Eased Edges
TP	Toilet Partitions (HDPE)	Scranton Products, Hiny Hider Color: Sandcastle Texture: Orange Peel
TSP2	Translucent Panel Changing Room Partition Frame	Moxie Air Board UV, 3/4" Color: Satin Opal (both sides) Edge: Ext 4 Finish Edge – Silicon Leslie Skylights PPG, Corafalon Coating System Color: Champagne Bronze, SRI 40 Finish: Satin

SECTION 09 22 36

LATH

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Metal lath for cement plaster.
- B. Furring for metal lath.

1.02 RELATED REQUIREMENTS

- A. Section 06 10 00 - Rough Carpentry: Sheathing on exterior walls.
- B. Section 09 24 00 - Cement Plastering.

1.03 REFERENCE STANDARDS

- A. ASTM C847 - Standard Specification for Metal Lath; 2014a.
- B. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2016.
- C. ASTM C1032 - Standard Specification for Woven Wire Plaster Base; 2014.
- D. ASTM C1063 - Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster; 2016c.

1.04 SUBMITTALS

- A. Product Data: Provide data on furring and lathing components, structural characteristics, material limitations, and finish.
- B. Samples:
 - 1. Submit two samples, 2 by 2 inch in size illustrating lath material and finish.

1.05 QUALITY ASSURANCE

- A. Maintain one copy of each installation standard referenced on site throughout the duration of lathing and plastering work.
- B. Installer Qualifications: Company specializing in performing the work of this section with documented experience.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Metal Lath:
 - 1. Alabama Metal Industries Corporation: www.amico-lath.com.
 - 2. Cemco: www.cemcosteel.com.
 - 3. Semco Southeastern Metals: www.semetals.com.
 - 4. Substitutions: Or Approved Equal.

2.02 FRAMING AND LATH ASSEMBLIES

- A. Provide completed assemblies with the following characteristics:
 - 1. Maximum Deflection of Vertical Assemblies: 1:360 under lateral point load of 100 lbs.
 - 2. Maximum Deflection of Horizontal Assemblies: 1:240 deflection under dead loads and wind uplift.

2.03 FRAMING MATERIALS

- A. Furring Channels: Formed steel, minimum 0.020 inch thick, 3/8 inch deep by 7/8 inch high, splicing permitted; stainless steel.
- B. Hangers: Steel wire, of size and type to suit application, to support ceiling components in place to deflection limits as indicated.
- C. Ceiling Hangers: Rolled steel sections, of size and type to suit application, to rigidly support ceiling components in place to deflection limits as indicated; stainless steel.
- D. Lateral Bracing: Formed steel, minimum 0.060 inch thick, size and length as required; stainless steel.

2.04 LATH

- A. Diamond Mesh Metal Lath: ASTM C847, galvanized; self-furring.
 - 1. Weight: To suit application and as specified in ASTM C841 or ASTM C1063 for framing spacing.
- B. Beads, Screeds, Joint Accessories, and Other Trim: Depth governed by plaster thickness, and maximum possible lengths.
 - 1. Material: Formed stainless steel, expanded metal flanges.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that substrates are ready to receive work and conditions are suitable for application.
- C. Do not begin until unacceptable conditions have been corrected.
- D. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 INSTALLATION - GENERAL

- A. Install metal lath and furring for Portland cement plaster in accordance with ASTM C1063.

3.03 CEILING AND SOFFIT FRAMING INSTALLATION

- A. Install furring after work above ceiling or soffit is complete. Coordinate the location of hangers with other work.
- B. Securely anchor hangers to structural members. Space hangers as required to limit deflection to criteria indicated. Use rigid hangers at exterior soffits.

- C. Space main carrying channels at maximum 72 inch on center, and not more than 6 inches from wall surfaces. Lap splice securely.
- D. Securely fix carrying channels to hangers to prevent turning or twisting and to transmit full load to hangers.
- E. Install furring channels perpendicular to carrying channels, not more than 2 inches from perimeter walls, and rigidly secure. Lap splices securely.

3.04 CONTROL AND EXPANSION JOINT INSTALLATION

- A. Locate joints as indicated on drawings and comply with ASTM C1063.
 - 1. Area of plaster panel not to exceed 100 sq ft for horizontal, curved or angled surfaces.
 - 2. Spacing between control joints not to exceed 18 ft in each direction.
 - 3. Area bounded by control joints not to exceed a length-to-width ratio of 2-1/2 to 1.
- B. Install prefabricated joint accessories in accordance with ASTM C1063.

3.05 LATH INSTALLATION

- A. Continuously reinforce internal angles with corner mesh, except where the metal lath returns 3 inches from corner to form the angle reinforcement; fasten at perimeter edges only.
- B. Place corner bead at external wall corners; fasten at outer edges of lath only.
- C. Place base screeds at termination of plaster areas; secure rigidly in place.
- D. Place lath vertically above each top corner and each side of door frames to 6 inches above ceiling line.
- E. Place casing beads at terminations of plaster finish. Butt and align ends. Secure rigidly in place.
- F. Place additional strip mesh diagonally at corners of lathed openings. Secure rigidly in place.

END OF SECTION

SECTION 09 24 00

CEMENT PLASTERING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Cement plastering.

1.02 RELATED REQUIREMENTS

- A. Section 06 10 00 - Rough Carpentry: Wood stud framing for plaster.
- B. Section 09 22 36 - Lath: Lath, furring, beads, screeds, and joint accessories for plaster base.
- C. Section 09 91 13 - Exterior Painting.

1.03 REFERENCE STANDARDS

- A. ASTM C1178/C1178M - Standard Specification for Coated Glass Mat Water-Resistant Gypsum Backing Panel; 2013.
- B. ASTM C91/C91M - Standard Specification for Masonry Cement; 2012.
- C. ASTM C150/C150M - Standard Specification for Portland Cement; 2016.
- D. ASTM C206 - Standard Specification for Finishing Hydrated Lime; 2014.
- E. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes; 2006 (Reapproved 2011).
- F. ASTM C897 - Standard Specification for Aggregate for Job-Mixed Portland Cement-Based Plasters; 2015.
- G. ASTM C926 - Standard Specification for Application of Portland Cement-Based Plaster; 2016b.
- H. ICC (IBC) - International Building Code; 2015.

1.04 SUBMITTALS

- A. Product Data: Provide data on plaster materials and trim accessories.
- B. Samples:
 - 1. Submit two samples, 12 by 12 inch in size illustrating finish color and texture.

1.05 QUALITY ASSURANCE

- A. Copies of Documents at Project Site: Maintain at the project site a copy of each referenced document that prescribes execution requirements.

1.06 FIELD CONDITIONS

- A. Exterior Plaster Work: Do not apply plaster when substrate or ambient air temperature is 40 degrees F or lower, or when temperature is expected to drop below 40 degrees F within 48 hours of application.

PART 2 PRODUCTS

2.01 CEMENT PLASTER APPLICATIONS

- A. Lath Plaster Base: Metal lath.
 - 1. Plaster Type: Factory prepared plaster mix.
 - 2. First Coat: Apply to a nominal thickness of 3/8 inch.
 - 3. Second Coat: Apply to a nominal thickness of 3/8 inch.
 - 4. Finish Coat: Apply to a nominal thickness of 1/8 inch.
 - a. Texture: Santa Barbara - Smooth.

2.02 JOBSITE MIXED CEMENT PLASTER

- A. Materials:
 - 1. Portland Cement: ASTM C150/C150M, Type I.
 - 2. Lime: ASTM C206, Type S.
 - 3. Sand: Clean, well graded, and complying with ASTM C897.
 - 4. Water: Clean, fresh, potable, and free of mineral or organic matter that could adversely affect plaster.
 - 5. Color Pigment: Mineral oxide type, color as selected.
- B. Plaster Mixes: Proportioned in accordance with ASTM C926; parts by volume.
 - 1. First Coat Over Lath:
 - a. Minimum 2-1/2 parts and maximum 4 parts sand, per total volume of cementitious materials.

2.03 ACCESSORIES

- A. Lath: As specified in Section 09 22 36.
- B. Beads, Screeds, and Joint Accessories: As specified in Section 09 22 36.
- C. Glass Mat Faced Board: Coated glass mat water-resistant gypsum backing panel as defined in ASTM C1178/C1178M.
 - 1. Standard Type: Thickness 1/2 inch.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions are acceptable prior to starting this work.
- B. Verify lath is flat, secured to substrate, and joint and surface perimeter accessories are properly in place.

3.02 MIXING

- A. Mix only as much plaster as can be used prior to initial set.
- B. Mix materials dry, to uniform color and consistency, before adding water.
- C. Protect mixtures from frost or freezing temperatures, contamination, and excessive evaporation.

3.03 APPLICATION

- A. Apply plaster in accordance with manufacturer's written instructions and comply with ASTM C926.
- B. Base Coats:
 - 1. Apply base coat(s) to fully embed lath and to specified thickness.
 - 2. Follow guidelines in ASTM C926 and manufacturer's written installation instructions for moist curing base coats and application of subsequent coats.
- C. Leveling Coat:
 - 1. Apply leveling coat to specified thickness.
 - 2. Fully embed reinforcing mesh in leveling coat.
- D. Finish Coats:
 - 1. Cement Plaster:
 - a. Apply with sufficient material and pressure to ensure complete coverage of base to specified thickness.
 - b. Apply desired surface texture while mix is still workable.
 - c. Float to a consistent finish.
- E. Install exterior contraction joints after initial set, scribed every 3 feet in each direction by cutting through two-thirds of cement plaster depth, neatly, and in straight lines.

3.04 TOLERANCES

- A. Maximum Variation from True Flatness: 1/8 inch in 10 feet.

3.05 REPAIR

- A. Patching: Remove loose, damaged or defective plaster and replace with plaster of same composition; finish to match surrounding area.

END OF SECTION

SECTION 09 91 13

PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints, stains, and varnishes.
- C. Scope: Finish surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.
- D. Do Not Paint or Finish the Following Items:
 - 1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
 - 5. Floors, unless specifically indicated.
 - 6. Glass.
 - 7. Concealed pipes, ducts, and conduits.

1.02 RELATED REQUIREMENTS

- A. Section 05 50 00 - Metal Fabrications: Shop-primed items.

1.03 DEFINITIONS

- A. Conform to ASTM D16 for interpretation of terms used in this section.

1.04 REFERENCE STANDARDS

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.
- B. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications; 2016.
- C. ASTM D4258 - Standard Practice for Surface Cleaning Concrete for Coating; 2005 (Reapproved 2012).
- D. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials; 2015.
- E. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition, www.paintinfo.com.
- F. SCAQMD 1113 - South Coast Air Quality Management District Rule No.1113; current edition.
- G. SSPC V1 (PM1) - Good Painting Practice: Painting Manual, Volume 1; Fourth Edition.
- H. SSPC-SP 13 - Surface Preparation of Concrete; (Reaffirmed 2015); 2003.

1.05 SUBMITTALS

- A. Product Data: Provide complete list of products to be used, with the following information for each:
 - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
 - 2. MPI product number (e.g. MPI #47).
 - 3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
 - 4. Manufacturer's installation instructions.
- B. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.
 - 1. Where sheen is specified, submit samples in only that sheen.
 - 2. Where sheen is not specified, discuss sheen options with Architect before preparing samples, to eliminate sheens definitely not required.
 - 3. Allow 30 days for approval process, after receipt of complete samples by Architect.
 - 4. Paint color submittals will not be considered until color submittals for major materials not to be painted, such as masonry, have been approved.
- C. Samples: Submit two painted samples, illustrating selected colors and textures for each color and system selected with specified coats cascaded. Submit on aluminum sheet, 8 1/2 by 11 inch in size.
- D. Certification: By manufacturer that paints and finishes comply with VOC limits specified.
- E. Manufacturer's Instructions: Indicate special surface preparation procedures.
- F. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.
- G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. Extra Paint and Finish Materials: 1 gallon of each color; from the same product run, store where directed.
 - 2. Label each container with color in addition to the manufacturer's label.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified.

1.07 MOCK-UP

- A. Provide panel, 4 feet long by 4 feet wide, illustrating paint color, texture, and finish.
- B. Locate where directed by Architect.
- C. Mock-up may remain as part of the work.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.09 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Do not apply exterior paint and finishes during rain or snow, or when relative humidity is outside the humidity ranges required by the paint product manufacturer.
- D. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Provide paints and finishes from the same manufacturer to the greatest extent possible.
 - 1. Substitution of a different paint system using MPI-approved products by the same manufacturer will be considered.
- B. Primer Sealers: Same manufacturer as top coats.

2.02 PAINTS AND FINISHES - GENERAL

- A. Paints and Finishes: Ready mixed, unless required to be a field-catalyzed paint.
 - 1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 - 2. Supply each paint material in quantity required to complete entire project's work from a single production run.
 - 3. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.

2.03 PRIMERS

- A. Primers: Provide the following unless other primer is required or recommended by manufacturer of top coats.
 - 1. Alkali Resistant Water Based Primer; MPI #3.
 - 2. Interior/Exterior Latex Block Filler; MPI #4.

2.04 ACCESSORY MATERIALS

- A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.
- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

2.05 PAINT SYSTEMS SCHEDULE

- A. Paint CT1: Graffiti Coating at formed concrete walls throughout, interior and exterior - City standard – no substitutions.
 - 1. First base coat: Aquaseal ME12 (Item 5200).
 - 2. Second base coat: Permashield Base (Item 6100).
 - 3. Two top coats: Permashield Premium (Item 5600 for matte finish).
- B. Paint P1: Protective Paint at Stainless Steel – all exposed columns
 - 1. One coat Primer: DTM Wash Primer B71Y1 by SW
 - 2. Two top coats: ProIndustrial Acrolon WB Polyurethane B65 Series by SW
- C. Paint W1: Wood Semi-Transparent Stain System at Wood Trellis
 - 1. Two top coats: SuperDeck Exterior WB Semi-Transparent Stain SD3T15 by SW

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.
- C. Test shop-applied primer for compatibility with subsequent cover materials.
- D. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
 - 1. Masonry, Concrete, and Concrete Masonry Units: 12 percent.
 - 2. Exterior Wood: 15 percent, measured in accordance with ASTM D4442.

3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces for finishing.
- D. Seal surfaces that might cause bleed through or staining of topcoat.
- E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- F. Concrete:
 - 1. Clean concrete according to ASTM D4258. Allow to dry.

2. Prepare surface as recommended by top coat manufacturer and according to SSPC-SP 13.
- G. Fiber Cement Siding: Remove dirt, dust and other foreign matter with a stiff fiber brush. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.
- H. Exterior Wood Surfaces to Receive Opaque Finish: Remove dust, grit, and foreign matter. Seal knots, pitch streaks, and sappy sections. Fill nail holes with tinted exterior caulking compound after prime coat has been applied. Back prime concealed surfaces before installation.

3.03 APPLICATION

- A. Exterior Wood to Receive Opaque Finish: If final painting must be delayed more than 2 weeks after installation of woodwork, apply primer within 2 weeks and final coating within 4 weeks.
- B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- D. Apply each coat to uniform appearance.
- E. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- F. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 CLEANING

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.05 PROTECTION

- A. Protect finishes until completion of project.
- B. Touch-up damaged finishes after Substantial Completion.

END OF SECTION

SECTION 09 96 00

HIGH-PERFORMANCE COATINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. High performance coatings.
- B. Surface preparation.

1.02 RELATED REQUIREMENTS

- A. City of San Diego Requirements - Volatile Organic Compound (VOC) Content Restrictions.
- B. Section 09 91 13 - Exterior Painting.
- C. Section 09 91 23 - Interior Painting: Requirements for mechanical and electrical equipment surfaces.

1.03 REFERENCE STANDARDS

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.
- B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2016.
- C. ASTM D4258 - Standard Practice for Surface Cleaning Concrete for Coating; 2005 (Reapproved 2012).
- D. ASTM D4259 - Standard Practice for Abrading Concrete; 1988 (Reapproved 2012).
- E. ASTM D4260 - Standard Practice for Liquid and Gelled Acid Etching of Concrete; 2005 (Reapproved 2012).
- F. CARB (SCM) - Suggested Control Measure for Architectural Coatings; California Air Resources Board; 2007.
- G. FS TT-P-28 - Paint, Aluminum, Heat Resisting (1200 Degrees F.); Revision H, 2007.
- H. MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association; current edition, www.paintinfo.com.
- I. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition, www.paintinfo.com.
- J. NFPA 101 - Life Safety Code; 2015.
- K. SCAQMD 1113 - South Coast Air Quality Management District Rule No.1113; current edition.
- L. SSPC V1 (PM1) - Good Painting Practice: Painting Manual, Volume 1; Fourth Edition.
- M. SSPC V2 (PM2) - Systems and Specifications: Steel Structures Painting Manual, Volume 2; Fourth Edition.

- N. SSPC-Paint 16 - Coal Tar Epoxy-Polyamide Black (or Dark Red); 2006 (Reaffirmed 2015).
- O. SSPC-PA 1 - Shop, Field, and Maintenance Painting of Steel; 2004.
- P. SSPC-PA 2 - Procedure For Determining Conformance To Dry Coating Thickness Requirements; 2015.
- Q. SSPC-SP 1 - Solvent Cleaning; 2015.
- R. SSPC-SP 2 - Hand Tool Cleaning; 1982 (Ed. 2004).
- S. SSPC-SP 3 - Power Tool Cleaning; 1982 (Ed. 2004).
- T. SSPC-SP 5 - White Metal Blast Cleaning; 2007.
- U. SSPC-SP 6 - Commercial Blast Cleaning; 2007.
- V. SSPC-SP 7 - Brush-Off Blast Cleaning; 2007.
- W. SSPC-SP 10 - Near-White Blast Cleaning; 2007.
- X. SSPC-SP 11 - Power Tool Cleaning to Bare Metal; 2012 (Ed. 2013).
- Y. SSPC-SP 13 - Surface Preparation of Concrete; (Reaffirmed 2015); 2003.
- Z. SSPC-SP 16 – Brush off Blast of Coated or Uncoated Non Ferrous Metals; 2010

1.04 SUBMITTALS

- A. See City of San Diego Requirements - Administrative Requirements for submittal procedures.
- B. Product Data: Provide complete list of all products to be used, with the following information for each:
 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
 2. MPI product number (e.g. MPI #47).
 3. Cross-reference to specified coating system(s) product is to be used in; include description of each system.
 4. Manufacturer's installation instructions.
 5. If proposal of substitutions is allowed under submittal procedures, explanation of all substitutions proposed.
- C. Samples: Submit two samples 8 by 8 inch in size illustrating colors available for selection.
- D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- E. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.
- F. Maintenance Data: Include cleaning procedures and repair and patching techniques.
- G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 1. See City of San Diego Requirements - Product Requirements, for additional provisions.
 2. Extra Coating Materials: 1 gallon of each type and color.

3. Label each container with manufacturer's name, product number, color number, and room names and numbers where used.

1.05 QUALITY ASSURANCE

- A. Maintain one copy of each referenced document that applies to application on site.
- B. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section.
- C. Applicator Qualifications: Company specializing in performing the work of this section.

1.06 MOCK-UP

- B. Provide mock-up of one stainless steel column, 2 foot length of metal flashing, and one skylight frame, illustrating coating, for each specified coating.
- C. Locate where directed.
- D. Mock-up may remain as part of the work.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of coating, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Coating Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.08 FIELD CONDITIONS

- A. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- B. Do not apply exterior coatings during rain or snow, or when relative humidity is outside the humidity ranges required by the coating product manufacturer.
- C. Do not install materials when temperature is below 55 degrees F or above 90 degrees F.
- D. Maintain this temperature range, 24 hours before, during, and 72 hours after installation of coating.
- E. Provide lighting level of 80 ft. candles measured mid-height at substrate surface.
- F. Restrict traffic from area where coating is being applied or is curing.

1.09 WARRANTY

- A. See City of San Diego Requirements - Closeout Submittals, for additional warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion.
- C. Warranty: Include coverage for bond to substrate.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Only materials (primers, coatings, etc.) listed in the latest edition of the MPI Approved Product List (APL) are acceptable for use on this project.
- B. Provide high performance coating products from the same manufacturer to the greatest extent possible.
 - 1. In the event that a single manufacturer cannot provide specified products, minor exceptions will be permitted provided approval by Architect is obtained using the specified procedures for substitutions.
 - 2. Substitution of MPI-approved products by a different manufacturer is preferred over substitution of unapproved products by the same manufacturer.
 - 3. Substitution of a different high performance coating system using MPI-approved products by the same manufacturer will be considered.
- C. High-Performance Coatings:
 - 1. PPG Paints: www.ppgmetalcoatings.com
 - 2. Sherwin-Williams Company; www.protective.sherwin-williams.com/industries.
 - 3. Substitutions: Or approved equal.

2.02 HIGH-PERFORMANCE COATINGS

- A. Provide coating systems that meet the following minimum performance criteria, unless more stringent criteria are specified:
 - 1. Surface Burning Characteristics: Flame spread/Smoke developed index of 0/0, maximum, when tested in accordance with ASTM E84.
 - 2. NFPA 101, Class A rated.
 - 3. Abrasion Resistance: 50L min when tested in accordance with ASTM D968.
 - 4. Impact Resistance: Reverse 1/16" cross hatch no loss when tested in accordance with ASTM D2794.
 - 5. Hardness: HBH, when tested in accordance with ASTM D3363.
 - 6. Adhesion: No loss when tested in accordance with ASTM D3359.
 - 7. Moisture Resistance: Excellent, when tested in accordance with ASTM D 4585.
 - 8. Lead Content: None.
 - 9. Gloss and Color Retention: 5YRS. FLA>98%, when tested in accordance with ASTM D523.
- B. Moderate Exposure: All minimum criteria, plus:
 - 1. Salt Spray Resistance: 1000hrs. (Steel) none or few # 8 blisters when tested in accordance with ASTM B117.
 - 2. Solvent Resistance: No effect, when tested in accordance with ASTM D5402
- C. Severe Exposure: All minimum criteria, plus:
 - 1. Salt Spray Resistance: 1000 hrs. (Steel) none or few #8 blisters when tested in accordance with ASTM B117.
 - 2. Solvent Resistance: No effect, when tested in accordance with ASTM D5402
 - 3. Acid Resistance: No effect, when tested in accordance with AAMA 605.2.

2.03 TOP COAT MATERIALS

- A. Coatings - General: Provide complete multi-coat systems formulated and recommended by manufacturer for the applications indicated, in the thicknesses indicated; number of coats specified does not include primer or filler coat.

1. Lead Content: Not greater than 0.06 percent by weight of total nonvolatile content.
 2. Chromium Content, as Hexavalent Chromium, Zinc Chromate, or Strontium Chromate: None.
 3. Volatile Organic Compound (VOC) Content: Comply with Section 01 61 16.
 4. Colors: Selected from manufacturer's standard colors.
- B. Fluoropolymer Coating for nonferrous metals
1. Number of Coats: Two.
 2. Product Characteristics:
 - a. Percentage of solids by volume, 36% minimum.
 - b. Dry film thickness, per coat, 1.5, minimum.
 - c. Comply with the performance requirements specified above for moderate exposure.
 3. Top Coat(s): Air Dry Fluoropolymer, Two Component.
 - a. Finish: Metallic.
 - b. Products:
 - 1) PPG Paints Corafon ADS.
 - 2) Or Approved Equal.
 4. Primer: As recommended by coating manufacturer for specific substrate.

2.04 PRIMERS

- A. Primers: Provide the following unless other primer is required or recommended by coating manufacturer.
1. Intermediate Epoxy Primer
 - a. Products:
 - 1) PPG Corafon ADS 572/574 series Intermediate Epoxy Primer / ADS 564 Barrier coat
 - 2) Or Approved Equal.

2.05 ACCESSORY MATERIALS

- A. Accessory Materials: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of coated surfaces.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Do not begin application of coatings until substrates have been properly prepared.
- C. Verify that substrate surfaces are ready to receive work as instructed by the coating manufacturer. Obtain and follow manufacturer's instructions for examination and testing of substrates.
- D. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- E. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- F. Test shop-applied primer for compatibility with subsequent cover materials.

- G. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
 - 1. Cementitious Substrates: Do not begin application until substrate has cured 28 days minimum and measured moisture content is not greater than 12 percent.
 - 2. Plaster and Stucco: 12 percent.
 - 3. Masonry, Concrete, and Concrete Unit Masonry: 12 percent.
 - 4. Concrete Floors and Traffic Surfaces: 8 percent.
 - 5. Wood: Do not begin application if substrate has moisture content over 12 percent.
- H. Proceed with coating application only after unacceptable conditions have been corrected.
 - 1. Commencing coating application constitutes Contractor's acceptance of substrates and conditions.

3.02 PREPARATION

- A. Clean surfaces of loose foreign matter.
- B. Remove substances that would bleed through finished coatings. If unremovable, seal surface with shellac.
- C. Remove finish hardware, fixture covers, and accessories and store.
- D. Aluminum: Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.
- E. Protect adjacent surfaces and materials not receiving coating from spatter and overspray; mask if necessary to provide adequate protection. Repair damage.

3.03 PRIMING

- A. Apply primer to all surfaces, unless specifically not required by coating manufacturer. Apply in accordance with coating manufacturer's instructions.

3.04 COATING APPLICATION

- A. Apply coatings in accordance with manufacturer's written instructions, to thicknesses specified and recommendations in "MPI Architectural Painting and Specification Manual".
- B. Apply in uniform thickness coats, without runs, drips, pinholes, brush marks, or variations in color, texture, or finish. Finish edges, crevices, corners, and other changes in dimension with full coating thickness.

3.05 FIELD QUALITY CONTROL

- A. See City of San Diego Quality Requirements, for general requirements for field inspection.
- B. Inspect and test questionable coated areas in accordance with ASTM D1654.
- C. Dry Film Thickness Testing: Owner will engage the services of a qualified testing and inspecting agency to inspect and test coatings for dry film thickness.
 - 1. Touch up and restore coated surfaces damaged by testing.
 - 2. If test results show that dry film thickness of applied coating does not comply with coating manufacturer's written recommendations, and specified thickness,

Contractor shall pay for retesting and apply additional coats as needed to provide dry film thickness that complies with coating manufacturer's written recommendations, and specified thickness.

3.06 CLEANING

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.
- B. Clean surfaces immediately of overspray, splatter, and excess material.
- C. After coating has cured, clean and replace finish hardware, fixtures, and fittings previously removed.

3.07 PROTECTION

- A. Protect finished work from damage.

END OF SECTION

SECTION 10 14 00

SIGNAGE

PART 1 GENERAL

1.01 SECTION INCLUDES

- a. Interior directional and informational signs.
- B. Building identification signs.

1.02 REFERENCE STANDARDS

- A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines; current edition.
- B. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- C. ICC A117.1 - Accessible and Usable Buildings and Facilities; International Code Council; 2009 (ANSI).

1.03 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Package signs as required to prevent damage before installation.
- B. Package room and door signs in sequential order of installation, labeled by floor or building.
- C. Store tape adhesive at normal room temperature.

1.05 FIELD CONDITIONS

- A. Do not install tape adhesive when ambient temperature is lower than recommended by manufacturer.
- B. Maintain this minimum temperature during and after installation of signs.

PART 2 PRODUCTS

2.01 SIGNAGE APPLICATIONS

- A. Accessibility Compliance: Signs are required to comply with ADA Standards and ICC A117.1 and applicable building codes, unless otherwise indicated; in the event of conflicting requirements, comply with the most comprehensive and specific requirements.
- B. Room and Door Signs: Provide a sign for every doorway, whether it has a door or not, not including corridors, lobbies, and similar open areas.
 - 1. Sign Type: Flat signs with engraved panel media as specified.
 - 2. Provide "tactile" signage, with letters raised minimum 1/32 inch and Grade II braille.
 - 3. Character Height: 1 inch.

4. Sign Height: 3 inches, unless otherwise indicated.
 5. Office Doors: Identify with room names and numbers to be determined later, not those shown on the drawings.
 6. Service Rooms: Identify with room names and numbers to be determined later, not those shown on the drawings.
 7. Rest Rooms: Identify with pictograms, the names "MEN" and "WOMEN", and braille.
- C. Interior Directional and Informational Signs:
1. Sign Type: Same as room and door signs.
 2. Sizes: As indicated on the drawings.
 3. Wording of signs is scheduled on the drawings.
- D. Building Identification Signs:
1. Use individual stainless steel letters.
 2. Mount on outside wall in location shown on drawings.

2.02 SIGN TYPES

- A. Flat Signs: Signage media without frame.
1. Edges: Square.
 2. Corners: Square.
 3. Wall Mounting of One-Sided Signs: Tape adhesive.
- B. Color and Font: Unless otherwise indicated:
1. Character Font: Helvetica, Arial, or other sans serif font.
 2. Character Case: Upper case only.
 3. Background Color: As scheduled.
 4. Character Color: Contrasting color.

2.03 TACTILE SIGNAGE MEDIA

- A. Engraved Panels: Laminated colored plastic; engraved through face to expose core as background color:
1. Total Thickness: 1/16 inch.

2.05 ACCESSORIES

- A. Concealed Screws: Stainless steel, galvanized steel, chrome plated, or other non-corroding metal.
- B. Tape Adhesive: Double sided tape, permanent adhesive.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrate surfaces are ready to receive work.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install neatly, with horizontal edges level.
- C. Locate signs where indicated:
 - 1. Room and Door Signs: Locate on wall at latch side of door with centerline of sign at 60 inches above finished floor.
 - 2. If no location is indicated obtain Owner's instructions.
- D. Protect from damage until Substantial Completion; repair or replace damage items.

END OF SECTION

SECTION 10 21 13.19

PLASTIC TOILET COMPARTMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Solid plastic toilet compartments.

1.02 RELATED REQUIREMENTS

- A. Section 06 10 00 - Rough Carpentry: Blocking and supports.
- B. Section 10 28 00 - Toilet and Shower Accessories.

1.03 REFERENCE STANDARDS

- A. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2015.
- B. NFPA 286 - Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth; 2015.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination: Coordinate the work with placement of support framing and anchors in walls and ceilings.

1.05 SUBMITTALS

- A. Product Data: Provide data on panel construction, hardware, and accessories.
- B. Shop Drawings: Indicate partition plan, elevation views, dimensions, details of wall supports, door swings.
- C. Samples: Submit two samples of partition panels, 12 inch in size illustrating panel finish, color, and sheen.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Solid Plastic Toilet Compartments:
 - 1. Scranton Products (Hiny Hider): www.scrantonproducts.com.
 - 2. Substitutions: Or Approved Equal.

2.02 SOLID PLASTIC TOILET COMPARTMENTS

- A. Toilet Compartments: Factory fabricated doors, pilasters, and divider panels made of solid molded high density polyethylene (HDPE), tested in accordance with NFPA 286, floor-mounted unbraced.
 - 1. Color: per Finish Schedule.
- B. Doors:
 - 1. Thickness: 1 inch.

2. Width: 24 inch.
 3. Width for Handicapped Use: 36 inch, out-swinging.
 4. Height: 55 inch.
- C. Panels:
1. Thickness: 1 inch.
 2. Height: 55 inch.
- D. Pilasters:
1. Thickness: 1 inch.
 2. Width: As required to fit space; minimum 3 inch.

2.03 ACCESSORIES

- A. Pilaster Shoes: Formed polished stainless steel, 3 inch high, concealing floor fastenings.
1. Provide adjustment for floor variations with screw jack through steel saddles integral with pilaster.
- B. Pilaster Brackets: Polished stainless steel.
- C. Wall Brackets: Continuous type, polished stainless steel.
- D. Attachments, Screws, and Bolts: Stainless steel, tamper proof type.
- E. Hardware: Polished stainless steel:
1. Pivot hinges, gravity type, adjustable for door close positioning; two per door.
 2. Door Latch: Slide type with exterior emergency access feature.
 3. Door strike and keeper with rubber bumper; mounted on pilaster in alignment with door latch.
 4. Coat hook with rubber bumper; one per compartment, mounted on door.
 5. Provide door pull for outswinging doors.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify correct spacing of and between plumbing fixtures.
- C. Verify correct location of built-in framing, anchorage, and bracing.

3.02 INSTALLATION

- A. Install partitions secure, rigid, plumb, and level in accordance with manufacturer's instructions.
- B. Maintain 3/8 inch to 1/2 inch space between wall and panels and between wall and end pilasters.
- C. Attach panel brackets securely to walls using anchor devices.
- D. Attach panels and pilasters to brackets. Locate head rail joints at pilaster center lines.
- E. Field touch-up of scratches or damaged finish will not be permitted. Replace damaged or scratched materials with new materials.

3.03 TOLERANCES

- A. Maximum Variation From True Position: 1/4 inch.
- B. Maximum Variation From Plumb: 1/8 inch.

3.04 ADJUSTING

- A. Adjust and align hardware to uniform clearance at vertical edge of doors, not exceeding 3/16 inch.
- B. Adjust hinges to position doors in partial opening position when unlatched. Return out-swinging doors to closed position.
- C. Adjust adjacent components for consistency of line or plane.

END OF SECTION

SECTION 10 28 00

TOILET AND SHOWER ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Commercial toilet accessories.
- B. Commercial shower accessories.
- C. Electric hand dryers.
- D. Diaper changing stations.

1.02 RELATED REQUIREMENTS

- A. Section 06 10 00: Concealed supports for accessories, including in wall framing and plates and above ceiling framing.
- B. Section 10 21 13.19 - Plastic Toilet Compartments.

1.03 REFERENCE STANDARDS

- A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- B. ASTM A269/A269M - Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service; 2015a.
- C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2015.
- D. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2015.
- F. ASTM F 2285-04 Standard Consumer Safety Performance Specification for Diaper Changing Tables for Commercial Use
- G. ANSI Z535.4 Product Safety Signs and Labels
- H. ASTM G21 Antifungal and ASTM G22 Antibacterial Standards

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the work with the placement of internal wall reinforcement, concealed ceiling supports, and reinforcement of toilet partitions to receive anchor attachments.

1.05 SUBMITTALS

- A. Product Data: Submit data on accessories describing size, finish, details of function, and attachment methods.
- B. Samples: Submit two samples of each accessory, illustrating color and finish.
- C. Manufacturer's Installation Instructions: Indicate special procedures and conditions requiring special attention.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Commercial Toilet and Shower Accessories:
 - 1. AJW Architectural Products: www.ajw.com.
 - 2. American Specialties, Inc: www.americanspecialties.com.
 - 3. Bradley Corporation: www.bradleycorp.com.
 - 4. Substitutions: Or Approved Equal.
- B. Electric Hand/Hair Dryers:
 - 1. Fastaire Hand Dryers.
 - 2. Substitutions: Or Approved Equal.
- C. Diaper Changing Stations:
 - 1. American Specialties, Inc: www.americanspecialties.com.
 - 2. Bradley Corporation: www.bradleycorp.com.
 - 3. Koala Kare Products: www.koalabear.com.
 - 4. Substitutions: Or Approved Equal.
- D. All items of each type to be made by the same manufacturer.

2.02 MATERIALS

- A. Accessories - General: Shop assembled, free of dents and scratches and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.
 - 1. Fabricate units made of metal sheet of seamless sheets, with flat surfaces.
- B. Keys: Provide 2 keys for each accessory to Owner; master key lockable accessories.
- C. Stainless Steel Sheet: ASTM A666, Type 316.
- E. Adhesive: Two component epoxy type, waterproof.
- F. Fasteners, Screws, and Bolts: Hot dip galvanized; tamper-proof; security type.

2.03 FINISHES

- A. Stainless Steel: Satin finish, unless otherwise noted.

2.04 COMMERCIAL TOILET ACCESSORIES

- A. Toilet Paper Dispenser: Double roll, surface-mounted, stainless steel unit with pivot hinge, tumbler lock.
 - a. Horizontal orientation; tamper-proof; Bobrick B-2740 or Approved Equal.
 - b. Vertical orientation; ADA accessible; Bobrick B-2888 or Approved Equal.
- C. Soap Dispenser: Liquid soap dispenser, wall-mounted, with stainless steel cover and window to gage soap level, tumbler lock.
 - 1. Minimum Capacity: 48 ounces.
- D. Grab Bars: Stainless steel, nonslip grasping surface finish.
 - 1. Standard Duty Grab Bars:
 - a. Push/Pull Point Load: 250 pound-force, minimum.

- b. Dimensions: 1-1/4 inch outside diameter, minimum 0.05 inch wall thickness, exposed flange mounting, 1-1/2 inch clearance between wall and inside of grab bar.
 - c. Length and Configuration: As indicated on drawings.
- E. Baby Changing Station: Surface-mounted, stainless steel finish, 18 gauge, type 316 satin stainless steel finish with FDA approved blow molded high-density grey polyethylene with antimicrobial interior. Reinforced full-length steel-on-steel hinge mechanism, with 11-gauge steel mounting plates and mounting hardware included.
- 1. Horizontal wall mounted
 - a. Accessible mounting height requirement per drawings
 - b. Unit to be 4" maximum from finish face of wall
 - c. Accessories
 - Nylon safety straps
 - bag hooks.

2.05 COMMERCIAL SHOWER AND BATH ACCESSORIES

- A. Towel Pin: Stainless steel, 4 inch extension from wall; rectangular-shaped bracket and backplate for concealed attachment, satin finish.

2.06 ELECTRIC HAND DRYERS

- A. Electric Hand Dryers: Traditional fan-in-case type, with downward fixed nozzle.
 - 1. Operation: Pushbutton on, timer off.
 - 2. Mounting: Surface mounted.
 - 3. Cover: Stainless steel with brushed finish.
 - a. Tamper-resistant screw attachment of cover to mounting plate.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify exact location of accessories for installation.
- C. For electrically-operated accessories, verify that electrical power connections are ready and in the correct locations.

3.02 INSTALLATION

- A. Install accessories in accordance with manufacturers' instructions in locations indicated on the drawings.
- B. Mounting Heights: As required by accessibility regulations, unless otherwise indicated.
 - 1. Grab Bars: As indicated on the drawings.

3.03 PROTECTION

- A. Protect installed accessories from damage due to subsequent construction operations.

END OF SECTION

SECTION 22 05 00

COMMON WORK RESULTS FOR PLUMBING

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

- A. The General Conditions, Supplementary Conditions are a part of this section and the contract for this work and apply to this section as fully as if repeated herein.

1.02 SUBMITTALS

- A. Submit a minimum of six copies of shop drawings for all products. All submittal sheets shall be clearly marked or highlighted showing conformance to specifications and schedule. All submittals shall be cross referenced to the requirements of each specification paragraph pertaining to the item being submitted. All requirements must be shown on manufacturer's literature. Manufacturer's representative's letterhead, or super-imposed notations, are not acceptable. This requirement pertains to all sections of Division 22. No exceptions. Submittals not so marked will be subject to rejection.

1.03 CODES AND STANDARDS

- A. All work and materials shall be in full accordance with the latest rules and regulations of the State Fire Marshal, the Safety Orders of the Division of Industrial Safety, the California Building Code, the California Mechanical Code, the California Plumbing Code the California Electrical Code, Local Building Codes, and other applicable codes, laws or regulations of bodies lawfully empowered and having jurisdiction over this project. Nothing in the plans or specifications is to be construed to permit work not conforming to these codes.

1.04 SEISMIC ANCHORAGE AND BRACING

- A. All equipment and piping shall be anchored or braced in accordance with the California Building Code. The contractor is responsible for providing anchorage or bracing for all equipment regardless of whether detailed or shown on the plans. All equipment and ductwork supports not detailed as shown on the plans, requires approval of a registered structural engineer.
- B. All piping shall be supported or braced in accordance with the SHL-A "Seismic Restraint Manual: Guideline for Mechanical Systems" latest approved edition, Superstrut "Seismic Restraint System", Unistrut Corp. "Seismic Bracing For Ductwork, Conduit, and Cable Tray Supports", or B-Line "Seismic Restraints." If the pipe size exceeds the size included in these manuals, custom designed supports are required. All custom supports require the approval of a registered Structural Engineer. All shop drawings and calculations shall be submitted prior to fabrication.
- C. All flexibly mounted equipment shall be provided with seismic vibration isolation devices designed in accordance with the California Building Code. All anchors and equipment connections shall be submitted. All seismic vibration isolation devices shall be

submitted with structural calculations signed by a Registered Structural Engineer in the State of California.

1.05 PERMITS

- A. The Contractor shall obtain all permits, patent rights, and licenses that are required for the performance of his work by all laws, ordinances, rules and regulations or orders of any officer and/or body, shall give all notices necessary in connection therewith, and pay all fees relating thereto and all costs and expenses incurred on account thereof. No work shall be covered before inspection by the jurisdictional inspector and the Architect.
- B. Contractor shall apply for and pay for all cost for the installation of water and gas meters, and for connection to gas, water, and sewer mains.

1.06 CUTTING AND PATCHING

- A. Perform all cutting and fitting required for work of this section in rough construction of the building.
- B. All patching of finished construction of building shall be performed under the sections of specifications covering these materials.
- C. All cutting of concrete work by this Contractor shall be by core drilling or concrete saw. No cutting or coring shall be done without first obtaining the permission of the Architect.

1.07 GENERAL

- A. Unless otherwise specified herein, all equipment and fixtures shall be installed in accordance with the manufacturer's recommendations.
- B. Before submitting his bid, the Contractor for the work under this section shall carefully study all drawings, and shall make a careful examination of the premises. He shall definitely determine in advance, the methods of installing and connecting the apparatus, the means to be provided for getting any equipment into place, and shall make himself thoroughly familiar with all the requirements of the contract. After award of the contract, no subsequent allowances will be made to the Contractor due to his failure to comply with the above requirements and any other conditions affecting the installation and completion of all work.
- C. Workmanship: All labor shall be carefully skilled for this kind of work, thorough and first class in all respects and under the direction of a competent foreman.
- D. Special Note: Any work called for on plans shall be installed whether or not mentioned in these specifications.

1.08 VERIFICATION OF LEAD CONTENT IN PLUMBING PRODUCTS

- A. Comply with California Health and Safety Code 116875 (AB 1953-2006) Lead Content in Plumbing Products for valves and fittings. All valves 2" and smaller and all fittings 2" and smaller for installation in the domestic water system, whether serving a fixture providing domestic water for human consumption or serving a fixture providing domestic water to a fixture not normally considered as for use for human consumption shall be provided

with valve and fittings that have been verified by an independent evaluation service as meeting the requirements of the California Health and Safety Code 116875 (AB 1953-2006). When valves or fittings larger than 2" are required and verified products are available from the specified manufacturer(s), verified valves and fittings shall be submitted for approval and provided, as approved.

- B. Comply with California Health and Safety Code 116875 (AB 1953-2006) Lead Content in Plumbing Products for piping specialties installed in the domestic water system whether serving a fixture providing domestic water for human consumption or serving a fixture providing domestic water to a fixture not normally considered as for use for human consumption shall have been verified by an independent evaluation service as meeting the requirements of the California Health and Safety Code 116875 (AB 1953-2006). When piping specialty item larger than 2" is required, and a verified product is available from the specified manufacturer(s), the verified plumbing specialty item shall be submitted for approval and provided, as approved.

1.09 DAMAGE BY LEAKS

- A. This Contractor shall be responsible for damage to the grounds, walks, roads, buildings, piping systems, electrical systems and their equipment and contents, caused by leaks in the piping systems being installed or having been installed herein. He shall repair at his expense all damage so caused. All repair work shall be done as directed by the Architect.

1.10 EMERGENCY REPAIRS

- A. The Owner reserves the right to make emergency repairs as required to keep equipment in operation without voiding the Contractor's guarantee bond nor relieving the Contractor of his responsibilities.

1.11 EXPLANATION AND PRECEDENCE OF DRAWINGS

- A. For purposes of clearness and legibility, drawings are essentially diagrammatic, and, although size and location of equipment are drawn to scale wherever possible, Contractor shall make use of all data in all the contract documents and shall verify this information at building site.
- B. The drawings indicate required size and points of termination of pipes, and suggest proper routes to conform to structure, avoid obstructions and preserve clearances. However, it is not intended that drawings indicate all necessary offsets, and it shall be the work of the Contractor to make the installation in such a manner as to conform to structure, avoid obstructions, preserve headroom and keep openings and passageways clear, without further instructions or cost to the Owner.
- C. It is intended that all apparatus be located symmetrical with architectural elements. Refer to architectural details in completing the correlating work.
- D. The contractor shall be fully informed regarding any and all peculiarities and limitations of the spaces available for the installation of all work and materials furnished and installed under the contract. The contractor shall exercise due and particular caution to determine that all parts of his work are made quickly and easily accessible.

- E. The Contractor shall study all drawings and specifications to determine any conflict with ordinances and statutes. Any errors or omissions shall be reported, and any changes shall be shown in the as-built drawings and the additional work performed at no cost to the Owner.
- F. Submittal of bid shall indicate the Contractor has examined the site and drawings and has included all required allowances in his bid. No allowance shall be made for any error resulting from Contractor's failure to visit job site and to review drawings, and bid shall include costs for all required drawings and changes as outlined above, all at no cost to Owner.

1.12 EXCAVATION AND BACKFILL

- A. See other Divisions for excavation and backfill requirements.
- B. Underground piping shall be installed with a minimum of 24" cover from finish grade and deeper as noted on drawings. Excavation depths shall be coordinated with other trades.
- C. Excavation for pipes shall be cut a minimum of 6" below the required grade. A 6" bed of sand or other approved material shall be then placed and properly compacted to provide an accurate grade and uniform bearing throughout the length of the pipe.
- D. Sand used shall be certified to a resistance of not less than the surrounding soil when wet with distilled water and shall consist of clean, natural, washed sand. The particles size shall pass through a 3/8" screen, 90% of them will pass through a 1/4" screen and not more than 25% will pass through a No. 50 screen.
- E. Backfilling will not be placed until the work has been inspected, tested and approved.
- F. Clods or lumps 2" in size or larger will not be permitted in the backfill. If the excavated material is not suitable, adequate material shall be provided by hauling from other locations.
- G. Surplus earth or material remaining after backfilling shall be removed from the site as indicated in "Earthwork" section.

1.13 SUPERVISION AND COOPERATION

- A. This Contractor shall include the services of experienced superintendents for each sub-section who shall be constantly in charge of the work, together with the qualified journeymen, helpers and laborers, required to properly unload, install, connect, adjust, start, operate and test the work involved, including equipment and materials furnished by others and by the Owner.
- B. The work under this section shall be executed in cooperation with the work of other trades to prevent conflict or interference and to aid rapid completion of the overall project.

1.14 OPERATION

- A. The Owner may require operation of parts or all of the installation for beneficial occupancy prior to final acceptance. Refer to General Conditions of the Contract.

- B. Cost of utilities for such operation shall be paid by the Owner. Said operation shall not be construed as acceptance of the work.

1.15 UTILITY SERVICES DURING CONSTRUCTION

- A. All water and electric power used for construction shall be paid for by the Contractor.

1.16 Coordination

- A. Coordinate layout and installation of piping and suspension system components with other construction, including light fixtures, HVAC ductwork / equipment, electrical conduit, fire suppression system components, and partition assemblies.
- B. Coordinate pipe sleeve installations for foundations wall penetrations.
- C. Coordinate installation of pipe sleeves for penetrations through exterior walls and floor assemblies.

PART 2 - PRODUCTS

2.01 Access Doors and Panels:

- A. Wherever valves, air vents, or other items or parts of the installation which require periodic inspection or adjustment are concealed by permanent non-removable construction, an access door or panel shall be provided. Installation of access doors to be coordinated by general contractor. Types to be submitted and approved for the surface, and construction in which it is installed. Access door to be manufactured by Mifab, Inc., or approved equal, and be Series CAD or UA, or series MFRU for fire rated walls.

2.02 ROOF FLASHING

- A. Furnish and install on each pipe passing through the roof, a "Stoneman" No. 1100-7, or approved equal, six pound, seamless lead flashing assembly. Flashing shall have reinforced boot and be complete with cast iron counter flashing sleeve and Permaseal waterproofing compound. All vent pipes shall be terminated 7" above the roof.

PART 3 - EXECUTION

3.01 Installation of Plumbing systems

- A. No holes for pipe or equipment will be allowed in any structural members without written consent of the Architect. Where pipes are to pass through or interfere with any member, or where notching, boring or cutting of the structure is necessary, the work shall be done by the Contractor as directed by the Architect.
- B. The Contractor shall, at a time in advance of the work, coordinate with other disciplines as to his requirements for openings, recesses, and chases in the walls, partitions, or framing. Should furnishing this information be neglected, delayed, or incorrect and additional cutting is found to be required, the costs of same shall be charged to the Contractor.
- C. Sleeves through foundation walls shall be standard weight black steel pipe, flush with walls and two pipe sizes larger than the pipe passing through. Sleeves shall be caulked with oakum to within 1" of the wall lines and then completely filled with an approved

bitumastic compound. Sleeves for piping through masonry wall above grade or floor or through floors shall be #10 gauge galvanized sheet steel and shall extend completely through the walls, or floor finishing flush on both sides. Sleeves shall be 1/2" larger than the pipe passing through with oakum caulking to make opening airtight. Sleeves through concrete firewalls or floors shall be packed with suitable non-combustible material. Provide and install polished chromium plate brass floor ceiling on wall plates for all pipes, exposed in finished portions of the buildings.

- D. All scaled and figured dimensions are approximate and are given for estimate purposes only. Before proceeding with any work, this Contractor shall carefully check and verify all dimensions, sizes, etc., and shall assume full responsibility for the installation with respect to other parts of the equipment, and to the structure.
- E. Any minor changes in work, which has not been installed, shall be made by this Contractor without additional compensation, except changes that are caused by architectural revisions that increase or decrease the size of the materials specified or indicated on the drawings.
- F. This Contractor shall submit an estimate of the cost of or credit for such changes he does not consider of a minor nature and shall proceed only upon the written authority of the Architect.
- G. Coordinate all sanitary vents through roof with HVAC equipment. Terminate all vents at least 10'-0" from any outside air intakes.
- H. Pipes Over Electrical Equipment: Where pipe joints or valves in pipes conveying water occur within 3' in a horizontal direction, of electrical panels and electronic equipment, provide a drip pan of galvanized steel construction of a size which will afford maximum protection.
 - 1. Pans: 24 gauge, edges turned up 2-1/2" all sides, reinforced with galvanized steel angles or by rolling edge over 1/4" diameter steel rod.
 - 2. Provide drain with 3/4" brass flange and copper pipe to floor.
 - 3. Support the pan with bars or angles, brace to prevent sagging or swaying.
- I. Install chrome plated split escutcheons around all pipes passing through finished walls, floors and ceilings.

3.02 TESTS AND ADJUSTMENTS

- A. No piping work, fixtures, or equipment shall be concealed or covered until inspected and approved by the Engineer, who shall be notified when the work is ready for inspection. All work shall be completely installed, tested as required by this section and the State Ordinances and State Safety Orders, and shall be leak-tight before inspection is requested. All tests shall be repeated upon request to the satisfaction of those making the inspection.
- B. Disinfection of the potable water system prior to use shall meet the requirements of the California Plumbing Code section 609.9. The method to be followed shall be that prescribed by the Health Authority or, in case no method is prescribed by it, the following:

1. The piping system shall be flushed with clean, potable water until only potable water appears at the points of outlet.
 2. The system or parts thereof shall be filled with a water-chlorine solution containing at least fifty (50) parts per million of chlorine, and the system or part thereof shall be valved-off and allowed to stand for twenty four (24) hours; or, the system or part thereof shall be filled with a water-chlorine solution containing at least two hundred (200) parts per million of chlorine and allowed to stand for three (3) hours.
 3. Following the allowed standing time, the system shall be flushed with clean, potable water until the chlorine residual in the water coming from the system does not exceed the chlorine residual in the flushing water.
 4. The procedure shall be repeated if it is shown by bacteriological examination made by an approved agency that contamination persists in the system.
- C. Piping tests shall be made with the medium and under pressure listed below. Use a calibrated Bristol Pressure Recorder on all tests. Recorder range shall be 0 - 300 pounds or required range for specific test.

Type of System	(Lbs. per sq. inch, gauge)	Test Medium
Soil, Waste, Vent Piping Within Building	Minimum of 5 psi for each joint, for duration of test with no loss in pressure.	Water
Domestic Water	150 PSI	Water

- D. Test pressure in pounds per square inch, gauge, are given as initial pressure to be applied to lines being tested, together with test medium.
- E. Tests are to be applied for a minimum period of twenty-four (24) hours and until tests are complete.
- F. Final pressures at the end of test period shall be no more nor less than that caused by expansion or contraction of the test medium due to temperature changes.

3.03 DRAWINGS OF RECORD

- A. Provide reproducible "as-builts" for the purpose of showing a complete picture of the work as actually installed. Copies of the contract drawings can be made available upon request at cost to the contractor.
- B. These drawings shall serve as work progress report sheets and the Contractor shall make all notations, neat and legible, thereon daily as the work proceeds. The drawings shall be available for inspection at all times and shall be kept at the job at a location designated by the Architect.
- C. At completion of the work, these as-built drawings shall be signed by the Contractor indicating his approval, dated and returned to the Architect.
- D. Invert elevations for buried piping and conduit. The dimensions location of all concealed raceway shall be accurately recorded on the "as-built" drawings. Elevation,

on Mean Sea Level base, of all piping and conduit runs outside the building shall be recorded.

3.04 FINAL INSPECTION

- A. If upon final completion of the final inspection and review of the maintenance manuals and "as-built" drawings, the list of required corrections is such that a re-inspection is required, the contractor will be subject to a charge of Ninety Dollars (\$90.00) per hour for any additional time required.

3.05 GUARANTEE

- A. All work under this section shall be guaranteed in writing in accordance with the General Provisions.
- B. All material except as otherwise noted shall be new, free from defect and of the quality and rating shown or specified.
- C. Any defect due to missing or improper material or faulty workmanship existing or developing during the warranty period shall be corrected and the resulting damage repaired without additional cost to the Owner.
- D. The warranty period shall be one year from date of acceptance of the project.

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SECTION 22 05 19

METERS AND GAUGES FOR PLUMBING PIPING

Part 1 - GENERAL

1.1 GENERAL CONDITIONS

- A. The General Conditions, Supplementary Conditions, are a part of this section and the contract for this work and apply to this section as fully as if repeated herein. The system shall be complete in all respects including all labor, materials, equipment and services necessary, and shall be installed by personnel specifically experienced in plumbing systems.

1.2 WORK INCLUDED

- A. Work included shall be as indicated on the drawings, including but not limited to the following:
 - A. Test Wells
 - B. Pressure Gauges

Part 2 - PRODUCTS

2.1 Test Wells:

- A. THERMOWELLS
 - a. Thermowells:
 - 1) Standard: ASME B40.200.
 - 2) Description: Pressure-tight, socket-type fitting made for insertion into piping tee fitting.
 - 3) Material for Use with Copper Tubing: CNR or CUNI.
 - 4) Material for Use with Steel Piping: CRES or CSA
 - 5) Type: Stepped shank unless straight or tapered shank is indicated.
 - 6) External Threads: NPS 1/2, NPS 3/4, or NPS 1, ASME B1.20.1 pipe threads.
 - 7) Internal Threads: 1/2, 3/4, and 1 inch, with ASME B1.1 screw threads.
 - 8) Bore: Diameter required matching thermometer bulb or stemming.
 - 9) Insertion Length: Length required matching thermometer bulb or stemming.

2.2 Pressure Gauges:

- a. Direct-Mounted, Metal-Case, Dial-Type Pressure Gages:

- 1) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a) Trerice, H. O. Co.
 - b) Watts; a Watts Water Technologies company.
 - c) Weiss Instruments, Inc.
 - d) Or Equal.
- 2) Standard: ASME B40.100.
- 3) Case: Sealed cast aluminum or drawn steel 4-1/2-inch nominal diameter.
- 4) Pressure-Element Assembly: Bourdon tube unless otherwise indicated.
- 5) Pressure Connection: Brass, with NPS 1/4, ASME B1.20.1 pipe threads and bottom-outlet type unless back-outlet type is indicated.
- 6) Movement: Mechanical, with link to pressure element and connection to pointer.
- 7) Dial: Nonreflective aluminum with permanently etched scale markings graduated in psi.
- 8) Pointer: Dark-colored metal.
- 9) Window: Glass.
- 10) Ring: Metal.
- 11) Accuracy: Grade A, plus or minus 1 percent of middle half of scale range.

Part 3 - EXECUTION

3.1 Pipe Installation

- A. Pipe and plumbing products shall be carefully cleaned before installation. The ends of threaded pipe shall be reamed out full size with a long taper reamer so as to be partially bell-mouthed and perfectly smooth.
- B. Openings in pipes, drains, fittings, apparatus and equipment shall be kept covered or plugged to prevent foreign substance from entering.
- C. Install gauges, thermometers, etc per manufacturer's recommendations including required straight pipe before and after each unit.

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SECTION 22 05 29

Hangers and supports for plumbing

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

- A. The General Conditions, Supplementary Conditions are a part of this section and the contract for this work and apply to this section as fully as if repeated herein. The system shall be complete in all respects including all labor, materials, equipment and services necessary, and shall be installed by personnel specifically experienced in plumbing systems.

1.02 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

2.01 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-718T.
- 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 (4" Pipe and Less): Fee and Mason Fig. 241 or Super-Strut C-720.
- F. Offset Pipe Clamps: Fee and Mason Fig. 366, or Super-Strut C-720L.
- 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

3.01 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. 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 Architect.
- J. In the event additional structural steel is required to transmit loads to main structure, it shall be provided at no additional cost to the Owner.
- K. 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

- L. 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"

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

- 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.

* * * *

SECTION 22 05 33

PLUMBING IDENTIFICATION

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

- A. The General Conditions, Supplementary Conditions are a part of this section and the contract for this work and apply to this section as fully as if repeated herein. Furnish design, construct and install a complete plumbing piping system. The system shall be complete in all respects including all labor, materials, equipment and services necessary, and shall be installed by personnel specifically experienced in plumbing systems.

1.02 WORK INCLUDED

- A. Work included shall be as indicated on the drawings, including but not limited to the following:
 - 1. Equipment Labels
 - 2. Warning Signs and Labels
 - 3. Pipe Labels
 - 4. Stencils
 - 5. Valve Tags
 - 6. Warning Tags

1.03 SUBMITTALS

- A. Product Data: For each type of product indicated submit list of wording, symbols, letter size, and color coding for identification of plumbing.
- B. Samples: Included with the above submittals, shall be samples of each identification material and device used.
- C. Equipment Label Schedule: Include a listing of all equipment to be labeled with the proposed content for each label.
- D. Valve numbering scheme.

1.04 COORDINATION

- A. Coordinate installation of identifying devices with completion of covering and painting of surfaces where devices are to be applied.
- B. Coordinate installation of identifying devices with locations of access panels and doors.
- C. Install identifying devices before installing acoustical ceilings and similar concealment.

PART 2 - PRODUCTS

2.01 EQUIPMENT LABELS

- A. Manufacturers:
 - 1. Seton Name Plate Corp
 - 2. Craftmark Identification Systems
 - 3. Bunting Mechanical Identification Systems
 - 4. Or Approved Equal
- B. Material and Thickness: Multilayer, multicolor, plastic labels for mechanical engraving, 1/8" thickness minimum, and having predrilled holes for attachment hardware.
- C. Letter Color: White
- D. Background Color: Black
- E. Maximum Temperature: Able to withstand temperatures up to 160 deg F.
- F. Minimum Label Size: Length and width vary for required label content, but not less than 2 1/2" x 3/4".
- G. Minimum Letter Size: 1/2" for viewing distances up to 72 inches, and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-fourths the size of principal lettering.
- H. Fasteners: Stainless Steel
- I. Adhesive: Contact type permanent adhesive, compatible with label and with substrate.
- J. Label Content: Include equipment's drawing designation or unique equipment number.
- K. Equipment Label Schedule: For each item of equipment to be labeled, on 8-1/2-by-11-inch bond paper. Tabulate equipment identification number and identify drawing numbers where equipment is indicated (plans, details, and schedules), plus the specification section number and title where equipment is specified. Equipment schedule shall be included in operation and maintenance data.

2.02 WARNING SIGNS AND LABELS

- A. Manufacturers:
 - 1. Seton Name Plate Corp
 - 2. Craftmark Identification Systems
 - 3. Bunting Mechanical Identification Systems
 - 4. Or Approved Equal
- B. Material and Thickness: Multilayer, multicolor, plastic labels for mechanical engraving, 1/8" thickness minimum, and having predrilled holes for attachment hardware.
- C. Letter Color: Red
- D. Background Color: White
- E. Maximum Temperature: Able to withstand temperatures up to 160 deg F.

- F. Minimum Label Size: Length and width vary for required label content, but not less than 2 ½" x ¾".
- G. Minimum Letter Size: ½" for viewing distances up to 72 inches, and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-fourths the size of principal lettering.
- H. Fasteners: Stainless Steel
- I. Adhesive: Contact type permanent adhesive, compatible with label and with substrate.
- J. Label Content: Include caution and warning information, plus emergency notification instructions.

2.03 PIPE LABELS

- A. Manufacturers:
 - 1. Seton Name Plate Corp
 - 2. Craftmark Identification Systems
 - 3. Bunting Mechanical Identification Systems
 - 4. Or Approved Equal
- B. General Requirements: Preprinted, color-coded with lettering indicating service, and showing flow direction.
- C. Pretensioned Pipe Labels: Precoiled, semirigid plastic formed to partially cover circumference of pipe and to attach to pipe without fasteners or adhesive.
- D. Self-Adhesive Pipe Labels: Printed plastic with contact type permanent adhesive backing.
- E. Pipe Label Contents: Including identification of piping service using same designations or abbreviates as used on drawings, pipe size, and an arrow indicating flow direction.
 - 1. Flow Direction Arrows: Integral with piping system service lettering to accommodate both directions, or as separate unit on each pipe label to indicate flow direction.
 - 2. Lettering Size: At least 1-1/2" high.
- F. Letter Color: See section 3.B.4 below.
- G. Background Color: See section 3.B.4 below.

2.04 STENCILS

- A. Manufacturers:
 - 1. Seton Name Plate Corp
 - 2. Craftmark Identification Systems
 - 3. Bunting Mechanical Identification Systems
 - 4. Or Approved Equal

- B. General Requirements: Prepared with letter sizes according to ASME A13.1 for piping and minimum letter height of $\frac{3}{4}$ " for access panel and door labels, equipment labels, and similar operational instructions.
- C. Material: Metal
- D. Stencil Paint Color: Exterior, gloss, black unless otherwise indicated. Paint me be in pressurized spray-can form.
- E. Identification Paint: Exterior in colors according to ASME A13.1 unless otherwise indicated.
- F. Letter Color: See section 3.B.4 below.
- G. Background Color: See section 3.B.4 below.

2.05 VALVE TAGS

- A. Manufacturers:
 1. Seton Name Plate Corp
 2. Craftmark Identification Systems
 3. Bunting Mechanical Identification Systems
 4. Or Approved Equal
- B. General Requirements: Stamped or engraved with $\frac{1}{4}$ " letters for piping system abbreviation and $\frac{1}{2}$ " numbers.
- C. Material: Aluminum, 0.032" minimum thickness, and having predrilled or stamped holes for attachment hardware.
- D. Fasteners: Brass beaded chain.
- E. Valve Schedule: For each piping system to be labeled, on 8-1/2-by-11-inch bond paper. Tabulate valve identification number, piping system, system abbreviation (as shown on valve tag), location of valve (room or space), normal-operating position (open, closed or modulating) and variations for identification. Mark valves for emergency shutoff and similar special uses. Valve schedule shall be included in operation and maintenance data.
- F. Valve Tag Color: See section 3.C.2 below.
- G. Valve Letter Color: See section 3.C.2 below
- H. Valve Size and Shape: See section 3.C.2 below.

2.06 WARNING TAGS

- A. Manufacturers:
 1. Seton Name Plate Corp
 2. Craftmark Identification Systems
 3. Bunting Mechanical Identification Systems
 4. Or Approved Equal

- B. General Requirements: Preprinted or partially printed accident prevention tags.
- C. Material: Plasticized card stock with matte finish suitable for writing.
- D. Size: 3"x5-1/4" minimum
- E. Color: Yellow background with black lettering.
- F. Fasteners: Brass grommet and wire.
- G. Nomenclature: Large size primary caption such as "DANGER", "CAUTION", or "DO NO OPERATE".

PART 3 - EXECUTION

3.01 PREPARATION

- A. Clean piping and equipment surfaces of substances that could impair bond of identification devices, including dirt, oil, grease, release agents, and incompatible primers, paints, and encapsulates.

3.02 INSTALLATION

A. Equipment Labels

1. Install or permanently fasten labels on each major item of plumbing equipment.
2. Locate equipment labels where accessible and visible.

B. Pipe Labels

1. Pipe color coding/painting per specification section 099123-Interior Painting.
2. Stenciled Pipe Label Option: Stencil labels may be provided instead of manufactured pipe labels, at installer's option. Install stenciled pipe, complying with ASME A13.1, on each piping system.
 - a. Identification Paint: Use for contrasting background.
 - b. Stencil Paint: Use for pipe marking
3. Locate pipe labels where piping is exposed or above accessible ceilings in finished spaces; machine rooms; accessible maintenance spaces such as shafts, tunnels, and plenums, and exterior exposed locations as follows:
 - a. Near each valve and control device.
 - b. Near each branch connection, excluding short takeoffs for fixtures and terminal units. Where flow pattern is not obvious, mark each pipe at branch.
 - c. Near penetrations through walls, floors, ceilings, and inaccessible enclosures.
 - d. At access doors, manholes, and similar access points that permit view of concealed piping.
 - e. Near major equipment items and other points of origination and termination.

- f. Spaced at maximum intervals of 50 feet along each run. Reduce intervals to 25 feet in areas of congested piping and equipment.
 - g. On piping above removable acoustical ceilings. Omit intermediately spaced labels.
4. Pipe Label Color Schedule:
- a. Domestic Water Piping
 - 1) Background Color: Blue
 - 2) Letter Color: White
 - b. Sanitary Waste Piping
 - 1) Background Color: White
 - 2) Letter Color: Green

C. Valve Labels

- 1. Install tags on valves and control devices in piping systems, except check valves, valves within factory-fabricated equipment units; shutoff valves; faucets; convenience and hose bibb connections; and similar roughing-in connections of end use fixtures and units. List tagged valves in a valve schedule.
- 2. Valve Tag Application Schedule: Tag valves according to size, shape, and color scheme and with captions similar to those indicated in the following subparagraphs:
 - a. Valve-Tag Size and Shape
 - 1) Cold Water: 2" Round
 - 2) Hot Water: 2" Round
 - b. Valve-Tag Color
 - 1) Cold Water: Green
 - 2) Hot Water: Green
 - c. Letter Color
 - 1) Cold Water: Black
 - 2) Hot Water: Black

D. Warning Tags

- 1. Write required message on, and attach warning tags to, equipment and other items where required.

* * * *

SECTION 22 07 00

Plumbing Insulation

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

- A. The General Conditions, Supplementary Conditions are a part of this section and the contract for this work and apply to this section as fully as if repeated herein. Furnish design, construct and install a complete insulated plumbing piping system. The system shall be complete in all respects including all labor, materials, equipment and services necessary, and shall be installed by personnel specifically experienced in insulation systems.

1.02 WORK INCLUDED

- A. The work covered by this specification consists of furnishing all labor, equipment, materials and accessories, and performing all operations required, for the correct installation of insulation on all piping, fittings, valves, controls and all other necessary items connected into the system subject to condensation or loss of heat.

1.03 SUBMITTALS

- A. Product Data: Provide product description, list of materials and thickness for each service or equipment scheduled, locations, and manufacturer's installation instructions.
- B. Shop Drawings: Submit list of insulation to be used for each service. Include installation details for valves, fittings, pipe and all other items to be insulated.
- C. Samples: Included with the above submittals, shall be samples of each insulation to be used.

1.04 ENVIRONMENTAL REQUIREMENTS

- A. Maintain ambient temperatures and conditions required by manufacturers of adhesives, mastics and insulating cements.

1.05 QUALITY ASSURANCE

- A. Insulation Materials: Insulation materials must be manufactured at facilities certified and registered with an approved registrar to conform to ISO 9001 Quality Standard.
 - 1. Pipe insulation shall be preformed and furnished in standard lengths with ends cut square, conforming to the dimensional requirements of ASTM C 585.
 - 2. Insulation materials shall be asbestos free.
 - 3. All insulating products shall have a 25/50 flame spread/smoke developed rating as tested in accordance with ASTM E 84.
- B. Workmanship: All insulation to be installed by a licensed applicator and applied in accordance with the manufacturer's recommendations.

1. All work shall conform to accepted industry and trade standards for commercial and industrial insulations.
2. Surfaces to be insulated shall be clean and free of dirt, scale, moisture, oil and grease.

1.06 DELIVERY AND STORAGE OF MATERIALS

- A. Deliver all materials to the jobsite and protect the insulation against dirt, water, chemical and mechanical damage before, during and after installation. Do not install damaged insulation and remove it from the project site.
- B. Deliver insulation, coverings, cements, adhesives coatings etc. to the site in factory-fabricated containers with the manufacturer's stamp or label affixed showing fire hazard ratings of the products.
- C. Installed insulation which has not been weatherproofed shall be protected from inclement weather by approved waterproof sheeting installed by the contractor. Any wet or damaged insulation shall be removed and replaced by the contractor at no additional cost.

PART 2 - PRODUCTS

2.01 INSULATION

- A. All domestic hot water supply piping shall be insulated with Johns Manville, or approved equal, Micro-Loc HP preformed fiber glass pipe insulation, complying with ASTM C 547, Class 13 (to 850°F), rigid, molded pipe insulation, noncombustible.
 1. Thermal Conductivity ("k"): 0.23 Btu•in/(hr•ft²•°F) at 75°F mean temperature per ASTM C 518.
 2. Maximum Service Temperature: 850°F.
 3. Rated 25/50 per ASTM E 84, UL 723 and NFPA 255.
 4. When being used over stainless steel, product must comply with the requirements of ASTM C 795.
 5. All-Service (ASJ) Vapor-Retarder Jacket: A white, kraft paper, reinforced with a glass fiber yarn and bonded to an aluminum foil, with selfsealing longitudinal closure laps (SSL) and butt strips.
- B. Field-Applied Jackets:
 1. PVC Plastic: Zeston 2000 Series. One piece, molded type fitting covers and jacketing material, gloss white.
 2. Connections: Tacks, pressure sensitive, color matching, vinyl tape.
 3. Aluminum Jacket: 0.016" thick sheet, (smooth/ embossed) finish, with longitudinal slip joints and 2" laps, die-shaped fitting covers with factory-attached protective liner.
 4. Stainless Steel Jacket: Type 304 stainless steel, 0.10", (smooth/ corrugated) finish.

2.02 FITTINGS, VALVES, TEES, ETC.

- A. All fittings, valves, tees, flanges, connections, etc. shall be insulated and covered with the appropriate Zeston 2000 PVC or metal insulated fitting cover.
 - 1. Fittings shall be manufactured from ultraviolet resistant PVC.
 - 2. Connections: Tacks, pressure sensitive, color matching, vinyl tape, Perma-Weld Adhesive.

2.03 EXPOSED DRAIN AND SUPPLY PIPES BELOW LAVATORIES

- A. Insulate all drainage piping including all hot and cold water valve and supplies under lavatories. PVC Insulators to comply with CBC (California Building Code) shall meet Testing Standard ASTM E 84-07 with a 25 flame spread/50 smoke. Insulators to meet and be listed with IPC/IAPMO Property and Material Standard PS 94-2008. With a one-piece design, fusion molded fabrication and pliable for high flexibility requirements. PVC insulators material to be 1/8" thick. Surfaces to be soft, smooth, nonabsorbent, easy to clean U/V inhibited, antimicrobial, antifungal properties. Insulator shall have a dual fastening system which consists of fusion bonded Velcro fastener strips for full slit enclosure and tamper resistant, smooth, non-abrasive snap-locking fasteners. Surfaces to be soft, smooth, non-absorbent, easy to clean U/V inhibited, antimicrobial, antifungal properties. Insulators shall have a dual fastening system which consists of fusion bonded Velcro fastener strips for full slit enclosure and tamper resistant, smooth, non-abrasive snap-locking fasteners. Manufacturer: Plumberex or approved equal Brand: Handy-Shield Maxx

PART 3 - EXECUTION

3.01 PREPARATION

- A. Verify that the fiber glass pipe insulation may be installed in accordance with project drawings, operation performance parameters and limitations of the specification.
- B. Tests of the piping system shall be completed prior to insulation application.
- C. All piping shall be cleaned of foreign substances and free of surface moisture prior to insulation application.

3.02 INSTALLATION

- A. Pipe insulation thickness:
 - 1. Runouts to individual fixtures that are no more than 12 feet long and smaller than 2" shall be insulated with 0.5" insulation.
 - 2. Pipe sizes up to 4" shall be insulated with 1.0" insulation.
- B. General:
 - 1. All pipe insulation shall be continuous through wall and ceiling openings and sleeves, except where fire stop materials are required.
 - 2. All surface finishes are to be extended to protect all surfaces, ends and raw edges of insulation.

3. Rigid insulation inserts shall be installed on pipe sizes 1½" or larger under outside hangers. Inserts shall be of equal thickness to the adjoining insulation and shall be provided with vapor retarder seals where required.
4. Insulation inserts shall not be less than the following lengths:

Pipe Size, In.	Length, In.
1½ – 2½	10

5. Galvanized metal shields shall be applied between hangers or supports and the pipe insulation. Shields shall be formed to fit the insulation and shall extend up to the centerline of the pipe and the length specified for the insulation hanger inserts less 4" to allow for vapor retarding butt joints on each side of the shields.
 6. Specified adhesives, mastics and coatings shall be applied at the manufacturer's recommended minimum coverage per gallon.
 7. When Zeston 2000 PVC Insulated Fitting Covers are used, care shall be taken to ensure that the surface temperature of the fitting will be kept below 150°F by the use of a proper thickness of insulation and by keeping the PVC cover away from contact with, or exposure to, sources of direct or radiant heat.
- C. Indoor piping: This portion of the installation procedure is applicable for piping in all indoor areas, including concealed spaces, mechanical rooms and inhabited areas.
1. Preformed fiber glass pipe insulation with all service jacket shall be applied to piping with all joints tightly fitted to eliminate voids.
 2. Longitudinal jacket laps and butt strips shall be smoothly secured according to manufacturer's recommendations.
 3. When adhered, the lap and butt strips must be pressurized by rubbing firmly with a plastic squeegee or the back of a knife blade to ensure positive closure.
 4. The installed thickness shall be enough that the surface temperature shall be kept below 150°F.
 5. For pipe exposed in mechanical equipment rooms or in finished spaces less than 10' above finished floor, finish with aluminum jacket.
 6. Fittings, valves and flanges shall be insulated with PVC insulated fitting covers and Hi-Lo Temp insulation inserts per manufacturer's recommendations.

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SECTION 221100

DOMESTIC WATER PIPING AND SPECIALTIES

PART 1 - GENERAL

1.1 GENERAL CONDITIONS

- A. The General Conditions, Supplementary Conditions are a part of this section and the contract for this work and apply to this section as fully as if repeated herein. Furnish design, construct and install a complete domestic water piping system. The system shall be complete in all respects including all labor, materials, equipment and services necessary, and shall be installed by personnel specifically experienced in plumbing installation.

1.2 WORK INCLUDED

- A. Work included shall be as indicated on the drawings, including but not limited to the following:
 - 1. Copper Pipe
 - 2. Valves and Fittings
 - 3. Piping Specialties
 - 4. Valve Boxes

1.3 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 ALL DOMESTIC WATER PIPING:

- A. Above grade shall be type "L" copper tubing hard drawn with wrought copper solder sweat fittings. Where below grade and within 5' of building line, shall be type "K" copper tubing in single continuous length with polyethylene outer tubing.

2.2 DOMESTIC WATER DISTRIBUTION 5' OUTSIDE BUILDING EXCEPT AS OTHERWISE NOTED ON PLANS:

- A. 1-1/2" and smaller schedule 40 PVC conform to ASTM 1785 with solvent welded fittings. 2" and larger class 200 PVC gasket bell end shall conform to ASTM 1869 with PVC fittings. Provide thrust block at each change in direction.

2.3 VALVES AND FITTINGS

- A. Ball valves 2" and smaller (Lead Free): Two-piece alloy C69300 (copper-zinc-silicon) body; sweat or threaded ends, alloy C69300 ball; virgin PTFE seat ring; brass alloy C36000 packing gland, O-Ring EPDM, alloy 69300 blowout-proof stem; 600 psig CWP. Nibco T/S 685-80-LF or approved equal.
- B. Spring loaded check valves 2" and smaller (Lead Free): Alloy C87850 body, sweat or threaded ends, stainless steel spring, stainless steel stem, stainless steel disc holder, PTFE disc; 250 PSI CWP. Nibco S/T 480-Y-LF or approved equal.
- C. Swing check valves 2" and smaller (Lead Free): Alloy C87850 body, sweat or threaded ends, Y-pattern, renewable PTFE seat disc, 200 PSI CWP, suitable for installation in a horizontal or vertical line with flow upward. Nibco S/T 413-Y-LF or approved equal.
- D. Balance valves 2" and smaller (Lead Free): Brass body, stainless steel ball, sweat or threaded ends, glass and carbon filled TFE seat, brass readout valves with EPT check valves, EPDM stem "O" ring, , suitable for 400 PSIG water working pressure at 250°F for NPT models and 200 PSIG water working pressure at 250 °F for sweat models. Bell & Gossett CB-LF or approved equal.
- E. Hose Bibbs (Lead Free): Stainless steel lead free hose faucet/valve, brass vandal-resistant lock shield bonnet and removable wheel handle, replaceable disc, hose thread spout, with vacuum breaker to comply with ASSE Standard 1011, 3/4" size. Acorn 8121-SSLF.
- F. Hose Bibbs: Rough brass body hose faucet/valve, brass vandal-resistant lock shield bonnet and removable wheel handle, replaceable disc, hose thread spout, with vacuum breaker to comply with ASSE Standard 1011, 3/4" size. Acorn 8121.
- G. Chrome plated brass body, brass ball with PTFE seats, blow-out proof plated brass stem and chrome plated metal handle. 3/8" O.D. compression outlet, 1/2" I.P.S. inlet and riser to match application. Dual outlet stops shall be provided where necessary. Stops shall be Brass Craft KTR17 C quarter turn ball stop, or approved equal.
- H. Combination Pressure and Temperature Relief Valve (Lead Free): Lead free brass body, temperature and pressure actuated, stainless steel stem and spring, thermostat with non-metallic coating, test lever, suitable for 125 psig water working pressure at 240°F, sized for

full BTUH input and operating pressure of equipment, with valve capacity on metal label. For equipment less than or equal to 200,000 BTUH input, provide AGA, U.L. or ASME listed and labeled valve. Provide ASME listed and labeled valve for larger equipment. Temperature and pressure relief valve shall be sized per AGA rating for BTUH input. Watts LF40XL.

- I. Water Pressure Reducing Valves (Lead Free): Lead free brass body, diaphragm operated, with an integral thermal expansion bypass valve, inlet union, stainless steel strainer, renewable stainless steel seat and adjustable reduced pressure range, 300 psig at 160°F. Pre-set for the scheduled pressure with gauge and tapping. Watts Model No. LFU5B-Z3-GG.
- J. Reduced Pressure Backflow Preventer Assembly (Lead Free): A backflow preventer shall be installed at each cross connection, and at the water meter to prevent back-siphonage, and backpressure backflow of hazardous materials into the potable water supply. The assembly shall consist of an internal pressure differential relief valve located in a zone between two positive seating check valves, captured springs, and silicone seat discs. Seats shall be replaceable on both check valves, and the relief valve. The assembly shall include two tightly closing shut-off valves, four test cocks, and a protective strainer upstream of the No. 1 shut-off valve. The reduced pressure zone backflow preventer shall have a single access port cover secured with stainless steel screws. Vent outlet to have an air gap. The assembly shall meet the requirements of A.S.S.E. Std. 1013; AWWA Std. C506, FFCCCHR of USC manual, 8th edition or current, Section 10. Watts Regulator Series LF009, or approved equal.

2.4 PIPING SPECIALTIES

- A. Tracer Wire: Provide on all plastic pipe No. 10 AWG, TW insulated copper wire. Spiral wrap around complete length of all plastic piping at approximately 2' intervals, terminate above grade or in yard box with a 24" pipe.
- B. Unions in Copper Tubing 2" and Smaller: ANSI B16.18 cast bronze union coupling or ANSI B15.24 class 150 bronze flanges. Nibco 733.
- C. Dielectric Fittings:
 - 1. Provide fittings and unions to install between pipes made of dissimilar metals. Unions shall be factory certified to withstand a minimum of 600 volts on a dry line with no flash over and shall be rated to 180°F at 250 PSI. Flanged fittings shall have a bolt isolator to insulate each bolt in the flange and shall be rated at 175 PSI. Bolts shall be constructed of durable, corrosion resistant polysulfone. Flanged fittings shall have a Standard Gasket "A" (GA) suitable for water, air, oil, natural gas, propane, gasoline, kerosene, mineral oil, vegetable oil and alkalines in 210°F at 250 PSI. Threaded end connections shall meet ANSI B2.1 and flanged fittings shall meet ANSI B16.42 (iron) and ANSI B16.24 Bronze. Unions shall conform to ANSI B16.39, including hydrostatic strength and air pressure testing. Dielectric fittings and unions shall be constructed of the following materials:
 - a. Gray Iron ASTM A48-83
 - b. Malleable iron parts ASTM A-197-79
 - c. Steel parts ASTM A108

- F. All piping to be run to maintain headroom and keep passageways and openings clear. Run parallel and straight with adjacent walls or ceilings to present a uniform appearance.
- G. All piping, except where noted otherwise on plans, shall be concealed in walls or above ceilings.
- H. Bending or forcing of pipe will not be allowed. Use fittings for all offsets or changes in alignment of piping.
- I. Proper provision shall be made for expansion and contraction by means of fittings and anchors and supports of all piping.
- J. Street elbows, bushings and long screw fittings will not be allowed.
- K. 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.
- L. PDI sized water hammer arresters shall be installed at the end of the branch line between the last two self-closing water faucet / flush valve fixtures served. When the branch line exceeds 20' -0" in length, an additional water hammer arrester shall be installed.
- M. Unions shall be installed after each screw-type valve, connections for all equipment, appliances and as required for erection and maintenance. No unions shall be installed in a concealed location.
- N. Install isolation unions on all connections between dissimilar metals (galvanized steel, black steel to copper).

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SECTION 22 13 00

Sanitary Waste, Vent, and Specialties

PART 1 - GENERAL

1.1 GENERAL CONDITIONS

- A. The General Conditions, Supplementary Conditions are a part of this section and the contract for this work and apply to this section as fully as if repeated herein. Furnish design, construct and install a complete sanitary waste system. The system shall be complete in all respects including all labor, materials, equipment and services necessary, and shall be installed by personnel specifically experienced in plumbing systems.

1.2 WORK INCLUDED

- A. Work included shall be as indicated on the drawings, including but not limited to the following:
 - 1. Sanitary Waste Piping
 - 2. Pipe Fittings

PART 2 - PRODUCTS

2.1 FITTINGS AND PIPING

- A. Soil, Waste, and Vent Above and Below Grade Within 5' of Building Line: No hub service weight cast iron soil pipe and fittings conforming to the latest issue of CISPI 301, ASTM A-888. Pipe and fittings shall be GreenSpec listed. Manufacturer shall be Charlotte, Tyler, AB&I, or approved equal.
- B. Joints: Joints for hubless pipe and fittings shall conform to the manufacturer's installation instructions and local code requirements. Hubless couplings shall be composed of a heavy duty four or six band coupling, stainless steel shield / clamp assembly and a fire resistant neoprene gasket conforming to ASTM C1540, CISPI 310, Factory Mutual 1680 Class 1, and bear the NSF trademark, manufactured by Anaco Husky SD4000, Fernco, MiFab or approved equal. Joints for hub and spigot shall be installed with compression gaskets conforming to the requirements of ASTM C-564, or shall be installed with lead and oakum.
- C. Sewer from 5' outside building except as otherwise noted on plans; Schedule 40 PVC piping conforming to ASTM D 2665, fittings conforming to ASTM D 2466 with solvent welded joints conforming to ASTM D2564.
- D. Vent Piping: Service weight cast-iron with same joint as used for soil and waste above grade.

2.2 CLEANOUTS

- A. Wall Cleanouts: J.R. Smith Fig. 4472, or approved equal, series countersunk plug with chrome plated cover and screws.

2.3 ROOF FLASHING

- A. Furnish and install on each pipe passing through the roof, a "Stoneman" No. 1100-7, or approved equal, six pound, seamless lead flashing assembly. Flashing shall have reinforced boot and be complete with cast iron counter flashing sleeve and Permaseal waterproofing compound. All vent pipes shall be terminated 7" above the roof.

PART 3 - EXECUTION

3.1 PIPE INSTALLATION

- A. No-Hub cast-iron Soil Pipe Institute Pamphlet #100 and the I.A.P.M.O. IS-6-75.
- B. All sanitary sewers and waste lines shall grade as indicated on drawings. The sections of the pipe shall be laid and fitted so that when completed the pipe will have smooth and uniform invert. Water shall not be allowed in the trenches while the pipes are being laid. Dirt, cement, or any other superfluous material of any description shall be carefully removed from the interior of the piping system as the work progresses. Constant inspection shall be made in pipe and fittings during and after all installation for possible fractures and failures caused by installation. Backfill so as not to disturb pipe or jointing.
- C. Flush out all sanitary drains with water so as to obtain free flow. Remove all obstructions and defects discovered. Remove and re-lay any sections and pipe already laid and found to be defective or which has had grade or joints disturbed.
- D. Openings in pipes, drains, fittings, apparatus and equipment shall be kept covered or plugged to prevent foreign substance from entering.
- E. Run piping free of traps, sags, or bends. Grade and valve for complete drainage and control of the system.
- F. All piping to be run to maintain headroom and keep passageways and openings clear. Run parallel and straight with adjacent walls or ceilings to present a uniform appearance.
- G. All piping, except where noted otherwise on plans, shall be concealed in walls or above ceilings.
- H. Bending or forcing of pipe will not be allowed. Use fittings for all offsets or changes in alignment of piping.
- 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.

3.2 CLEANOUTS

- A. As specified (see plans for size), cleanouts shall be caulked into pipe where shown on plans under countertops where they occur in walls to avoid their being too conspicuous. Cleanouts shall be accessible in all cases and shall be brought to surface on "Y"

branches. All cleanouts shall be provided with removable floor or wall plate as herein specified.

- B. In addition to the cleanouts shown on the plans, install cleanouts in all horizontal lines at each aggregate change of direction exceeding 135°, and at the base of any vertical riser longer than 8'-0". Install cleanout outside the building at the lower end of the building drain and extend to grade.

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SECTION 22 40 00

PLUMBING FIXTURES

PART 1 - GENERAL

1.01 GENERAL CONDITIONS

- A. The General Conditions, Supplementary Conditions are a part of this section and the contract for this work and apply to this section as fully as if repeated herein. The system shall be complete in all respects including all labor, materials, equipment and services necessary, and shall be installed by personnel specifically experienced in plumbing systems.

1.02 WORK INCLUDED

- A. Work included shall be as indicated on the drawings, including but not limited to the following:
 - 1. Plumbing Fixtures
 - 2. Fixture Supports

PART 2 - PRODUCTS

2.01 PLUMBING FIXTURES

- A. Plumbing fixtures shall be as shown in Plumbing Fixture Schedule.
- B. All sinks shall have a clean-out.

PART 3 - EXECUTION

3.01 FIXTURE INSTALLATION

- A. All plumbing fixtures shall be bedded and caulked along joint at walls, countertops, and other intersecting surfaces with Vulkem white silicone, use clear at stainless steel fixtures.
- B. Plumbing fixture trim and exposed supplies and waste shall be brass with polished chrome plated finish. Individual loose key stops, or, so specified, screw driver stops, shall be provided for all supplies, and unless integral with valves or faucets, unless otherwise approved by Architect, shall be mounted under the fixture. Exposed supplies and wastes through walls shall be provided with polished chrome plated cast brass wall escutcheons.
- C. Fixtures with hangers or supporting arms shall have hangers or arms securely mounted on a 1/4" thick x 6" wide steel wall plate which shall extend at least one stud beyond the first and last fixture mounting points. Concealed arm assemblies shall be attached to plates by four 3/8" x 1-1/4" steel bolts and nuts, and hangers and exposed arms by 5/16"

minimum full thread steel studs and jamb nuts. Plates shall be drilled and tapped at the time of fixture installation.

- D. Wall plates shall be recessed flush with studs and shall be securely attached to each stud crossed. In steel stud construction, a 1-1/2" x 18" long furring channel shall be attached to each notched stud with fillet welds 1" long on 6" centers front and back. Plates shall be continuous fillet welded at both top and bottom to each furring channel.

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SECTION 26 05 10

GENERAL ELECTRICAL REQUIREMENTS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections.
- B. All Specification Sections under Division 26.

1.02 SUMMARY

- A. This Section includes:
 - 1. Definitions.
 - 2. Excavation.
 - 3. Coordination of work.
 - 4. Cleaning, patching repairing and painting.
 - 5. Guarantees.
 - 6. Field test.

1.03 REFERENCES

- A. American National Standards Institute, Inc. (ANSI) Publications:
 - 1. C2 - National Electrical Safety Code.
 - 2. C37 – Metal-Enclosed Low-Voltage Power Circuit Breaker Switchgear.
 - 3. C37 – Metal-Clad and Station-Type Cubicle Switchgear.
 - 4. C37 – Metal-Enclosed Interrupter Switchgear.
- B. California Code of Regulations (CCR) Publications:
 - 1. Title 8, Industrial Relations.
 - 2. Title 19, State Fire Marshal Regulations.
 - 3. Title 24, Part 2, Energy Conservation Standards.
 - 4. Title 24, Part 3, CCR, 2016 California Electrical Code.
 - 5. Title 24, Part 9, CCR, 2016 California Fire Code.
- C. National Electrical Manufacturers Association (NEMA) Publication: ICS6-93 Enclosures for Industrial Controls and Systems.
- D. National Fire Protection Association (NFPA) Publications:
 - 1. 70 National Electrical Code (NEC).
 - 2. 70B Recommended Practice for Electrical Equipment Maintenance.
- E. State of California Public Utilities Commission (Cal. P.U.C.) Publications:
 - 1. G.O. 95 Rules for Overhead Electric Line Construction.
 - 2. G.O. 128 Rules for Construction of Underground Electrical Supply and Communications Systems.

1.04 DEFINITIONS

The following definitions apply to terms used in these standards.

- A. The words "work" or "electrical work" include products, labor, equipment, tools, appliances, transportation, and all related items directly or indirectly required to complete the specified and indicated electrical installation.
- B. The word "concealed" shall mean that the installation will not be visible when all permanent or removable elements of the construction are in place. The word "exposed" shall mean that the installation is visible when all permanent or removable elements of the construction are in place.
- C. The word "code" shall mean any and all regulations and requirements of regulatory bodies, public and private, having jurisdiction over the work involved.
- D. The word "product" used in Division 26 means all material, equipment, machinery, and/or appliances directly or indirectly required to complete the specified and/or indicated electrical work.
- E. The words "standard product" shall mean a manufactured product, illustrated and/or described in catalogs or brochures that is in general distribution prior to the date of issue of construction documents. Products will generally be identified by means of a specific catalog number and manufacturer's name.
- F. "Provide" means furnish, install, connect and test unless otherwise noted.
- G. The words "conduit" and "duct" are used interchangeably, and have the same meaning.
- H. "UFER" Ground: See Section 26 0526, "Grounding".

1.05 DRAWINGS AND SPECIFICATIONS:

- A. Electrical drawings are diagrammatic but shall be followed as closely as actual construction and work of the other sections shall permit. Size and location of equipment is drawn to scale wherever possible.
- B. Drawings and specifications are for the assistance and guidance of the Contractor. Exact locations, distances, and levels will be governed by the building. The Contractor shall make use of data in all the contract documents to verify information at the building site.
- C. In any case where there appears to be a conflict or ambiguity between that which is shown on the electrical drawings or in the electrical specifications and any other part of the Contract Documents, the Contractor shall notify and secure directions from the Architect.
- D. Drawings and specifications are intended to complement each other. Where a conflict or ambiguity exists between the requirements of the drawings and the specifications, request clarification. Do not proceed with work without direction.
- E. The Architect shall interpret the drawings and the specifications. The interpretation by the Architect as to the true intent and meaning thereof and the quality, quantity, and sufficiency of the materials and workmanship furnished there under shall be accepted as final and conclusive.
- F. In the case of conflicts or ambiguities not clarified prior to the bidding deadline, use the most costly alternative (better quality, greater quantity, and larger size) in preparing the bid. A clarification will be issued to the successful bidder as soon as feasible after the award and, if appropriate, a deductive change order will be issued.

- G. Where items are specified in the singular, this division shall provide the quantity as shown on drawings plus any spares or extras indicated on the drawings or in the specifications.

1.06 RECORD DRAWINGS:

- A. On one (1) set of contract drawings, kept at the site during construction, mark all work that is installed differently from that shown on plans, including revised circuitry, material or equipment. Sufficient dimensions shall be provided to locate all materials installed beneath and outside the building including, but not limited to, underground conduits, cabling, ground rods, and stubouts.
- B. All changes or revisions to the contract drawings including, but not limited to, those indicate by amendment, change order, field order, written response to RFI/RFC or other contractual means shall be kept current as the work progresses and shall be incorporated onto the final record drawings.
- C. Accurately locate and dimension all underground and embedded conduit runs on the record drawings.
- D. The marked drawings shall be kept current as the work progresses and shall be available for inspection upon request. At the close of construction, prepare a set of accurate reproducible record drawings and turn them over to the Architect. The correct and completed record drawings are a prerequisite to final contract payment.
 - 1. As part of the reproducible record drawings, the Contractor shall produce full size reproducible drawings with the: Final panelboard schedules as modified during construction and final light fixture schedule as modified during construction.
 - 2. These drawings shall be on Architectural base sheets and numerically sequenced to follow the last "E" sheet.
- E. As part of the reproducible record drawings, the Contractor shall produce full size reproducible drawings for all signal systems which shall include exact "As-Built" device locations, "As-Built" interconnection drawings, and "As-Built" riser diagrams, and provide one set in the panel board, motor control center, or main distribution panel.

1.07 EXAMINATION OF SITE:

- A. Examination of the building site shall be made by the Contractor. The Contractor shall compare it with the drawings and specification and satisfy himself as to the conditions under which work is to be performed. The Contractor shall, at such time, ascertain and check the locations of existing structures or equipment which may affect his work.

1.08 EXCAVATION

- A. Prior to starting excavation or trenching, the Contractor shall perform an underground Site Survey utilizing an electronic locator to verify the exact location of all existing underground utility piping, conduits and conductors. The Contractor shall submit for approval a site survey report to the Architect within five (5) working days after the survey is performed. The Site Survey Report shall show the horizontal location for existing utilities and identify any possible conflicts between the new work and existing utilities.

1.09 PERMITS, FEES AND INSPECTIONS:

- A. Permits, fees, and inspections shall be arranged for and paid by the Contractor.

- B. The Contractor shall present to the Architect, properly signed certificates of the final inspection before work will be accepted.

1.10 ELECTRO-MECHANICAL REQUIREMENTS:

- A. The power wiring, safety switches, combination controllers (indicated on electrical plans), circuit breakers, and motor control equipment forming a part of motor-control centers or switchgear assemblies, and the electrical connection of the mechanical equipment to the electrical power source shall be included under Division 26.
- B. The electrical components of mechanical equipment including, but not limited to, motors, motor-starters, control or pushbutton stations, float-pressure switches, solenoid valves, thermostats, junction boxes, and other devices functioning to control mechanical equipment shall be provided under Division 15. Interconnecting wiring for packaged equipment shall be provided as an integral part of the equipment.
- C. Control Wiring: Installation of line and low voltage conduit, wiring and junction/outlet boxes not shown on the electrical drawings but required for controlling or monitoring mechanical equipment systems shall be furnished and installed under Division 15. Installation of these shall comply with the requirements of Division 26.
- D. If substitution of controls or mechanical equipment other than that specified requires any changes in the electrical work from that shown on the plans or specified in Division 26, any additional cost of the equipment or electrical work shall be the responsibility of Division 15.

1.11 SUBMITTALS:

- A. Submittal requirements for Division 26 shall be in accordance with Division 1 except as modified herein. All time requirements shall be based on the notice to proceed date of the General Contract. All materials and equipment furnished under Division 26 shall be submitted to the Architect for approval. Such approval shall be in writing from the Architect including that which is exactly as specified. Any materials or equipment installed without written approval shall be subject to immediate removal. Approval of material or equipment shall in no way obviate compliance with the contract documents.
- B. Submittals shall be packaged separately for each system or major piece of equipment and reviewed by the Contractor for verification of compliance with the contract documents prior to submitting to the Architect. Separate, bound submittals shall be provided for each specification section to the Architect. Authorization to combine equipment or systems must be in writing from the Architect. All interface between specification sections shall be indicated in each submittal.
- C. All materials and equipment shall be new and shall bear the inspection label of the Underwriters Laboratories (UL) where applicable. Materials and equipment shall be the latest standard product and shall be of the grade indicated by the trade names given.
- D. The work shown on the contract drawings is engineered and designed to accommodate the equipment described hereinafter in these specifications.
- E. Equipment submittal shall include manufacturer's name, model, type, number, finish, size and capacity of the equipment at the given conditions. This information shall be provided in bound submittals, each containing an index and all submittals. Provide [seven (7)] copies of each submittal. The title shall provide the project name, system identity, the specification number, and the Contractor's name and address. This

submittal shall be in addition to the shop drawings hereinafter specified. Partial submittals of material submitted from time to time are not acceptable and may be returned without review.

- F. Submittals shall be reviewed by the Architect for compliance with the contract documents. Submittals found to be incomplete or not in compliance with the contract documents shall be returned for resubmittal. The Architect shall review the original submittal and one (1) resubmittal per section (if required). The Contractor shall reimburse the Architect for all subsequent submittal review.
- G. Equipment Layout Drawings: "Equipment Layout Drawings" shall be provided for each equipment room, yard or area containing equipment items furnished under Division 26. Layout drawings shall consist of a plan view of the room or area (to a ¼ inch = 1 foot – 0 inch minimum scale) showing projected outlines of all equipment, complete with dotted lines indicating all required clearances, including all clearances needed for removal or service. Location of all conduit and pull boxes shall be indicated. Drawings shall indicate any and all conflicts with other trades.

1.12 SUBSTITUTIONS:

- A. Equipment submitted for substitution must fit the space conditions shown on the drawings, leaving adequate room for maintenance around all equipment. A minimum of 48 inches (or more if required by Code) must be maintained clear in front of all electrical panels, starters, gutters or other electrical apparatus. Submit drawings showing the layout, size, and exact method of interconnection of conduit, wiring and controls, which shall conform to the manufacturer's recommendations and these specifications. The scale of these drawings shall be the scale of the contract drawings. The Contractor shall bear the excess costs, by any and all crafts, for fitting the equipment into the space and the system designated. Where additional labor or material is required to permit equipment submitted for substitution to function in an approved manner, this shall be furnished and installed by the Contractor without additional cost to the Owner.
- B. No substitutions will be allowed for materials or equipment if three (3) or more manufacturers are indicated.
- C. An item submitted for substitution does not constitute an "equal" unless approval by the Architect has been given in writing.
- D. Equipment submitted for substitution shall be approved in writing by the Architect and shall be accompanied by the following:
 - 1. A sample of each item submitted for substitution shall accompany the submittal if requested by the Architect.
 - 2. A unit price quotation shall be provided with each item intended for substitution. This quote shall include a unit price for the specified item and a unit price for the intended substitute item. The Contractor shall also provide a total (per item) of the differential payback to the Owner should the intended substitute item be approved as equivalent to that which is specified.
 - 3. The Contractor shall reimburse the Owner for the additional services required by the Architect to review and process substitutions.
- E. Substitutions shall be approved in writing by the Architect. The determination of the Architect shall be final.

1.13 WARRANTY:

- A. Warranty requirements for Division 26 shall be in accordance with Division 1 except as modified herein.
- B. All materials and equipment provided shall be warranted for a minimum period of one (1)-year from the official date of completion. In addition, provide two (2)-year extended warranty, for a total of three (3)-years, for the following items:
 - 1. Disconnect Switches.
 - 2. Panelboards.
 - 3. Circuit Breakers.
- C. The Contractor shall provide all labor and materials required to correct problems which develop during the warranty period due to defective materials or faulty workmanship. The labor and materials to do this work shall be provided at no additional cost to the Owner.
- D. Within one (1)-month prior to the expiration of the warranty period, the Contractor shall correct any and all defects covered by the warranty. This shall include tightening to original specifications of all bolted connections.
- E. Warranty certificates shall be made out to Vista Unified School District and shall be delivered to the Architect at the completion of the installation.
- F. All equipment shall be guaranteed to be supported in such a way as to be free from objectionable vibration and noise.
- G. Additional warranty requirement shall be as indicated in the following sections of Division 26.

1.14 OPERATION AND MAINTENANCE MANUALS:

- A. The Contractor shall furnish operation and maintenance manuals for each electrical system and for each piece of equipment. The complete manual, bound in hardback binders, or an approved equivalent, shall be provided to the Architect. Provide Seven (7) copies of each manual. One (1) manual shall be furnished prior to the time that system or equipment tests are performed, and the remaining manuals shall be furnished one (1) week before the final job visit is made. The following identification shall be inscribed on the cover; the words "OPERATION AND MAINTENANCE MANUAL", the name and location of the building, the name of the Contractor, and the contract number.
- B. The manual shall include the names, address, and the telephone numbers of each Subcontractor installing equipment and systems, and of the local representatives for each item of equipment and each system. The manual shall have a table of contents and be assembled to conform to the table of contents with tab sheets placed before instructions covering each subject. The instruction sheet shall be legible with large sheets of drawings folded in. The Manual shall include, but not limited to, the following:
 - 1. System layout showing components.
 - 2. Devices and controls.
 - 3. Wiring and control diagrams showing operation and control of each component.
 - 4. Sequence of operation describing start-up, operation, and shutdown.
 - 5. Functional description of the principal system components.
 - 6. Installation instructions.
 - 7. Maintenance and overhaul instructions.
 - 8. Lubrication schedule including type, grade, temperature, range, and frequency.
 - 9. Safety precautions, diagrams and illustrations.

10. Test procedures.
 11. Performance data.
 12. Parts list.
- C. The parts list for equipment shall indicate the sources of supply, recommended spare parts, and the service organization which is reasonably convenient to the building sit. The manual shall be complete in all respects for all equipment, controls, and accessories provided.

1.15 COORDINATION OF ALL WORK:

- A. Job Visits by the Architect:
1. Periodic visits to the job by the Architect are for the express purpose of verifying compliance with the contract documents.
 2. Such visits shall not be construed as construction supervision. Neither shall such visits be construed as making the Architect responsible for providing a safe place for the performance of the work by the Contractor or the Contractor's employees or the safety of the supplies of the Contractor or his Subcontractors.
- B. Temporary Electrical Service:
1. The Contractor shall provide labor and materials required for the installation and maintenance of temporary lighting and required power sources for the Contractor's equipment inside the building or construction site and for pedestrian walkways during the period of construction.
 2. The building or construction site shall be sufficiently illuminated so that construction work can be safely performed. Special attention shall be given to adequately lighting stairs, ladders, pedestrian walkways, floor openings, etc. Walkway lights shall be controlled by a switch within the building or construction site.
 3. Power shall be on and all lighting shall be in operation before painting work commences.
- C. Posted Operating Instructions:
1. Operating instructions shall be provided by the Contractor at the conclusion of the project for each system and each principal piece of equipment for the use of operating and maintenance personnel. The operating instructions shall include wiring and control diagrams showing the entire system, including, but not limited to, equipment, devices, and control sequences. All operating instruction shall be approved by the Architect.
 2. Operating instructions shall be typewritten or engraved and shall be framed under glass or in approved laminated plastic and posted adjacent to each principal piece of equipment and shall include such instructions as start up, proper adjustment, operation, lubrication, shutdown, safety-precautions, procedure in the event of equipment failure, and any other necessary items of instructions as recommended by the manufacturer of unit.
 3. Operating instructions exposed to the weather shall be made of weather-resisting materials or shall be suitably enclosed to be weather protected. Operating instructions shall not face when exposed to sunlight and shall be secured to prevent easy removal or peeling.

1.16 TRAINING:

- A. User staff and maintenance personnel shall be thoroughly trained (minimum four (4)-hours) in the use of each system or major piece of equipment installed. This training

shall be provided a part of the Contractors bid to supply the system or equipment. Additional training requirements, shall be as specified in the subsequent sections of Division 26.

1.17 DELIVERY AND STORAGE:

- A. Equipment and materials shall be properly stored, adequately protected, and carefully handled to prevent damage before and during installation. Equipment and materials shall be handled, stored, and protected in accordance with the manufacturer's recommendations and as approved by the Architect. Electrical conduit shall be stored to provide protection from the weather and accidental damage. Plastic conduit shall be stored on even supports and in locations not subject to direct sunrays or excessive heat. Cables shall be sealed, stored, and handled carefully to avoid damage to the outer covering or insulation and damage from moisture and weather. Damaged or defective items shall be replaced with new items at no cost to the Owner. The Architect shall determine if a damaged or defective item is to be replaced with a new item. The decisions by the Architect in these matters shall be final.

1.18 FIELD TESTS:

- A. As an exception to requirements that may be stated elsewhere in the contract, the Architect shall be given five (5) working days notice prior to each test. The Contractor shall provide all test equipment, personnel and incidentals including, but not limited to, water, fuel, and lubricants necessary to perform the required tests. Inspections are to be performed by an independent third party and are intended to ensure that the work of the prime contractor is in accordance with the Contract Documents and applicable building codes. The Owner shall provide electrical power required for all tests. The Contractor shall submit five (5) typewritten copies of all test results to the Architect within five (5) working days after each test.
 - 1. The information submitted shall include, but not limited to, the following:
 - a. Scope of the test.
 - 2. Name and type of instrument used.
 - 3. Calibration date of instrument and name of calibration firm.
 - 4. Name and signature of testing personnel.
 - 5. Name of signature of Architect.
 - 6. Analysis of test results.
 - 7. The Contractor shall demonstrate to the Architect the operation of all equipment and systems. All tests shall be completed to the satisfaction of the Architect. Each test shall be performed the number of times indicated in the individual specification section. In the event the number of times the tests are to be completed is omitted, the Architect shall determine the number.

END OF SECTION

SECTION 26 05 19

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 GENERAL

1.01 SUMMARY

- A. This Section includes the following:
 - 1. Building wires and cables rated 600 V and less.
 - 2. Connectors, splices, and terminations rated 600 V and less.

1.02 ACTION SUBMITTALS

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

1.03 INFORMATIONAL SUBMITTALS

- A. Field quality-control test reports.

1.04 QUALITY ASSURANCE

- A. 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.
- B. Comply with NFPA 70.

PART 2 PRODUCTS

2.01 CONDUCTORS AND CABLES

- A. Aluminum and Copper Conductors: Comply with NEMA WC 70.
- B. Conductor Insulation: Comply with NEMA WC 70 for Types THHN-THWN, XHHW.
- C. No BX or MC cables allowed.

2.02 CONNECTORS AND SPLICES

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, or approved equal to the following:
 - 1. AFC Cable Systems, Inc.
 - 2. Hubbell Power Systems, Inc.
 - 3. O-Z/Gedney; EGS Electrical Group LLC.
 - 4. 3M; Electrical Products Division.
 - 5. Tyco Electronics Corp.
- B. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

PART 3 EXECUTION

3.01 CONDUCTOR MATERIAL APPLICATIONS

- A. Feeders: Copper; stranded for No. 12 AWG.
- B. Branch Circuits: Copper; stranded for No. 12 AWG and larger.
- C. Use copper feeders and branch circuit conductors serving motor loads.

3.02 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

- A. Service Entrance: Type XHHW, single conductors in raceway.
- B. Exposed Feeders: Type THHN-THWN, single conductors in raceway.
- C. Feeders Concealed in Ceilings, Walls, Partitions, and Crawlspace: Type THHN-THWN, single conductors in raceway.
- D. Feeders Concealed in Concrete, below Slabs-on-Grade, and Underground: Type THHN-THWN, single conductors in raceway.
- E. Exposed Branch Circuits, Including in Crawlspace: Type THHN-THWN, single conductors in raceway, Armored cable, Type AC.
- F. Branch Circuits Concealed in Ceilings, Walls, and Partitions: Type THHN-THWN, single conductors in raceway, Armored cable, Type AC.
- G. Branch Circuits Concealed in Concrete, below Slabs-on-Grade, and Underground: Type THHN-THWN, single conductors in raceway.
- H. Class 1 Control Circuits: Type THHN-THWN, in raceway.
- I. Class 2 Control Circuits: Type THHN-THWN, in raceway or Power-limited cable, concealed in building finishes.
- J. NM cable allowed where permissible by code and local authority having jurisdiction.

3.03 INSTALLATION OF CONDUCTORS AND CABLES

- A. Conceal cables in finished walls, ceilings, and floors, unless otherwise indicated.
- B. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
- C. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.
- D. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.
- E. Support cables according to Division 26 Sections "Hangers and Supports for Electrical Systems."
- F. Identify and color-code conductors and cables according to Division 26 Section "Identification for Electrical Systems."

- G. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.
- H. Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.
 - 1. Use oxide inhibitor in each splice and tap conductor for aluminum conductors.
- I. Wiring at Outlets: Install conductor at each outlet, with at least 6 inches (150 mm) of slack.

3.04 SLEEVE AND SLEEVE-SEAL INSTALLATION FOR ELECTRICAL PENETRATIONS

- A. Install sleeves and sleeve seals at penetrations of exterior floor and wall assemblies. Comply with requirements in Division 26 Section "Sleeves and Sleeve Seals for Electrical Raceways and Cabling."

3.05 FIELD QUALITY CONTROL

- A. A qualified inspector will perform tests and inspections and prepare test reports.
- B. Inspections are to be performed by an independent third party and are intended to ensure that the work of the prime contractor is in accordance with the Contract Documents and applicable building codes.
 - 1. After installing conductors and cables and before electrical circuitry has been energized, test service entrance and feeder conductors for compliance with requirements.
 - 2. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
 - 3. Infrared Scanning: After Substantial Completion, but not more than 60 days after Final Acceptance, perform an infrared scan of each splice in cables and conductors No. 3 AWG and larger. Remove box and equipment covers so splices are accessible to portable scanner.
 - a. Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of each splice 11 months after date of Substantial Completion.
 - b. Instrument: Use an infrared scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.
 - c. Record of Infrared Scanning: Prepare a certified report that identifies splices checked and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.
- C. Test Reports: Prepare a written report to record the following:
 - 1. Test procedures used.
 - 2. Test results that comply with requirements.
 - 3. Test results that do not comply with requirements and corrective action taken to achieve compliance with requirements.
- D. Remove and replace malfunctioning units and retest as specified above.

END OF SECTION

SECTION 26 05 26

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: Grounding systems and equipment.

1.02 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Field quality-control reports.

1.03 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with UL 467 for grounding and bonding materials and equipment.

PART 2 PRODUCTS

2.01 CONDUCTORS

- A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.
- B. Bare Copper Conductors:
 - 1. Solid Conductors: ASTM B 3.
 - 2. Stranded Conductors: ASTM B 8.
 - 3. Tinned Conductors: ASTM B 33.
 - 4. Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG conductor, 1/4 inch (6 mm) in diameter.
 - 5. Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.
 - 6. Bonding Jumper: Copper tape, braided conductors terminated with copper ferrules; 1-5/8 inches (41 mm) wide and 1/16 inch (1.6 mm) thick.
 - 7. Tinned Bonding Jumper: Tinned-copper tape, braided conductors terminated with copper ferrules; 1-5/8 inches (41 mm) wide and 1/16 inch (1.6 mm) thick.

2.02 CONNECTORS

- A. Listed and labeled by an NRTL acceptable to authorities having jurisdiction for applications in which used and for specific types, sizes, and combinations of conductors and other items connected.
- B. Bolted Connectors for Conductors and Pipes: Copper or copper alloy, pressure type with at least two bolts.
 - 1. Pipe Connectors: Clamp type, sized for pipe.
- C. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.

2.03 GROUNDING ELECTRODES

- A. Ground Rods: Copper-clad steel, 5/8 by 96 inches (16 by 2400 mm) in diameter.

PART 3 EXECUTION

3.01 APPLICATIONS

- A. Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger unless otherwise indicated.
- B. Underground Grounding Conductors: Install bare tinned-copper conductor, No. 3/0 AWG minimum or as indicated on plans. Bury at least 24 inches (600 mm) below grade.
- C. Isolated Grounding Conductors: Green-colored insulation with continuous yellow stripe. On feeders with isolated ground, identify grounding conductor where visible to normal inspection, with alternating bands of green and yellow tape, with at least three bands of green and two bands of yellow.
- D. Conductor Terminations and Connections:
 - 1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
 - 2. Underground Connections: Welded connectors except at test wells and as otherwise indicated.
 - 3. Connections to Ground Rods at Test Wells: Bolted connectors.
 - 4. Connections to Structural Steel: Welded connectors.

3.02 EQUIPMENT GROUNDING

- A. Install insulated equipment grounding conductors with the following items, in addition to those required by NFPA 70:
 - 1. Feeders and branch circuits.
 - 2. Lighting circuits.
 - 3. Receptacle circuits.
 - 4. Single-phase motor and appliance branch circuits.
 - 5. Three-phase motor and appliance branch circuits.
 - 6. Flexible raceway runs.
 - 7. Armored and metal-clad cable runs.
 - 8. Busway Supply Circuits: Install insulated equipment grounding conductor from grounding bus in the switchgear, switchboard, or distribution panel to equipment grounding bar terminal on busway.
 - 9. Computer and Rack-Mounted Electronic Equipment Circuits: Install insulated equipment grounding conductor in branch-circuit runs from equipment-area power panels and power-distribution units.
- B. Air-Duct Equipment Circuits: Install insulated equipment grounding conductor to duct-mounted electrical devices operating at 120 V and more, including air cleaners, heaters, dampers, humidifiers, and other duct electrical equipment. Bond conductor to each unit and to air duct and connected metallic piping.
- C. Water Heater, Heat-Tracing, and Antifrost Heating Cables: Install a separate insulated equipment grounding conductor to each electric water heater and heat-tracing cable. Bond conductor to heater units, piping, connected equipment, and components.

- D. Signal and Communication Equipment: In addition to grounding and bonding required by NFPA 70, provide a separate grounding system complying with requirements in TIA/ATIS J-STD-607-A.
 - 1. For telephone, alarm, voice and data, and other communication equipment, provide No. 4 AWG minimum insulated grounding conductor in raceway from grounding electrode system to each service location, terminal cabinet, wiring closet, and central equipment location.
 - 2. Service and Central Equipment Locations and Wiring Closets: Terminate grounding conductor on a 1/4-by-4-by-12-inch (6.3-by-100-by-300-mm) grounding bus.
 - 3. Terminal Cabinets: Terminate grounding conductor on cabinet grounding terminal.
- E. Metal Poles Supporting Outdoor Lighting Fixtures: Install grounding electrode and a separate insulated equipment grounding conductor in addition to grounding conductor installed with branch-circuit conductors.

3.03 INSTALLATION

- A. Grounding Conductors: Route along shortest and straightest paths possible unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.
- B. Ground Rods: Drive rods until tops are 2 inches (50 mm) below finished floor or final grade unless otherwise indicated.
 - 1. Interconnect ground rods with grounding electrode conductor below grade and as otherwise indicated. Make connections without exposing steel or damaging coating if any.
 - 2. For grounding electrode system, install at least three rods spaced at least one-rod length from each other and located at least the same distance from other grounding electrodes, and connect to the service grounding electrode conductor.
- C. Test Wells: Ground rod driven through drilled hole in bottom of handhole. Handholes are specified in Division 26 Section "Underground Ducts and Raceways for Electrical Systems," and shall be at least 12 inches (300 mm) deep, with cover.
 - 1. Test Wells: Install at least one test well for each service unless otherwise indicated. Install at the ground rod electrically closest to service entrance. Set top of test well flush with finished grade or floor.
- D. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance except where routed through short lengths of conduit.
 - 1. Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.
 - 2. Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install bonding so vibration is not transmitted to rigidly mounted equipment.
 - 3. Use exothermic-welded connectors for outdoor locations; if a disconnect-type connection is required, use a bolted clamp.
- E. Grounding and Bonding for Piping:
 - 1. Metal Water Service Pipe: Install insulated copper grounding conductors, in conduit, from building's main service equipment, or grounding bus, to main metal water service entrances to building. Connect grounding conductors to main metal water service pipes; use a bolted clamp connector or bolt a lug-type connector to a pipe flange using one of the lug bolts of the flange.

Where a dielectric main water fitting is installed, connect grounding conductor on street side of fitting. Bond metal grounding conductor conduit or sleeve to conductor at each end.

2. Water Meter Piping: Use braided-type bonding jumpers to electrically bypass water meters. Connect to pipe with a bolted connector.
 3. Bond each aboveground portion of gas piping system downstream from equipment shutoff valve.
- F. Bonding Interior Metal Ducts: Bond metal air ducts to equipment grounding conductors of associated fans, blowers, electric heaters, and air cleaners. Install tinned bonding jumper to bond across flexible duct connections to achieve continuity.

3.04 LABELING

- A. Comply with requirements in Division 26 Section "Identification for Electrical Systems" Article for instruction signs. The label or its text shall be green.
- B. Install labels at the telecommunications bonding conductor and grounding equalizer and at the grounding electrode conductor where exposed.
 1. Label Text: "If this connector or cable is loose or if it must be removed for any reason, notify the facility manager."

3.05 FIELD QUALITY CONTROL

- A. A qualified inspector will perform tests and inspections and prepare test reports. Inspections are to be performed by an independent third party and are intended to ensure that the work of the prime contractor is in accordance with the Contract Documents and applicable building codes.
 1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.
 2. Inspect physical and mechanical condition. Verify tightness of accessible, bolted, electrical connections with a calibrated torque wrench according to manufacturer's written instructions.
 3. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal, and at ground test wells. Make tests at ground rods before any conductors are connected.
- B. Report measured ground resistances that exceed the following values:
 1. Power and Lighting Equipment or System with Capacity of 500 kVA and Less: 10 ohms.
 2. Power and Lighting Equipment or System with Capacity of 500 to 1000 kVA: 5 ohms.
 3. Power and Lighting Equipment or System with Capacity More Than 1000 kVA: 3 ohms.
 4. Power Distribution Units or Panelboards Serving Electronic Equipment: 3 ohm(s).
- C. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Architect promptly and include recommendations to reduce ground resistance.

END OF SECTION

SECTION 26 05 29

HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes:
 - 1. Hangers and supports for electrical equipment and systems.
 - 2. Construction requirements for concrete bases.

1.02 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Design supports for multiple raceways, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- B. Design supports for multiple raceways capable of supporting combined weight of supported systems and its contents.
- C. Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and components.
- D. Rated Strength: Adequate in tension, shear, and pullout force to resist maximum loads calculated or imposed for this Project, with a minimum structural safety factor of five times the applied force.

1.03 SUBMITTALS

- A. Product Data: For steel slotted support systems.
- B. Shop Drawings: Show fabrication and installation details and include calculations for the following:
 - 1. Trapeze hangers. Include Product Data for components.
 - 2. Steel slotted channel systems. Include Product Data for components.
 - 3. Equipment supports.
- C. Welding certificates.

1.04 QUALITY ASSURANCE

- A. Welding: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."
- B. Comply with NFPA 70.

PART 2 PRODUCTS

2.01 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

- A. Steel Slotted Support Systems: Comply with MFMA-4, factory-fabricated components for field assembly.

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
1. Allied Tube & Conduit.
 - a. Cooper B-Line, Inc.; a division of Cooper Industries.
 - b. ERICO International Corporation.
 - c. GS Metals Corp.
 - d. Thomas & Betts Corporation.
 - e. Unistrut; Tyco International, Ltd.
 - f. Wesanco, Inc.
 2. Metallic Coatings: Hot-dip galvanized after fabrication and applied according to MFMA-4.
 3. Nonmetallic Coatings: Manufacturer's standard PVC, polyurethane, or polyester coating applied according to MFMA-4.
 4. Painted Coatings: Manufacturer's standard painted coating applied according to MFMA-4.
 5. Channel Dimensions: Selected for applicable load criteria.
- B. Raceway and Cable Supports: As described in NECA 1 and NECA 101.
- C. Conduit and Cable Support Devices: Steel hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.
- D. Support for Conductors in Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug or plugs for non-armored electrical conductors or cables in riser conduits. Plugs shall have number, size, and shape of conductor gripping pieces as required to suit individual conductors or cables supported. Body shall be malleable iron.
- E. Structural Steel for Fabricated Supports and Restraints: ASTM A 36/A 36M, steel plates, shapes, and bars; black and galvanized.
- F. Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to building surfaces include the following:
1. Mechanical-Expansion Anchors: Insert-wedge-type, zinc-coated steel, for use in hardened portland cement concrete with tension, shear, and pullout capacities appropriate for supported loads and building materials in which used.
 - a. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Cooper B-Line, Inc.; a division of Cooper Industries.
 - 2) Empire Tool and Manufacturing Co., Inc.
 - 3) Hilti Inc.
 - 4) ITW Ramset/Red Head; a division of Illinois Tool Works, Inc.
 - 5) MKT Fastening, LLC.
 2. Concrete Inserts: Steel or malleable-iron, slotted support system units similar to MSS Type 18; complying with MFMA-4 or MSS SP-58.
 3. Clamps for Attachment to Steel Structural Elements: MSS SP-58, type suitable for attached structural element.
 4. Through Bolts: Structural type, hex head, and high strength. Comply with ASTM A 325.
 5. Toggle Bolts: All-steel springhead type.

6. Hanger Rods: Threaded steel.

2.02 FABRICATED METAL EQUIPMENT SUPPORT ASSEMBLIES

- A. Description: Welded or bolted, structural-steel shapes, shop or field fabricated to fit dimensions of supported equipment.
- B. Materials: Comply with requirements in Division 05 Section "Metal Fabrications" for steel shapes and plates.

PART 3 EXECUTION

3.01 APPLICATION

- A. Comply with NECA 1 and NECA 101 for application of hangers and supports for electrical equipment and systems except if requirements in this Section are stricter.
- B. Maximum Support Spacing and Minimum Hanger Rod Size for Raceway: Space supports for EMT, IMC, and RMC as scheduled in NECA 1, where its Table 1 lists maximum spacings less than stated in NFPA 70. Minimum rod size shall be 1/4 inch (6 mm) in diameter.
- C. Multiple Raceways or Cables: Install trapeze-type supports fabricated with steel slotted support system, sized so capacity can be increased by at least 25 percent in future without exceeding specified design load limits.
 1. Secure raceways and cables to these supports with two-bolt conduit clamps or single-bolt conduit clamps.
- D. Spring-steel clamps designed for supporting single conduits without bolts may be used for 1-1/2-inch (38-mm) and smaller raceways serving branch circuits and communication systems above suspended ceilings and for fastening raceways to trapeze supports.

3.02 SUPPORT INSTALLATION

- A. Comply with NECA 1 and NECA 101 for installation requirements except as specified in this Article.
- B. Raceway Support Methods: In addition to methods described in NECA 1, EMT, IMC, and RMC may be supported by openings through structure members, as permitted in NFPA 70.
- C. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb (90 kg).
- D. Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements by the following methods unless otherwise indicated by code:
 1. To Wood: Fasten with lag screws or through bolts.
 2. To New Concrete: Bolt to concrete inserts.
 3. To Masonry: Approved toggle-type bolts on hollow masonry units and expansion anchor fasteners on solid masonry units.
 4. To Existing Concrete: Expansion anchor fasteners.

5. Instead of expansion anchors, powder-actuated driven threaded studs provided with lock washers and nuts may be used in existing standard-weight concrete 4 inches (100 mm) thick or greater. Do not use for anchorage to lightweight-aggregate concrete or for slabs less than 4 inches (100 mm) thick.
 6. To Steel: Beam clamps (MSS Type 19, 21, 23, 25, or 27) complying with MSS SP-69 or Spring-tension clamps.
 7. To Light Steel: Sheet metal screws.
 8. Items Mounted on Hollow Walls and Nonstructural Building Surfaces: Mount cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices on slotted-channel racks attached to substrate by means that meet seismic-restraint strength and anchorage requirements.
- E. Drill holes for expansion anchors in concrete at locations and to depths that avoid reinforcing bars.

3.03 INSTALLATION OF FABRICATED METAL SUPPORTS

- A. Comply with installation requirements in Division 05 Section "Metal Fabrications" for site-fabricated metal supports.
- B. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.
- C. Field Welding: Comply with AWS D1.1/D1.1M.

3.04 CONCRETE BASES

- A. Construct concrete bases of dimensions indicated but not less than 4 inches (100 mm) larger in both directions than supported unit, and so anchors will be a minimum of 10 bolt diameters from edge of the base.
- B. Use 3000-psi (20.7-MPa), 28-day compressive-strength concrete. Concrete materials, reinforcement, and placement requirements are specified in Division 03 Section "Miscellaneous Cast-in-Place Concrete."
- C. Anchor equipment to concrete base.
 1. Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
 2. Install anchor bolts to elevations required for proper attachment to supported equipment.
 3. Install anchor bolts according to anchor-bolt manufacturer's written instructions.

3.05 PAINTING

- A. Touchup: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.
 1. Apply paint by brush or spray to provide minimum dry film thickness of 2.0 mils (0.05 mm).

- B. Touchup: Comply with requirements in Division 09 painting Sections for cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint on miscellaneous metal.
- C. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A 780.

END OF SECTION

SECTION 26 05 33

RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SUMMARY

- A. This Section includes raceways, fittings, boxes, enclosures, and cabinets for electrical wiring.
- B. See Division 26 Section "Underground Ducts and Raceways for Electrical Systems" for exterior ductbanks and manholes, and underground handholes, boxes, and utility construction.

1.02 SUBMITTALS

- A. Product Data: For surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.
- B. Shop Drawings: For custom enclosures and cabinets. Include plans, elevations, sections, details, and attachments to other work.

1.03 QUALITY ASSURANCE

- A. 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.
- B. Comply with NFPA 70.

PART 2 PRODUCTS

2.01 METAL CONDUIT AND TUBING

- A. Rigid Steel Conduit: ANSI C80.1.
- B. IMC: ANSI C80.6.
- C. EMT: ANSI C80.3.
- D. FMC: Zinc-coated steel.
- E. LFMC: Flexible steel conduit with PVC jacket.
- F. Fittings for Conduit (Including all Types and Flexible and Liquid tight), EMT, and Cable: NEMA FB 1; listed for type and size raceway with which used, and for application and environment in which installed.
 - 1. Conduit Fittings for Hazardous (Classified) Locations: Comply with UL 886.
 - 2. Fittings for EMT: Steel or die-cast, compression type.

2.02 NONMETALLIC CONDUIT AND TUBING

- A. ENT: NEMA TC 13.
- B. RNC: NEMA TC 2, Type EPC-40-PVC, unless otherwise indicated.

- C. LFNC: UL 1660.
- D. Fittings for ENT and RNC: NEMA TC 3; match to conduit or tubing type and material.
- E. Fittings for LFNC: UL 514B.

2.03 METAL WIREWAYS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
 - 1. Cooper B-Line, Inc.
 - 2. Hoffman.
 - 3. Square D; Schneider Electric.
- B. Description: Sheet metal sized and shaped as indicated, NEMA 250, Type 3R or 4X stainless steel, unless otherwise indicated.
- C. Fittings and Accessories: Include couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings to match and mate with wireways as required for complete system.
- D. Wireway Covers: As indicated.
- E. Finish: Manufacturer's standard enamel finish.

2.04 NONMETALLIC WIREWAYS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
- B. Hoffman.
 - 1. Lamson & Sessions; Carlon Electrical Products.
- C. Description: PVC plastic, extruded and fabricated to size and shape indicated, with snap-on cover and mechanically coupled connections with plastic fasteners.
- D. Fittings and Accessories: Include couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings to match and mate with wireways as required for complete system.

2.05 SURFACE RACEWAYS

- A. Surface Metal Raceways: Galvanized steel with snap-on covers. Manufacturer's standard enamel finish in color selected by Architect.
- B. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
 - 1. Thomas & Betts Corporation.
 - a. Walker Systems, Inc.; Wiremold Company (The).
 - b. Wiremold Company (The); Electrical Sales Division.
- C. Surface Nonmetallic Raceways: Two-piece construction, manufactured of rigid PVC with texture and color selected by Architect.
 - 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include or approved equal to the following:

- a. Butler Manufacturing Company; Walker Division.
- b. Enduro Systems, Inc.; Composite Products Division.
- c. Hubbell Incorporated; Wiring Device-Kellems Division.
- d. Lamson & Sessions; Carlon Electrical Products.
- e. Panduit Corp.
- f. Walker Systems, Inc.; Wiremold Company (The).
- g. Wiremold Company (The); Electrical Sales Division.

2.06 BOXES, ENCLOSURES, AND CABINETS

- A. Sheet Metal Outlet and Device Boxes: NEMA OS 1.
- B. Cast-Metal Outlet and Device Boxes: NEMA FB 1, ferrous alloy, Type FD, with gasketed cover.
- C. Nonmetallic Outlet and Device Boxes: NEMA OS 2.
- D. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.
- E. Cast-Metal Access, Pull, and Junction Boxes: NEMA FB 1, galvanized, cast iron with gasketed cover.
- F. Hinged-Cover Enclosures: NEMA 250, Type 1, with continuous-hinge cover with flush latch, unless otherwise indicated.
 - 1. Stainless Steel Metal Enclosures: Steel, finished inside and out with manufacturer's standard enamel.
- G. Cabinets:
 - 1. NEMA 250, Type 4x, stainless-steel box with removable interior panel and removable front, finished inside and out with manufacturer's standard enamel.
 - 2. Hinged door in front cover with flush latch and concealed hinge.
 - 3. Key latch to match panelboards.
 - 4. Metal barriers to separate wiring of different systems and voltage.
 - 5. Accessory feet where required for freestanding equipment.

PART 3 EXECUTION

3.01 RACEWAY APPLICATION

- A. Outdoors: Apply raceway products as specified below, unless otherwise indicated:
 - 1. Exposed Conduit: Rigid steel conduit.
 - 2. Concealed Conduit, Aboveground: Rigid steel conduit, IMC, EMT.
 - 3. Underground Conduit: RNC, Type EPC-40-PVC, direct buried.
 - 4. Boxes and Enclosures, Aboveground: NEMA 250, Type 4X Stainless steel.
- B. Comply with the following indoor applications, unless otherwise indicated:
 - 1. Exposed, Not Subject to Physical Damage: EMT.
 - 2. Exposed, Not Subject to Severe Physical Damage: EMT.
 - 3. Exposed and Subject to Severe Physical Damage: Rigid steel conduit.
Includes raceways in the following locations:
 - a. Mechanical rooms.
 - 4. Concealed in Ceilings and Interior Walls and Partitions: EMT.

5. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC, except use LFMC in damp or wet locations.
 6. Damp or Wet Locations: Rigid steel conduit.
 7. Raceways for Optical Fiber or Communications Cable: EMT.
 8. Boxes and Enclosures: NEMA 250, Type 4X, stainless steel in damp or wet locations.
- C. Minimum Raceway Size: 3/4-inch (21-mm) trade size.
- D. Raceway Fittings: Compatible with raceways and suitable for use and location.
1. Rigid and Intermediate Steel Conduit: Use threaded rigid steel conduit fittings, unless otherwise indicated.
 2. EMT: Use connector and other fittings to be steel compression type.

3.02 INSTALLATION

- A. Comply with NECA 1 for installation requirements applicable to products specified in Part 2 except where requirements on Drawings or in this Article are stricter.
- B. Keep raceways at least 6 inches (150 mm) away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.
- C. Complete raceway installation before starting conductor installation.
- D. Support raceways as specified in Division 26 Section "Hangers and Supports for Electrical Systems."
- E. Arrange stub-ups so curved portions of bends are not visible above the finished slab.
- F. Install no more than the equivalent of three 90-degree bends in any conduit run except for communications conduits, for which fewer bends are allowed.
- G. Conceal conduit and EMT within finished walls, ceilings, and floors, unless otherwise indicated.
- H. Raceways Embedded in Slabs:
 1. Run conduit larger than 1-inch (27-mm) trade size, parallel or at right angles to main reinforcement. Where at right angles to reinforcement, place conduit close to slab support.
 2. Arrange raceways to cross building expansion joints at right angles with expansion fittings.
 3. Change from ENT to RNC, Type EPC-40-PVC, rigid steel conduit, or IMC before rising above the floor.
- I. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors, including conductors smaller than No. 4 AWG.
- J. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb (90-kg) tensile strength. Leave at least 12 inches (300 mm) of slack at each end of pull wire.
- K. Raceways for Optical Fiber and Communications Cable: Install as follows:
 1. 3/4-Inch (19-mm) Trade Size and Smaller: Install raceways in maximum lengths of 50 feet (15 m).

2. 1-Inch (25-mm) Trade Size and Larger: Install raceways in maximum lengths of 75 feet (23 m).
 3. Install with a maximum of two 90-degree bends or equivalent for each length of raceway unless Drawings show stricter requirements. Separate lengths with pull or junction boxes or terminations at distribution frames or cabinets where necessary to comply with these requirements.
- L. Install raceway sealing fittings at suitable, approved, and accessible locations and fill them with listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings at the following points:
1. Where conduits pass from warm to cold locations, such as boundaries of refrigerated spaces.
 2. Where otherwise required by NFPA 70.
- M. Expansion-Joint Fittings for RNC: Install in each run of aboveground conduit that is located where environmental temperature change may exceed 30 deg F (17 deg C), and that has straight-run length that exceeds 25 feet (7.6 m).
1. Install expansion-joint fittings for each of the following locations, and provide type and quantity of fittings that accommodate temperature change listed for location:
 - a. Outdoor Locations Not Exposed to Direct Sunlight: 125 deg F (70 deg C) temperature change.
 - b. Outdoor Locations Exposed to Direct Sunlight: 155 deg F (86 deg C) temperature change.
 - c. Indoor Spaces: Connected with the Outdoors without Physical Separation: 125 deg F (70 deg C) temperature change.
 2. Install fitting(s) that provide expansion and contraction for at least 0.00041 inch per foot of length of straight run per deg F (0.06 mm per meter of length of straight run per deg C) of temperature change.
 3. Install each expansion-joint fitting with position, mounting, and piston setting selected according to manufacturer's written instructions for conditions at specific location at the time of installation.
- N. Flexible Conduit Connections: Use maximum of 72 inches (1830 mm) of flexible conduit for recessed and semirecessed lighting fixtures, equipment subject to vibration, noise transmission, or movement; and for transformers and motors.
1. Use LFMC in damp or wet locations subject to severe physical damage.
 2. Use LFMC in damp or wet locations not subject to severe physical damage.
- O. Recessed Boxes in Masonry Walls: Saw-cut opening for box in center of cell of masonry block, and install box flush with surface of wall.
- P. Set metal floor boxes level and flush with finished floor surface.

3.03 INSTALLATION OF UNDERGROUND CONDUIT

- A. Direct-Buried Conduit:
1. Excavate trench bottom to provide firm and uniform support for conduit. Prepare trench bottom as specified in Division 31 Section "Earth Moving" for pipe less than 6 inches (150 mm) in nominal diameter.
 2. After installing conduit, backfill and compact. Start at tie-in point, and work toward end of conduit run, leaving conduit at end of run free to move with expansion and contraction as temperature changes during this process.

Firmly hand tamp backfill around conduit to provide maximum supporting strength. After placing controlled backfill to within 12 inches (300 mm) of finished grade, make final conduit connection at end of run and complete backfilling with normal compaction.

3. Install manufactured duct elbows for stub-ups at poles and equipment and at building entrances through the floor, unless otherwise indicated. Encase elbows for stub-up ducts throughout the length of the elbow.
4. Install manufactured rigid steel conduit elbows for stub-ups at poles and equipment and at building entrances through the floor.
 - a. Couple steel conduits to ducts with adapters designed for this purpose, and encase coupling with 3 inches (75 mm) of concrete.
 - b. For stub-ups at equipment mounted on outdoor concrete bases, extend steel conduit horizontally a minimum of 60 inches (1500 mm) from edge of equipment pad or foundation. Install insulated grounding bushings on terminations at equipment.
5. Warning Planks: Bury warning planks approximately 12 inches (300 mm) above direct-buried conduits, placing them 24 inches (600 mm) o.c. Align planks along the width and along the centerline of conduit.

END OF SECTION

SECTION 26 05 44

SLEEVES AND SLEEVE SEALS FOR ELECTRICAL RACEWAYS AND CABLING

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Sleeves for raceway and cable penetration of non-fire-rated construction walls and floors.
 - 2. Sleeve-seal systems.
 - 3. Sleeve-seal fittings.
 - 4. Grout.
 - 5. Silicone sealants.

1.02 ACTION SUBMITTALS

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

PART 2 PRODUCTS

2.01 SLEEVES

- A. Wall Sleeves:
 - 1. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, zinc coated, plain ends.
 - 2. Cast-Iron Pipe Sleeves: Cast or fabricated "wall pipe," equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop unless otherwise indicated.
- B. Sleeves for Conduits Penetrating Non-Fire-Rated Gypsum Board Assemblies: Galvanized-steel sheet; 0.0239-inch (0.6-mm) minimum thickness; round tube closed with welded longitudinal joint, with tabs for screw-fastening the sleeve to the board.
- C. Sleeves for Rectangular Openings:
 - 1. Material: Galvanized sheet steel.
 - 2. Minimum Metal Thickness:
 - a. For sleeve cross-section rectangle perimeter less than 50 inches (1270 mm) and with no side larger than 16 inches (400 mm), thickness shall be 0.052 inch (1.3 mm).
 - b. For sleeve cross-section rectangle perimeter 50 inches (1270 mm) or more and one or more sides larger than 16 inches (400 mm), thickness shall be 0.138 inch (3.5 mm).

2.02 SLEEVE-SEAL SYSTEMS

- A. Description: Modular sealing device, designed for field assembly, to fill annular space between sleeve and raceway or cable.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
 - a. Advance Products & Systems, Inc.

- b. CALPICO, Inc.
 - c. Metraflex Company (The).
 - d. Pipeline Seal and Insulator, Inc.
 - e. Proco Products, Inc.
2. Sealing Elements: EPDM rubber interlocking links shaped to fit surface of pipe. Include type and number required for pipe material and size of pipe.
 3. Pressure Plates: Carbon steel.
 4. Connecting Bolts and Nuts: Carbon steel, with corrosion-resistant coating, of length required to secure pressure plates to sealing elements.

2.03 SLEEVE-SEAL FITTINGS

- A. Description: Manufactured plastic, sleeve-type, waterstop assembly made for embedding in concrete slab or wall. Unit shall have plastic or rubber waterstop collar with center opening to match piping OD.
 1. Manufacturers: Subject to compliance with requirements, provide products by the following:
 - a. Presealed Systems.

2.04 GROUT

- A. Description: Nonshrink; recommended for interior and exterior sealing openings in non-fire-rated walls or floors.
- B. Standard: ASTM C 1107/C 1107M, Grade B, post-hardening and volume-adjusting, dry, hydraulic-cement grout.
- C. Design Mix: 5000-psi (34.5-MPa), 28-day compressive strength.
- D. Packaging: Premixed and factory packaged.

2.05 SILICONE SEALANTS

- A. Silicone Sealants: Single-component, silicone-based, neutral-curing elastomeric sealants of grade indicated below.
 1. Grade: Pourable (self-leveling) formulation for openings in floors and other horizontal surfaces that are not fire rated.
 2. Sealant shall have VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
 3. Sealant 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."
- B. Silicone Foams: Multicomponent, silicone-based liquid elastomers that, when mixed, expand and cure in place to produce a flexible, nonshrinking foam.

PART 3 EXECUTION

3.01 SLEEVE INSTALLATION FOR NON-FIRE-RATED ELECTRICAL PENETRATIONS

- A. Comply with NECA 1.
- B. Sleeves for Conduits Penetrating Above-Grade Non-Fire-Rated Concrete and Masonry-Unit Floors and Walls:
 1. Interior Penetrations of Non-Fire-Rated Walls and Floors:

- a. Seal annular space between sleeve and raceway or cable, using joint sealant appropriate for size, depth, and location of joint. Comply with requirements in Division 07 Section "Joint Sealants."
 - b. Seal space outside of sleeves with mortar or grout. Pack sealing material solidly between sleeve and wall so no voids remain. Tool exposed surfaces smooth; protect material while curing.
2. Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.
 3. Size pipe sleeves to provide 1/4-inch (6.4-mm) annular clear space between sleeve and raceway or cable unless sleeve seal is to be installed or unless seismic criteria require different clearance.
 4. Install sleeves for wall penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of walls. Cut sleeves to length for mounting flush with both surfaces of walls. Deburr after cutting.
 5. Install sleeves for floor penetrations. Extend sleeves installed in floors 2 inches (50 mm) above finished floor level. Install sleeves during erection of floors.
- C. Sleeves for Conduits Penetrating Non-Fire-Rated Gypsum Board Assemblies:
1. Use circular metal sleeves unless penetration arrangement requires rectangular sleeved opening.
 2. Seal space outside of sleeves with approved joint compound for gypsum board assemblies.
- D. Roof-Penetration Sleeves: Seal penetration of individual raceways and cables with flexible boot-type flashing units applied in coordination with roofing work.
- E. Aboveground, Exterior-Wall Penetrations: Seal penetrations using steel pipe sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch (25-mm) annular clear space between pipe and sleeve for installing mechanical sleeve seals.
- F. Underground, Exterior-Wall and Floor Penetrations: Install cast-iron pipe sleeves. Size sleeves to allow for 1-inch (25-mm) annular clear space between raceway or cable and sleeve for installing sleeve-seal system.

3.02 SLEEVE-SEAL-SYSTEM INSTALLATION

- A. Install sleeve-seal systems in sleeves in exterior concrete walls and slabs-on-grade at raceway entries into building.
- B. Install type and number of sealing elements recommended by manufacturer for raceway or cable material and size. Position raceway or cable in center of sleeve. Assemble mechanical sleeve seals and install in annular space between raceway or cable and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

3.03 SLEEVE-SEAL-FITTING INSTALLATION

- A. Install sleeve-seal fittings in new walls and slabs as they are constructed.
- B. Assemble fitting components of length to be flush with both surfaces of concrete slabs and walls. Position waterstop flange to be centered in concrete slab or wall.
- C. Secure nailing flanges to concrete forms.
- D. Using grout, seal the space around outside of sleeve-seal fittings.

END OF SECTION

SECTION 26 05 48

VIBRATION AND SEISMIC CONTROLS FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes:
 - 1. Isolation pads.
 - 2. Spring isolators.
 - 3. Restrained spring isolators.
 - 4. Channel support systems.
 - 5. Restraint cables.
 - 6. Hanger rod stiffeners.
 - 7. Anchorage bushings and washers.

1.02 PERFORMANCE REQUIREMENTS

- A. Seismic-Restraint Loading:
 - 1. Site Class as Defined in the IBC: D.
 - 2. Assigned Seismic Use Group or Building Category as Defined in the IBC: II.
 - a. Component Importance Factor: 1.0.
 - b. Component Response Modification Factor: 1.5.
 - c. Component Amplification Factor: 1.0.

1.03 SUBMITTALS

- A. Product Data: For the following:
 - 1. Include rated load, rated deflection, and overload capacity for each vibration isolation device.
 - 2. Illustrate and indicate style, material, strength, fastening provision, and finish for each type and size of seismic-restraint component used.
 - a. Tabulate types and sizes of seismic restraints, complete with report numbers and rated strength in tension and shear as evaluated by an agency acceptable to authorities having jurisdiction.
 - b. Annotate to indicate application of each product submitted and compliance with requirements.
 - 3. Restrained-Isolation Devices: Include ratings for horizontal, vertical, and combined loads.
- B. Delegated-Design Submittal: For vibration isolation and seismic-restraint details indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
 - 1. Design Calculations: Calculate static and dynamic loading due to equipment weight and operation, seismic forces required to select vibration isolators and seismic restraints.
 - a. Coordinate design calculations with wind-load calculations required for equipment mounted outdoors. Comply with requirements in other Division 26 Sections for equipment mounted outdoors.

2. Indicate materials and dimensions and identify hardware, including attachment and anchorage devices.
 3. Field-fabricated supports.
 4. Seismic-Restraint Details:
 - a. Design Analysis: To support selection and arrangement of seismic restraints. Include calculations of combined tensile and shear loads.
 - b. Details: Indicate fabrication and arrangement. Detail attachments of restraints to the restrained items and to the structure. Show attachment locations, methods, and spacings. Identify components, list their strengths, and indicate directions and values of forces transmitted to the structure during seismic events.
 - c. Preapproval and Evaluation Documentation: By an agency acceptable to authorities having jurisdiction, showing maximum ratings of restraint items and the basis for approval (tests or calculations).
- C. Welding certificates.
- D. Field quality-control test reports.

1.04 QUALITY ASSURANCE

- A. Comply with seismic-restraint requirements in the IBC unless requirements in this Section are more stringent.
- B. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."
- C. Seismic-restraint devices shall have horizontal and vertical load testing and analysis and shall bear anchorage preapproval OPA number from OSHPD, preapproval by ICC-ES, or preapproval by another agency acceptable to authorities having jurisdiction, showing maximum seismic-restraint ratings. Ratings based on independent testing are preferred to ratings based on calculations. If preapproved ratings are not available, submittals based on independent testing are preferred. Calculations (including combining shear and tensile loads) to support seismic-restraint designs must be signed and sealed by a qualified professional engineer.
- D. Comply with NFPA 70.

PART 2 PRODUCTS

2.01 VIBRATION ISOLATORS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
 1. Ace Mountings Co., Inc.
 2. Amber/Booth Company, Inc.
 3. California Dynamics Corporation.
 4. Isolation Technology, Inc.
 5. Kinetics Noise Control.
 6. Mason Industries.
 7. Vibration Eliminator Co., Inc.
 8. Vibration Isolation.
 9. Vibration Mountings & Controls, Inc.

- B. Pads: Arrange in single or multiple layers of sufficient stiffness for uniform loading over pad area, molded with a nonslip pattern and galvanized-steel baseplates, and factory cut to sizes that match requirements of supported equipment.
 - 1. Resilient Material: Oil- and water-resistant neoprene.
- C. Spring Isolators: Freestanding, laterally stable, open-spring isolators.
 - 1. Outside Spring Diameter: Not less than 80 percent of the compressed height of the spring at rated load.
 - 2. Minimum Additional Travel: 50 percent of the required deflection at rated load.
 - 3. Lateral Stiffness: More than 80 percent of rated vertical stiffness.
 - 4. Overload Capacity: Support 200 percent of rated load, fully compressed, without deformation or failure.
 - 5. Baseplates: Factory drilled for bolting to structure and bonded to 1/4-inch- (6-mm-) thick, rubber isolator pad attached to baseplate underside. Baseplates shall limit floor load to 500 psig (3447 kPa).
 - 6. Top Plate and Adjustment Bolt: Threaded top plate with adjustment bolt and cap screw to fasten and level equipment.
- D. Restrained Spring Isolators: Freestanding, steel, open-spring isolators with seismic or limit-stop restraint.
 - 1. Housing: Steel with resilient vertical-limit stops to prevent spring extension due to weight being removed; factory-drilled baseplate bonded to 1/4-inch- (6-mm-) thick, neoprene or rubber isolator pad attached to baseplate underside; and adjustable equipment mounting and leveling bolt that acts as blocking during installation.
 - 2. Restraint: Seismic or limit-stop as required for equipment and authorities having jurisdiction.
 - 3. Outside Spring Diameter: Not less than 80 percent of the compressed height of the spring at rated load.
 - 4. Minimum Additional Travel: 50 percent of the required deflection at rated load.
 - 5. Lateral Stiffness: More than 80 percent of rated vertical stiffness.
 - 6. Overload Capacity: Support 200 percent of rated load, fully compressed, without deformation or failure.

2.02 SEISMIC-RESTRAINT DEVICES

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
 - 1. Amber/Booth Company, Inc.
 - 2. California Dynamics Corporation.
 - 3. Cooper B-Line, Inc.; a division of Cooper Industries.
 - 4. Hilti Inc.
 - 5. Loos & Co.; Seismic Earthquake Division.
 - 6. Mason Industries.
 - 7. TOLCO Incorporated; a brand of NIBCO INC.
 - 8. Unistrut; Tyco International, Ltd.
- B. General Requirements for Restraint Components: Rated strengths, features, and application requirements shall be as defined in reports by an agency acceptable to authorities having jurisdiction.

1. Structural Safety Factor: Allowable strength in tension, shear, and pullout force of components shall be at least four times the maximum seismic forces to which they will be subjected.
- C. Channel Support System: MFMA-3, shop- or field-fabricated support assembly made of slotted steel channels with accessories for attachment to braced component at one end and to building structure at the other end and other matching components and with corrosion-resistant coating; and rated in tension, compression, and torsion forces.
 - D. Restraint Cables: ASTM A 603 galvanized-steel cables with end connections made of steel assemblies with thimbles, brackets, swivels, and bolts designed for restraining cable service; and with a minimum of two clamping bolts for cable engagement.
 - E. Hanger Rod Stiffener: Steel tube or steel slotted-support-system sleeve with internally bolted connections to hanger rod. Do not weld stiffeners to rods.
 - F. Bushings for Floor-Mounted Equipment Anchor: Neoprene bushings designed for rigid equipment mountings, and matched to type and size of anchors and studs.
 - G. Bushing Assemblies for Wall-Mounted Equipment Anchorage: Assemblies of neoprene elements and steel sleeves designed for rigid equipment mountings, and matched to type and size of attachment devices.
 - H. Resilient Isolation Washers and Bushings: One-piece, molded, oil- and water-resistant neoprene, with a flat washer face.
 - I. Mechanical Anchor: Drilled-in and stud-wedge or female-wedge type in zinc-coated steel for interior applications and stainless steel for exterior applications. Select anchors with strength required for anchor and as tested according to ASTM E 488. Minimum length of eight times diameter.
 - J. Adhesive Anchor: Drilled-in and capsule anchor system containing polyvinyl or urethane methacrylate-based resin and accelerator, or injected polymer or hybrid mortar adhesive. Provide anchor bolts and hardware with zinc-coated steel for interior applications and stainless steel for exterior applications. Select anchor bolts with strength required for anchor and as tested according to ASTM E 488.

PART 3 EXECUTION

3.01 APPLICATIONS

- A. Multiple Raceways or Cables: Secure raceways and cables to trapeze member with clamps approved for application by an agency acceptable to authorities having jurisdiction.
- B. Hanger Rod Stiffeners: Install hanger rod stiffeners where indicated or scheduled on Drawings to receive them and where required to prevent buckling of hanger rods due to seismic forces.
- C. Strength of Support and Seismic-Restraint Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static and seismic loads within specified loading limits.

3.02 SEISMIC-RESTRAINT DEVICE INSTALLATION

- A. Equipment and Hanger Restraints:

1. Install restrained isolators on electrical equipment.
 2. Install resilient, bolt-isolation washers on equipment anchor bolts where clearance between anchor and adjacent surface exceeds 0.125 inch (3.2 mm).
 3. Install seismic-restraint devices using methods approved by an agency acceptable to authorities having jurisdiction providing required submittals for component.
- B. Install bushing assemblies for mounting bolts for wall-mounted equipment, arranged to provide resilient media where equipment or equipment-mounting channels are attached to wall.
- C. Attachment to Structure: If specific attachment is not indicated, anchor bracing to structure at flanges of beams, at upper truss chords of bar joists, or at concrete members.
- D. Drilled-in Anchors:
1. Identify position of reinforcing steel and other embedded items prior to drilling holes for anchors. Do not damage existing reinforcing or embedded items during coring or drilling. Notify the structural engineer if reinforcing steel or other embedded items are encountered during drilling. Locate and avoid prestressed tendons, electrical and telecommunications conduit, and gas lines.
 2. Do not drill holes in concrete or masonry until concrete, mortar, or grout has achieved full design strength.
 3. Wedge Anchors: Protect threads from damage during anchor installation. Heavy-duty sleeve anchors shall be installed with sleeve fully engaged in the structural element to which anchor is to be fastened.
 4. Adhesive Anchors: Clean holes to remove loose material and drilling dust prior to installation of adhesive. Place adhesive in holes proceeding from the bottom of the hole and progressing toward the surface in such a manner as to avoid introduction of air pockets in the adhesive.
 5. Set anchors to manufacturer's recommended torque, using a torque wrench.
 6. Install zinc-coated steel anchors for interior and stainless-steel anchors for exterior applications.

3.03 ACCOMMODATION OF DIFFERENTIAL SEISMIC MOTION

- A. Install flexible connections in runs of raceways, cables, wireways, cable trays, and busways where they cross seismic joints, where adjacent sections or branches are supported by different structural elements, and where they terminate with connection to equipment that is anchored to a different structural element from the one supporting them as they approach equipment.

3.04 FIELD QUALITY CONTROL

- A. A qualified inspector shall perform tests and Inspections. Inspections are to be performed by an independent third party and are intended to ensure that the work of the prime contractor is in accordance with the Contract Documents and applicable building codes.
1. Obtain Architect's approval before transmitting test loads to structure. Provide temporary load-spreading members.
 2. Test at least four of each type and size of installed anchors and fasteners selected by Architect.

3. Test to 90 percent of rated proof load of device.
 4. Measure isolator restraint clearance.
 5. Measure isolator deflection.
 6. Verify snubber minimum clearances.
 7. If a device fails test, modify all installations of same type and retest until satisfactory results are achieved.
- B. Remove and replace malfunctioning units and retest as specified above.
- C. Prepare test and inspection reports.

3.05 ADJUSTING

- A. Adjust isolators after isolated equipment is at operating weight.
- B. Adjust limit stops on restrained spring isolators to mount equipment at normal operating height. After equipment installation is complete, adjust limit stops so they are out of contact during normal operation.
- C. Adjust active height of spring isolators.
- D. Adjust restraints to permit free movement of equipment within normal mode of operation.

END OF SECTION

SECTION 26 05 53

IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Identification for raceways.
 - 2. Identification of power and control cables.
 - 3. Identification for conductors.
 - 4. Underground-line warning tape.
 - 5. Warning labels and signs.
 - 6. Instruction signs.
 - 7. Equipment identification labels.
 - 8. Miscellaneous identification products.

1.02 SUBMITTALS

- A. Product Data: For each electrical identification product indicated.

1.03 QUALITY ASSURANCE

- A. Comply with ANSI A13.1.
- B. Comply with NFPA 70.
- C. Comply with 29 CFR 1910.144 and 29 CFR 1910.145.
- D. Comply with ANSI Z535.4 for safety signs and labels.
- E. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.

PART 2 PRODUCTS

2.01 POWER RACEWAY IDENTIFICATION MATERIALS

- A. Comply with ANSI A13.1 for minimum size of letters for legend and for minimum length of color field for each raceway size.
- B. Colors for Raceways Carrying Circuits at 600 V or Less:
 - 1. Black letters on an orange field.
 - 2. Legend: Indicate voltage.
- C. Self-Adhesive Vinyl Labels for Raceways Carrying Circuits at 600 V or Less: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.

2.02 POWER AND CONTROL CABLE IDENTIFICATION MATERIALS

- A. Comply with ANSI A13.1 for minimum size of letters for legend and for minimum length of color field for each raceway and cable size.

- B. Self-Adhesive Vinyl Labels: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.

2.03 CONDUCTOR IDENTIFICATION MATERIALS

- A. Color-Coding Conductor Tape: Colored, self-adhesive vinyl tape not less than 3 mils (0.08 mm) thick by 1 to 2 inches (25 to 50 mm) wide.
- B. Self-Adhesive Vinyl Labels: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.

2.04 UNDERGROUND-LINE WARNING TAPE

- A. Tape:
 - 1. Recommended by manufacturer for the method of installation and suitable to identify and locate underground electrical and communications utility lines.
 - 2. Printing on tape shall be permanent and shall not be damaged by burial operations.
 - 3. Tape material and ink shall be chemically inert, and not subject to degrading when exposed to acids, alkalis, and other destructive substances commonly found in soils.
- B. Color and Printing:
 - 1. Comply with ANSI Z535.1 through ANSI Z535.5.
 - 2. Inscriptions for Red-Colored Tapes: ELECTRIC LINE, HIGH VOLTAGE.
 - 3. Inscriptions for Orange-Colored Tapes: TELEPHONE CABLE, CATV CABLE, COMMUNICATIONS CABLE, OPTICAL FIBER CABLE.
- C. Tag:
 - 1. Detectable three-layer laminate, consisting of a printed pigmented polyolefin film, a solid aluminum-foil core, and a clear protective film that allows inspection of the continuity of the conductive core, bright-colored, continuous-printed on one side with the inscription of the utility, compounded for direct-burial service.
 - 2. Overall Thickness: 5 mils (0.125 mm).
 - 3. Foil Core Thickness: 0.35 mil (0.00889 mm).
 - 4. Weight: 28 lb/1000 sq. ft. (13.7 kg/100 sq. m).
 - 5. 3-Inch (75-mm) Tensile According to ASTM D 882: 70 lbf (311.3 N), and 4600 psi (31.7 MPa).

2.05 WARNING LABELS AND SIGNS

- A. Comply with NFPA 70 and 29 CFR 1910.145.
- B. Self-Adhesive Warning Labels: Factory-printed, multicolor, pressure-sensitive adhesive labels, configured for display on front cover, door, or other access to equipment unless otherwise indicated.
- C. Baked-Enamel Warning Signs:
 - 1. Preprinted aluminum signs, punched or drilled for fasteners, with colors, legend, and size required for application.
 - 2. 1/4-inch (6.4-mm) grommets in corners for mounting.

3. Nominal size, 7 by 10 inches (180 by 250 mm).
- D. Metal-Backed, Butyrate Warning Signs:
1. Weather-resistant, nonfading, preprinted, cellulose-acetate butyrate signs with 0.0396-inch (1-mm) galvanized-steel backing; and with colors, legend, and size required for application.
 2. 1/4-inch (6.4-mm) grommets in corners for mounting.
 3. Nominal size, 10 by 14 inches (250 by 360 mm).
- E. Warning label and sign shall include, but are not limited to, the following legends:
1. Multiple Power Source Warning: "DANGER - ELECTRICAL SHOCK HAZARD - EQUIPMENT HAS MULTIPLE POWER SOURCES."
 2. Workspace Clearance Warning: "WARNING - OSHA REGULATION - AREA IN FRONT OF ELECTRICAL EQUIPMENT MUST BE KEPT CLEAR FOR 36 INCHES (915 MM)."

2.06 INSTRUCTION SIGNS

- A. Engraved, laminated acrylic or melamine plastic, minimum 1/16 inch (1.6 mm) thick for signs up to 20 sq. inches (129 sq. cm) and 1/8 inch (3.2 mm) thick for larger sizes.
1. Engraved legend with black letters on white face.
 2. Punched or drilled for mechanical fasteners.
 3. Framed with mitered acrylic molding and arranged for attachment at applicable equipment.

2.07 EQUIPMENT IDENTIFICATION LABELS

- A. Engraved, Laminated Acrylic or Melamine Label: 1" high and 3" wide x 3/32 thick with 2 cadmium rated screws with white letters on a dark-gray background. Minimum letter height shall be 3/8 inch (10 mm) white characters.

2.08 MISCELLANEOUS IDENTIFICATION PRODUCTS

- A. Fasteners for Labels and Signs: Stainless-steel screws or stainless-steel machine screws with nuts and flat and lock washers.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Location: Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.
- B. Apply identification devices to surfaces that require finish after completing finish work.
- C. Attach signs and plastic labels that are not self-adhesive type with mechanical fasteners appropriate to the location and substrate.
- D. System Identification Color-Coding Bands for Raceways and Cables: Each color-coding band shall completely encircle cable or conduit. Place adjacent bands of two-color markings in contact, side by side. Locate bands at changes in direction, at penetrations of walls and floors, at 50-foot (15-m) maximum intervals in straight runs, and at 25-foot (7.6-m) maximum intervals in congested areas.

- E. Underground-Line Warning Tape: During backfilling of trenches install continuous underground-line warning tape directly above line at 6 to 8 inches (150 to 200 mm) below finished grade. Use multiple tapes where width of multiple lines installed in a common trench or concrete envelope exceeds 16 inches (400 mm) overall.

3.02 IDENTIFICATION SCHEDULE

- A. Accessible Raceways and Metal-Clad Cables, 600 V or Less, for Service, Feeder, and Branch Circuits More Than 30A, and 120V to ground: Install labels at 10-foot (3-m) maximum intervals.
- B. Accessible Raceways and Cables within Buildings: Identify the covers of each junction and pull box of the following systems with self-adhesive vinyl labels with the
 - 1. Power.
- C. Power-Circuit Conductor Identification, 600 V or Less: For conductors in vaults, pull and junction boxes, manholes, and handholes, use color-coding conductor tape to identify the phase.
 - 1. Color-Coding for Phase and Voltage Level Identification, 600 V or Less: Use colors listed below for ungrounded service, feeder and branch-circuit conductors.
 - a. Color shall be factory applied or field applied for sizes larger than No. 8 AWG, if authorities having jurisdiction permit.
 - b. Colors for 208/120-V Circuits:
 - 1) Phase A: Black.
 - 2) Phase B: Red.
 - 3) Phase C: Blue.
 - c. Colors for 480/277-V Circuits:
 - 1) Phase A: Brown.
 - 2) Phase B: Orange.
 - 3) Phase C: Yellow.
 - d. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for a minimum distance of 6 inches (150 mm) from terminal points and in boxes where splices or taps are made. Apply last two turns of tape with no tension to prevent possible unwinding. Locate bands to avoid obscuring factory cable markings.
- D. Install instructional sign including the color-code for grounded and ungrounded conductors using adhesive-film-type labels.
- E. Conductors to Be Extended in the Future: Attach write-on tags to conductors and list source.
- F. Auxiliary Electrical Systems Conductor Identification: Identify field-installed alarm, control, and signal connections.
 - 1. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, and pull points. Identify by system and circuit designation.
 - 2. Use system of marker tape designations that is uniform and consistent with system used by manufacturer for factory-installed connections.
 - 3. Coordinate identification with Project Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance Manual.
- G. Locations of Underground Lines: Identify with underground-line warning tape for power, lighting, communication, and control wiring and optical fiber cable.
 - 1. Limit use of underground-line warning tape to direct-buried cables.

2. Install underground-line warning tape for both direct-buried cables and cables in raceway.
- H. Workspace Indication: Install floor marking tape to show working clearances in the direction of access to live parts. Workspace shall be as required by NFPA 70 and 29 CFR 1926.403 unless otherwise indicated. Do not install at flush-mounted panelboards and similar equipment in finished spaces.
- I. Warning Labels for Indoor Cabinets, Boxes, and Enclosures for Power and Lighting: Self-adhesive warning labels.
1. Comply with 29 CFR 1910.145.
 2. Identify system voltage with black letters on an orange background.
 3. Apply to exterior of door, cover, or other access.
 4. For equipment with multiple power or control sources, apply to door or cover of equipment including, but not limited to, the following:
 - a. Power transfer switches.
 - b. Controls with external control power connections.
- J. Operating Instruction Signs: Install instruction signs to facilitate proper operation and maintenance of electrical systems and items to which they connect. Install instruction signs with approved legend where instructions are needed for system or equipment operation.
- K. Equipment Identification Labels: On each unit of equipment, install unique designation label that is consistent with wiring diagrams, schedules, and the Operation and Maintenance Manual. Apply labels to disconnect switches and protection equipment, central or master units, control panels, control stations, terminal cabinets, and racks of each system. Systems include power, lighting, control, communication, signal, monitoring, and alarm systems unless equipment is provided with its own identification.
1. Labeling Instructions:
 - a. Indoor Equipment: Engraved, laminated acrylic or melamine label. Unless otherwise indicated, provide a single line of text with 1/4-inch-high letters on 1 inch high label; where two lines of text are required, use labels 2 inches (50 mm) high.
 - b. Outdoor Equipment: Engraved, laminated acrylic or melamine label, Stenciled legend 4 inches (100 mm) high.

END OF SECTION

SECTION 26 09 23

LIGHTING CONTROL DEVICES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Photoelectric switches.
 - 2. Indoor occupancy, switchbox-mounted occupancy and outdoor motion sensors.
- B. Related Requirements:
 - 1. Division 26 Section "Wiring Devices" for wall-box dimmers, wall-switch occupancy sensors, and manual light switches.

1.02 ACTION SUBMITTALS

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

1.03 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.

1.04 CLOSEOUT SUBMITTALS

- A. Operation and maintenance data

PART 2 PRODUCTS

2.01 TIME SWITCHES

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
 - 1. Cooper Industries, Inc.
 - 2. Intermatic, Inc.
 - 3. Invensys Controls.
 - 4. Leviton Mfg. Company Inc.
 - 5. NSi Industries LLC; TORK Products.
 - 6. Tyco Electronics; ALR Brand.
 - 7. Wattstopper.
- B. Electronic Time Switches: Solid state, programmable, with alphanumeric display; complying with UL 917.
 - 1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
 - 2. Contact Configuration: SPST.
 - 3. Contact Rating: 20-A ballast load, 120-/240-V ac.

2.02 OUTDOOR PHOTOELECTRIC SWITCHES

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
 - 1. Cooper Industries, Inc.
 - 2. Intermatic, Inc.
 - 3. NSi Industries LLC; TORK Products.
 - 4. Tyco Electronics; ALR Brand.
- B. Description: Solid state, with SPST dry contacts rated for 1800 VA, to operate connected load, complying with UL 773.
 - 1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
 - 2. Light-Level Monitoring Range: 1.5 to 10 fc (16.14 to 108 lux), with an adjustment for turn-on and turn-off levels within that range.
 - 3. Time Delay: Thirty-second minimum, to prevent false operation.
 - 4. Lightning Arrester: Air-gap type.
 - 5. Mounting: Twist lock complying with NEMA C136.10, with base.

2.03 INDOOR OCCUPANCY SENSORS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
 - 1. Cooper Industries, Inc.
 - 2. Lithonia Lighting; Acuity Lighting Group, Inc.
 - 3. Lutron Electronics Co., Inc.
- B. General Requirements for Sensors: Wall- or ceiling-mounted, solid-state indoor occupancy sensors with a separate power pack.
 - 1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
 - 2. Operation: Unless otherwise indicated, turn lights on when coverage area is occupied, and turn them off when unoccupied; with a time delay for turning lights off, adjustable over a minimum range of 1 to 15 minutes.
 - 3. Sensor Output: Contacts rated to operate the connected relay, complying with UL 773A. Sensor is powered from the power pack.
 - 4. Power Pack: Dry contacts rated for 20-A ballast load at 120- and 277-V ac, for 13-A tungsten at 120-V ac, and for 1 hp at 120-V ac. Sensor has 24-V dc, 150-mA, Class 2 power source, as defined by NFPA 70.
 - 5. Mounting:
 - a. Sensor: Suitable for mounting in any position on a standard outlet box.
 - b. Relay: Externally mounted through a 1/2-inch (13-mm) knockout in a standard electrical enclosure.
 - c. Time-Delay and Sensitivity Adjustments: Recessed and concealed behind hinged door.
 - 6. Indicator: Digital display, to show when motion is detected during testing and normal operation of sensor.
 - 7. Bypass Switch: Override the "on" function in case of sensor failure.
 - 8. Automatic Light-Level Sensor: Adjustable from 2 to 200 fc (21.5 to 2152 lux); turn lights off when selected lighting level is present.

- C. Dual-Technology Type: Ceiling mounted; detect occupants in coverage area using PIR and ultrasonic detection methods. The particular technology or combination of technologies that control on-off functions is selectable in the field by operating controls on unit.
 - 1. Sensitivity Adjustment: Separate for each sensing technology.
 - 2. Detector Sensitivity: Detect occurrences of 6-inch- (150-mm-) minimum movement of any portion of a human body that presents a target of not less than 36 sq. in. (232 sq. cm), and detect a person of average size and weight moving not less than 12 inches (305 mm) in either a horizontal or a vertical manner at an approximate speed of 12 inches/s (305 mm/s).
 - 3. Detection Coverage (Standard Room): Detect occupancy anywhere within a circular area of 1000 sq. ft. (93 sq. m) when mounted on a 96-inch- (2440-mm-) high ceiling.

2.04 SWITCHBOX-MOUNTED OCCUPANCY SENSORS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
 - 1. Cooper Industries, Inc.
 - 2. Lithonia Lighting; Acuity Lighting Group, Inc.
 - 3. Lutron Electronics Co., Inc.
- B. General Requirements for Sensors: Automatic-wall-switch occupancy sensor, suitable for mounting in a single gang switchbox.
 - 1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application, and shall comply with California Title 24.
 - 2. Operating Ambient Conditions: Dry interior conditions, 32 to 120 deg F (0 to 49 deg C).
 - 3. Switch Rating: Not less than 800-VA fluorescent at 120 V, 1200-VA fluorescent at 277 V, and 800-W incandescent.
- C. Wall-Switch Sensor:
 - 1. Standard Range: 180-degree field of view, field adjustable from 180 to 40 degrees; with a minimum coverage area of 900 sq. ft. (84 sq. m).
 - 2. Sensing Technology: Dual technology - PIR and ultrasonic.
 - 3. Switch Type: SP, dual circuit, field selectable automatic "on," or manual "on" automatic "off."
 - 4. Voltage: Match the circuit voltage; dual-technology type.
 - 5. Ambient-Light Override: Concealed, field-adjustable, light-level sensor from 10 to 150 fc (108 to 1600 lux). The switch prevents the lights from turning on when the light level is higher than the set point of the sensor.
 - 6. Concealed, field-adjustable, "off" time-delay selector at up to 30 minutes.
 - 7. Concealed "off" time-delay selector at 30 seconds, and 5, 10, and 20 minutes.
 - 8. Adaptive Technology: Self-adjusting circuitry detects and memorizes usage patterns of the space and helps eliminate false "off" switching.

2.05 OUTDOOR MOTION SENSORS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
 - 1. Cooper Industries, Inc.

2. Lithonia Lighting; Acuity Lighting Group, Inc.
 3. Watt Stopper.
- B. General Requirements for Sensors: Solid-state outdoor motion sensors.
1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application, and shall comply with California Title 24.
 2. PIR type, weatherproof. Detect occurrences of 6-inch- (150-mm-) minimum movement of any portion of a human body that presents a target of not less than 36 sq. in. (232 sq. cm). Comply with UL 773A.
 3. Switch Rating:
 - a. Separately Mounted Sensor: Dry contacts rated for 20-A ballast load at 120- and 277-V ac, for 13-A tungsten at 120-V ac, and for 1 hp at 120-V ac. Sensor has 24-V dc, 150-mA, Class 2 power source, as defined by NFPA 70.
 4. Switch Type: SP, field selectable automatic "on," or manual "on" automatic "off."
 5. Voltage: Match the circuit voltage type.
 6. Detector Coverage:
 - a. Standard Range: 210-degree field of view, with a minimum coverage area of 900 sq. ft. (84 sq. m).
 - b. Long Range: 180-degree field of view and 110-foot (34-m) detection range.
 7. Ambient-Light Override: Concealed, field-adjustable, light-level sensor from 10 to 150 fc (108 to 1600 lux). The switch prevents the lights from turning on when the light level is higher than the set point of the sensor.
 8. Concealed, field-adjustable, "off" time-delay selector at up to 30 minutes.
 9. Concealed "off" time-delay selector at 30 seconds, and 5, 10, and 20 minutes.
 10. Adaptive Technology: Self-adjusting circuitry detects and memorizes usage patterns of the space and helps eliminate false "off" switching.
 11. Operating Ambient Conditions: Suitable for operation in ambient temperatures ranging from minus 40 to plus 130 deg F (minus 40 to plus 54 deg C), rated as "raintight" according to UL 773A.

2.06 LIGHTING CONTACTORS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
1. Allen-Bradley/Rockwell Automation.
 2. ASCO Power Technologies, LP; a division of Emerson Electric Co.
 3. Eaton Corporation.
 4. General Electric Company; GE Consumer & Industrial - Electrical Distribution; Total Lighting Control.
 5. Square D; a brand of Schneider Electric.
- B. Description: Electrically operated and electrically held, combination-type lighting contactors with nonfused disconnect, complying with NEMA ICS 2 and UL 508.
1. Current Rating for Switching: Listing or rating consistent with type of load served, including tungsten filament, inductive, and high-inrush ballast (ballast with 15 percent or less total harmonic distortion of normal load current).
 2. Fault Current Withstand Rating: Equal to or exceeding the available fault current at the point of installation.

3. Enclosure: Comply with NEMA 250.
4. Provide with control and pilot devices as indicated on Drawings, matching the NEMA type specified for the enclosure.

2.07 CONDUCTORS AND CABLES

- A. Power Wiring to Supply Side of Remote-Control Power Sources: Not smaller than No. 12 AWG. Comply with requirements in Division 26 Section "Low-Voltage Electrical Power Conductors and Cables."
- B. Classes 2 and 3 Control Cable: Multiconductor cable with stranded-copper conductors not smaller than No. 18 AWG. Comply with requirements in Division 26 Section "Low-Voltage Electrical Power Conductors and Cables."
- C. Class 1 Control Cable: Multiconductor cable with stranded-copper conductors not smaller than No. 14 AWG. Comply with requirements in Division 26 Section "Low-Voltage Electrical Power Conductors and Cables."

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install and aim sensors in locations to achieve not less than 90 percent coverage of areas indicated. Do not exceed coverage limits specified in manufacturer's written instructions.
- B. Occupancy Adjustments: When requested within 12 months from date of Substantial Completion, provide on-site assistance in adjusting sensors to suit actual occupied conditions. Provide up to two visits to Project during other-than-normal occupancy hours for this purpose.
 1. For occupancy and motion sensors, verify operation at outer limits of detector range. Set time delay to suit Owner's operations.
- C. Mount electrically held lighting contactors with elastomeric isolator pads to eliminate structure-borne vibration, unless contactors are installed in an enclosure with factory-installed vibration isolators.
- D. Wiring Method: Comply with Division 26 Section "Low-Voltage Electrical Power Conductors and Cables." Minimum conduit size is 1/2 inch (13 mm).
- E. Identify components and power and control wiring according to Division 26 Section "Identification for Electrical Systems."

3.02 FIELD QUALITY CONTROL

- A. A qualified inspector shall perform the following tests and inspections. Inspections are to be performed by an independent third party and are intended to ensure that the work of the prime contractor is in accordance with the Contract Documents and applicable building codes.
 1. Operational Test: After installing time switches and sensors, and after electrical circuitry has been energized, start units to confirm proper unit operation.
 2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

- B. Lighting control devices will be considered defective if they do not pass tests and inspections.
- C. Prepare test and inspection reports.

END OF SECTION

SECTION 26 24 13

SWITCHBOARDS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Service and distribution switchboards rated 600 V and less.
 - 2. Disconnecting and overcurrent protective devices.
 - 3. Accessory components and features.
 - 4. Identification.

1.02 PERFORMANCE REQUIREMENTS

- A. Seismic Performance: Switchboards shall withstand the effects of earthquake motions determined according to SEI/ASCE 7.
 - 1. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified and the unit will be fully operational after the seismic event."

1.03 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For each switchboard and related equipment.
 - 1. Include dimensioned plans, elevations, sections, and details, including required clearances and service space around equipment. Show tabulations of installed devices, equipment features, and ratings.
 - 2. Include time-current coordination curves for each type and rating of overcurrent protective device included in switchboards.
 - 3. Include schematic and wiring diagrams for power, signal, and control wiring.
- C. Seismic Qualification Certificates: Submit certification that switchboards, overcurrent protective devices, accessories, and components will withstand seismic forces defined in Division 26 Section "Vibration and Seismic Controls for Electrical Systems."
- D. Field quality-control reports.
- E. Operation and maintenance data.

1.04 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with NEMA PB 2.
- C. Comply with NFPA 70.
- D. Comply with UL 891.

1.05 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace transient voltage suppression devices that fail in materials or workmanship within specified warranty period.
 - 1. Warranty Period: Five years from date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURED UNITS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
 - 1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
 - 2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
 - 3. Siemens Energy & Automation, Inc.
 - 4. Square D; a brand of Schneider Electric.
- B. Front-Connected, Front-Accessible Switchboards:
 - 1. Main Devices: Fixed, individually mounted.
 - 2. Branch Devices: Panel mounted.
 - 3. Sections front and rear aligned.
- C. Main-Bus Continuous: as indicated on single line diagram.
- D. Seismic Requirements: Fabricate and test switchboards according to IEEE 344 to withstand seismic forces defined in Division 26 Section "Vibration and Seismic Controls for Electrical Systems."
- E. Enclosure: Stainless Steel, NEMA 4x.
 - 1. Enclosure Finish: Factory-applied finish in manufacturer's standard gray finish over a rust-inhibiting primer on treated metal surface.
 - 2. Enclosure: Flat roof; bolt-on rear covers for each section, with provisions for padlocking.
- F. Utility Metering Compartment: Fabricated, barrier compartment and section complying with utility company's requirements. If separate vertical section is required for utility metering, match and align with basic switchboard. Provide service entrance label and necessary applicable service entrance features.
- G. Bus Transition and Incoming Pull Sections: Matched and aligned with basic switchboard.
- H. Hinged Front Panels: Allow access to circuit breaker, metering, accessory, and blank compartments.
- I. Phase and Neutral Buses and Connections: Three phase, four wire unless otherwise indicated. Tin-plated, high-strength, electrical-grade aluminum alloy with tin-plated aluminum circuit-breaker line connections.
 - 1. Ground Bus: 1/4-by-2-inch- (6-by-50-mm-) minimum size, hard-drawn copper of 98 percent conductivity, equipped with pressure connectors for feeder and branch-circuit ground conductors.
 - 2. Main Phase Buses and Equipment Ground Buses: Uniform capacity for entire length of switchboard's main and distribution sections. Provide for future extensions from both ends.

3. Neutral Buses: 50 percent of the ampacity of phase buses unless otherwise indicated, equipped with pressure connectors for outgoing circuit neutral cables.
- J. Future Devices: Equip compartments with mounting brackets, supports, bus connections, and appurtenances at full rating of circuit-breaker compartment.

2.02 DISCONNECTING AND OVERCURRENT PROTECTIVE DEVICES

- A. Molded-Case Circuit Breaker (MCCB): Comply with UL 489, with interrupting capacity to meet available fault currents.
 1. Thermal-Magnetic Circuit Breakers: Inverse time-current element for low-level overloads, and instantaneous magnetic trip element for short circuits. Adjustable magnetic trip setting for circuit-breaker frame sizes 250 A and larger.
 2. Adjustable Instantaneous-Trip Circuit Breakers: Magnetic trip element with front-mounted, field-adjustable trip setting.
 3. Electronic trip circuit breakers with rms sensing; field-replaceable rating plug or field-replicable electronic trip; and the following field-adjustable settings:
 - a. Instantaneous trip.
 - b. Long- and short-time pickup levels.
 - c. Long- and short-time time adjustments.
 - d. Ground-fault pickup level, time delay, and I^2t response.
 4. Molded-Case Circuit-Breaker (MCCB) Features and Accessories:
 - a. Standard frame sizes, trip ratings, and number of poles.
 - b. Lugs: Mechanical style, suitable for number, size, trip ratings, and conductor material.
 - c. Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HID for feeding fluorescent and high-intensity discharge (HID) lighting circuits.
 - d. Ground-Fault Protection: Integrally mounted relay and trip unit with adjustable pickup and time-delay settings, push-to-test feature, and ground-fault indicator.
 - e. Shunt Trip: 120-V trip coil energized from separate circuit, set to trip at 55 percent of rated voltage.

2.03 ACCESSORY COMPONENTS AND FEATURES

- A. Portable Test Set: For testing functions of solid-state trip devices without removing from switchboard. Include relay and meter test plugs suitable for testing switchboard meters and switchboard class relays.

2.04 IDENTIFICATION

- A. Service Equipment Label: NRTL labeled for use as service equipment for switchboards with one or more service disconnecting and overcurrent protective devices.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Receive, inspect, handle, store and install switchboards and accessories according to NECA 400 and NEMA PB 2.1.

- B. Equipment Mounting: Install switchboards on concrete base, 4-inch (100-mm) nominal thickness. Comply with requirements for concrete base specified in Division 03 Section "Miscellaneous Cast-in-Place Concrete."
 - 1. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch (450-mm) centers around the full perimeter of concrete base.
 - 2. For supported equipment, install epoxy-coated anchor bolts that extend through concrete base and anchor into structural concrete floor.
 - 3. Place and secure anchorage devices. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
 - 4. Install anchor bolts to elevations required for proper attachment to switchboards.
- C. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from switchboard units and components.
- D. Comply with mounting and anchoring requirements specified in Division 26 Section "Vibration and Seismic Controls for Electrical Systems."
- E. Install filler plates in unused spaces of panel-mounted sections.
- F. Install overcurrent protective devices.
 - 1. Set field-adjustable switches and circuit-breaker trip ranges.
- G. Comply with NECA 1.

3.02 IDENTIFICATION

- A. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs complying with requirements for identification specified in Division 26 Section "Identification for Electrical Systems."
- B. Switchboard Nameplates: Label each switchboard compartment with a nameplate complying with requirements for identification specified in Division 26 Section "Identification for Electrical Systems."
- C. Device Nameplates: Label each disconnecting and overcurrent protective device and each meter and control device mounted in compartment doors with a nameplate complying with requirements for identification specified in Division 26 Section "Identification for Electrical Systems."

3.03 FIELD QUALITY CONTROL

- A. Acceptance Testing Preparation:
 - 1. Test insulation resistance for each switchboard bus, component, connecting supply, feeder, and control circuit.
 - 2. Test continuity of each circuit.
- B. A qualified inspector shall perform tests and inspections. Inspections are to be performed by an independent third party and are intended to ensure that the work of the prime contractor is in accordance with the Contract Documents and applicable building codes.
 - 1. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.

2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
 3. Test and adjust controls, remote monitoring, and safeties. Replace damaged and malfunctioning controls and equipment.
- C. Switchboard will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports, including a certified report that identifies switchboards included and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

END OF SECTION

SECTION 26 24 16

PANELBOARDS

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes distribution panelboards and lighting and appliance branch-circuit panelboards.

1.02 PERFORMANCE REQUIREMENTS

- A. Seismic Performance: Panelboards shall withstand the effects of earthquake motions determined according to SEI/ASCE 7.
 - 1. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified and the unit will be fully operational after the seismic event."

1.03 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For each panelboard and related equipment.
 - 1. Include dimensioned plans, elevations, sections, and details. Show tabulations of installed devices, equipment features, and ratings.
 - 2. Detail enclosure types and details for types other than NEMA 250, Type 4X.
 - 3. Detail bus configuration, current, and voltage ratings.
 - 4. Short-circuit current rating of panelboards and overcurrent protective devices.
 - 5. Include evidence of NRTL listing for series rating of installed devices.
 - 6. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.
 - 7. Include wiring diagrams for power, signal, and control wiring.
 - 8. Include time-current coordination curves for each type and rating of overcurrent protective device included in panelboards.
- C. Seismic Qualification Certificates: Submit certification that panelboards, overcurrent protective devices, accessories, and components will withstand seismic forces defined in Division 26 Section "Vibration and Seismic Controls for Electrical Systems."
- D. Field quality-control reports.
- E. Panelboard schedules for installation in panelboards.
- F. Operation and maintenance data.

1.04 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with NEMA PB 1.

- C. Comply with NFPA 70.

1.05 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace transient voltage suppression devices that fail in materials or workmanship within specified warranty period.
 - 1. Warranty Period: Five years from date of Substantial Completion.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS FOR PANELBOARDS

- A. Fabricate and test panelboards according to IEEE 344 to withstand seismic forces defined in Division 26 Section "Vibration and Seismic Controls for Electrical Systems."
- B. Enclosures: Flush- and surface-mounted cabinets.
 - 1. Rated for environmental conditions at installed location.
 - a. Indoor Dry and Clean Locations: NEMA 250, Type 4X.
 - b. Outdoor Locations: NEMA 250, Type 4X stainless steels.
 - c. Kitchen and Wash-Down Areas: NEMA 250, Type 4X stainless steel.
 - d. Other Wet or Damp Indoor Locations: NEMA 250, Type 4X stainless steel.
 - 2. Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions; for flush-mounted fronts, overlap box.
 - 3. Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover.
 - 4. Directory Card: Inside panelboard door, mounted in transparent card holder.
- C. Incoming Mains Location: Top and bottom.
- D. Phase, Neutral, and Ground Buses: Tin-plated aluminum.
- E. Conductor Connectors: Suitable for use with conductor material and sizes.
 - 1. Material: Tin-plated aluminum.
 - 2. Main and Neutral Lugs: Mechanical type.
 - 3. Ground Lugs and Bus Configured Terminators: Mechanical type.
 - 4. Feed-Through Lugs: Mechanical type, suitable for use with conductor material. Locate at opposite end of bus from incoming lugs or main device.
 - 5. Subfeed (Double) Lugs: Mechanical type suitable for use with conductor material. Locate at same end of bus as incoming lugs or main device.
- F. Service Equipment Label: NRTL labeled for use as service equipment for panelboards with one or more main service disconnecting and overcurrent protective devices.
- G. Future Devices: Mounting brackets, bus connections, filler plates, and necessary appurtenances required for future installation of devices.
- H. Panelboard Short-Circuit Current Rating: Fully rated to interrupt symmetrical short-circuit current available at terminals.

2.02 DISTRIBUTION PANELBOARDS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include or approved equal to the following:

1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
 2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
 3. Siemens Energy & Automation, Inc.
 4. Square D; a brand of Schneider Electric.
- B. Panelboards: NEMA PB 1, power and feeder distribution type.
- C. Doors: Secured with vault-type latch with tumbler lock; keyed alike.
- D. Mains: Lugs only.
- E. Branch Overcurrent Protective Devices: For Circuit-Breaker Frame Sizes 125 A and Smaller: Bolt-on circuit breakers.
- F. Branch Overcurrent Protective Devices: For Circuit-Breaker Frame Sizes Larger Than 125 A: Bolt-on circuit breakers.

2.03 LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
 2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
 3. Siemens Energy & Automation, Inc.
 4. Square D; a brand of Schneider Electric.
- B. Panelboards: NEMA PB 1, lighting and appliance branch-circuit type.
- C. Mains: Circuit breaker or lugs only, as indicated on panel schedules.
- D. Branch Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units.
- E. Doors: Concealed hinges; secured with flush latch with tumbler lock; keyed alike.
- F. Column-Type Panelboards: Narrow gutter extension, with cover, to overhead junction box equipped with ground and neutral terminal buses.

2.04 DISCONNECTING AND OVERCURRENT PROTECTIVE DEVICES

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
 2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
 3. Siemens Energy & Automation, Inc.
 4. Square D; a brand of Schneider Electric.
- B. Molded-Case Circuit Breaker (MCCB): Comply with UL 489, with interrupting capacity to meet available fault currents.
1. Thermal-Magnetic Circuit Breakers: Inverse time-current element for low-level overloads, and instantaneous magnetic trip element for short circuits. Adjustable magnetic trip setting for circuit-breaker frame sizes 250 A and larger.
 2. Adjustable Instantaneous-Trip Circuit Breakers: Magnetic trip element with front-mounted, field-adjustable trip setting.

3. Electronic trip circuit breakers with rms sensing; field-replaceable rating plug or field-replicable electronic trip; and the following field-adjustable settings:
 - a. Instantaneous trip.
 - b. Long- and short-time pickup levels.
 - c. Long- and short-time time adjustments.
 - d. Ground-fault pickup level, time delay, and I^2t response.
4. Ground-Fault Equipment Protection (GFEP) Circuit Breakers: Class B ground-fault protection (30-mA trip).
5. Molded-Case Circuit-Breaker (MCCB) Features and Accessories:
 - a. Standard frame sizes, trip ratings, and number of poles.
 - b. Lugs: Mechanical style, suitable for number, size, trip ratings, and conductor materials.
 - c. Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HID for feeding fluorescent and high-intensity discharge (HID) lighting circuits.
 - d. Ground-Fault Protection: Integrally mounted relay and trip unit with adjustable pickup and time-delay settings, push-to-test feature, and ground-fault indicator.
 - e. Shunt Trip: 120-V trip coil energized from separate circuit, set to trip at 55 percent of rated voltage.
 - f. Handle Padlocking Device: Fixed attachment, for locking circuit-breaker handle in on or off position.
 - g. Handle Clamp: Loose attachment, for holding circuit-breaker handle in on position.

2.05 ACCESSORY COMPONENTS AND FEATURES

- A. Portable Test Set: For testing functions of solid-state trip devices without removing from panelboard. Include relay and meter test plugs suitable for testing panelboard meters and switchboard class relays.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Receive, inspect, handle, store and install panelboards and accessories according to NECA 407 and NEMA PB 1.1.
- B. Comply with mounting and anchoring requirements specified in Division 26 Section "Vibration and Seismic Controls for Electrical Systems."
- C. Mount panelboards such that the highest position of any operating handle for circuit breakers or switches does not exceed 79 inches above the floor or working platform, unless otherwise indicated.
- D. Mount panelboard cabinet plumb and rigid without distortion of box. Mount recessed panelboards with fronts uniformly flush with wall finish and mating with back box.
- E. Install overcurrent protective devices and controllers not already factory installed.
 1. Set field-adjustable, circuit-breaker trip ranges.
- F. Install filler plates in unused spaces.

- G. Stub four 1-inch (27-GRC) empty conduits from panelboard into accessible ceiling space or space designated to be ceiling space in the future. Stub four 1-inch (27-GRC) empty conduits into raised floor space or below slab not on grade.
- H. Arrange conductors in gutters into groups and bundle and wrap with wire ties.
- I. Comply with NECA 1.

3.02 IDENTIFICATION

- A. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs complying with Division 26 Section "Identification for Electrical Systems."
- B. Create a directory to indicate installed circuit loads and incorporating Owner's final room designations. Obtain approval before installing. Use a computer or typewriter to create directory; handwritten directories are not acceptable.
- C. Panelboard Nameplates: Label each panelboard with a nameplate complying with requirements for identification specified in Division 26 Section "Identification for Electrical Systems."
- D. Device Nameplates: Label each branch circuit device in distribution panelboards with a nameplate complying with requirements for identification specified in Division 26 Section "Identification for Electrical Systems."

3.03 FIELD QUALITY CONTROL

- A. A qualified inspector shall perform tests and inspections. Inspections are to be performed by an independent third party and are intended to ensure that the work of the prime contractor is in accordance with the Contract Documents and applicable building codes.
- B. Acceptance Testing Preparation:
 - 1. Test insulation resistance for each panelboard bus, component, connecting supply, feeder, and control circuit.
 - 2. Test continuity of each circuit.
- C. Tests and Inspections:
 - 1. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
 - 2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
- D. Panelboards will be considered defective if they do not pass tests and inspections.
- E. Prepare test and inspection reports, including a certified report that identifies panelboards included and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

END OF SECTION

SECTION 26 27 13

ELECTRICITY METERING

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes equipment for electricity metering by Owner.

1.02 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Dimensioned plans and sections or elevation layouts and wiring diagrams.
- C. Field quality-control reports.
- D. Operation and Maintenance Data include the following:
 - 1. Application and operating software documentation.
 - 2. Software licenses.
 - 3. Software service agreement.
 - 4. Hard copies of manufacturer's operating specifications, design user's guides for software and hardware, and PDF files on CD-ROM of the hard-copy Submittal.

1.03 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

1.04 SOFTWARE SERVICE AGREEMENT

- A. Technical Support: Beginning with Substantial Completion, provide software support for two years.
- B. Upgrade Service: Update software to latest version at Project completion. Install and program software upgrades that become available within two years from date of Substantial Completion. Upgrading software shall include operating system. Upgrade shall include new or revised licenses for use of software.
 - 1. Provide 30 days' notice to Owner to allow scheduling and access to system and to allow Owner to upgrade his computer equipment if necessary.

PART 2 PRODUCTS

2.01 EQUIPMENT FOR ELECTRICITY METERING BY OWNER

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- B. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or approved equal to of the following:
 - 1. E-Mon; a division of Hunt Power.
 - 2. National Meter Industries.

3. Osaki Meter Sales, Inc.
 4. Square D; a brand of Schneider Electric.
- C. General Requirements for Owner's Meters:
1. Comply with UL 1244.
 2. Meters used for billing shall have an accuracy of 0.5 percent of reading, complying with requirements in ANSI C12.20.
 3. Meters shall be certified by California Type Evaluation Program as complying with Title 4, California Code of Regulations, Article 2.2.
 4. Enclosure: NEMA 250, Type 3R minimum, with hasp for padlocking or sealing.
 5. Identification: Comply with requirements in Division 26 Section "Identification for Electrical Systems."
 6. Memory Backup: Self-contained to maintain memory throughout power outages of 72 hours, minimum.
 7. Sensors: Current-sensing type, with current or voltage output, selected for optimum range and accuracy for meters indicated for this application.
 - a. Type: Split core.
 8. Current-Transformer Cabinet: Listed or recommended by metering equipment manufacturer for use with sensors indicated.
- D. Kilowatt-hour Meter: Electronic single-phase meters, measuring electricity used.
1. Voltage and Phase Configuration: Meter shall be designed for use on circuits with voltage rating and phase configuration indicated for its application.
 2. Display: LCD with characters not less than 0.25 inch (6 mm) high, indicating accumulative kilowatt-hours and current kilowatt load. Retain accumulated kilowatt-hour in a nonvolatile memory, until reset.
 3. Display: Digital electromechanical counter, indicating accumulative kilowatt-hours.
- E. Kilowatt-hour/Demand Meter: Electronic single-phase meters, measuring electricity use and demand. Demand shall be integrated over a 15-minute interval.
1. Voltage and Phase Configuration: Meter shall be designed for use on circuits with voltage rating and phase configuration indicated for its application.
 2. Display: LCD with characters not less than 0.25 inch (6 mm) high, indicating accumulative kilowatt-hours, current time and date, current demand, and historic peak demand, and time and date of historic peak demand. Retain accumulated kilowatt-hour and historic peak demand in a nonvolatile memory, until reset.
- F. Software: PC based, a product of meter manufacturer, suitable for calculation of utility cost allocation and billing.
1. Utility Cost Allocation: Automatically import energy-usage records to allocate energy costs for the following:
 - a. 5 copies to City of San Diego billing department.
 2. Tenant or Activity Billing Software: Automatically import energy-usage records to automatically compute and prepare activity demand and energy-use statements based on metering of energy use and peak demand. Maintain separate directory for each tenant's historical billing information. Prepare summary reports in user-defined formats and time intervals.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Comply with equipment installation requirements in NECA 1.
- B. Install meters furnished by utility company. Install raceways and equipment according to utility company's written requirements. Provide empty conduits for metering leads and extend grounding connections as required by utility company.
- C. Install modular meter center according to NECA 400 switchboard installation requirements.
- D. Comply with requirements for identification specified in Division 26 Section "Identification for Electrical Systems."
 - 1. Series Combination Warning Label: Self-adhesive type, with text as required by NFPA 70.
 - 2. Equipment Identification Labels: Adhesive film labels with clear protective overlay. For residential meters, provide an additional card holder suitable for printed, weather-resistant card typewritten card with occupant's name.

3.02 FIELD QUALITY CONTROL

- A. A qualified inspector shall perform tests and inspections. Inspections are to be performed by an independent third party and are intended to ensure that the work of the prime contractor is in accordance with the Contract Documents and applicable building codes.
- B. Tests and Inspections:
 - 1. Connect a load of known kilowatt rating, 1.5 kW minimum, to a circuit supplied by metered feeder.
 - 2. Turn off circuits supplied by metered feeder and secure them in off condition.
 - 3. Run test load continuously for eight hours minimum, or longer, to obtain a measurable meter indication. Use test-load placement and setting that ensures continuous, safe operation.
 - 4. Check and record meter reading at end of test period and compare with actual electricity used, based on test-load rating, duration of test, and sample measurements of supply voltage at test-load connection. Record test results.
- C. Electricity metering will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports.

END OF SECTION

SECTION 26 27 26

WIRING DEVICES

PART 1 GENERAL

1.01 SUMMARY

- A. This Section includes the following:
 - 1. Receptacles, receptacles with integral GFCI, and associated device plates.
 - 2. Snap switches and wall-box dimmers.

1.02 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: List of legends and description of materials and process used for premarking wall plates.
- C. Samples: One for each type of device and wall plate specified, in each color specified.
- D. Operation and Maintenance Data: For wiring devices to include in all manufacturers' packing label warnings and instruction manuals that include labeling conditions.

1.03 QUALITY ASSURANCE

- A. 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.
- B. Comply with NFPA 70.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in other Part 2 articles:
 - 1. Cooper Wiring Devices; a division of Cooper Industries, Inc. (Cooper).
 - 2. Hubbell Incorporated; Wiring Device-Kellems (Hubbell).
 - 3. Leviton Mfg. Company Inc. (Leviton).
 - 4. Pass & Seymour/Legrand; Wiring Devices & Accessories (Pass & Seymour).

2.02 STRAIGHT BLADE RECEPTACLES

- A. Convenience Receptacles, 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 configuration 5-20R, and UL 498.
 - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include or approved equal to the following:
 - 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. Cooper; 5351 (single), 5352 (duplex).

- b. Hubbell; HBL5351 (single), CR5352 (duplex).
- c. Leviton; 5891 (single), 5352 (duplex).
- d. Pass & Seymour; 5381 (single), 5352 (duplex).

2.03 GFCI RECEPTACLES – see page 3

- A. General Description: Straight blade, non-feed-through type. Comply with NEMA WD 1, NEMA WD 6, UL 498, and UL 943, Class A, and include indicator light that is lighted when device is tripped.
- B. Duplex GFCI Convenience Receptacles, 125 V, 20 A:
 - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include or approved equal to the following:
 - 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. Cooper; GF20.
 - b. Pass & Seymour; 2084.
 - 3. All receptacles in public areas shall be tamper proof
 - a. Hubbel – HBL 8300SGA.

2.04 SNAP SWITCHES

- A. Comply with NEMA WD 1 and UL 20.
- B. Switches, 120/277 V, 20 A:
 - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include or approved equal to the following:
 - 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. Cooper; 2221 (single pole), 2222 (two pole), 2223 (three way), 2224 (four way).
 - b. Hubbell; HBL1221 (single pole), HBL 1222 (two pole), HBL 1223 (three way), CS1224 (four way).
 - c. Leviton; 1221-2 (single pole), 1222-2 (two pole), 1223-2 (three way), 1224-2 (four way).
 - d. Pass & Seymour; 20AC1 (single pole), 20AC2 (two pole), 20AC3 (three way), 20AC4 (four way).
- C. Key-Operated Switches, 120/277 V, 20 A:
 - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include or approved equal to the following:
 - 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. Cooper; 2221L.
 - b. Hubbell; HBL1221L.
 - c. Leviton; 1221-2L.
 - d. Pass & Seymour; PS20AC1-L.
 - 3. Description: Single pole, with factory-supplied key in lieu of switch handle.
 - 4. All devices are to have clamp style side/back connections for stranded wire only. All receptacles shall be pigtailed out so only one color wire, a neutral wire and ground wire is connected to back of receptacles.

2.05 ROCKER SWITCHES DECORA STYLE (ALL Public Areas, Including Guestrooms, Front Desk and Admin Offices)

- A. Rocker Switches by Cooper, Hubbell, Leviton or Pass & Seymour, or approved equal Mfg. Co's, Grounding: UL Listed, CSA Certified, colors as selected from manufacturer's standard colors.
 - 1. Commercial Spec Grade, Back and Side Wired.
 - a. 20 amp, 120/277 volt single-pole, double-pole, 3-way and 4-way.
 - b. 20 amp, Illuminated ON, single-pole 120 volt and 277 volt, 3-way 120 volt and 277 volt.
 - c. 20 amp, Illuminated OFF, single-pole 120 volt and 277 volt, 3-way 120 volt and 277 volt.
 - d. 20 amp, 120/277 volt, antimicrobial, single-pole and 3-way.

2.06 WALL-BOX DIMMERS

- A. Dimmer Switches: Modular, full-wave, solid-state units with integral, quiet on-off switches, with audible frequency and EMI/RFI suppression filters.
- B. Control: Continuously adjustable slider; with single-pole or three-way switching. Comply with UL 1472.

2.07 WALL PLATES

- A. Single and combination types to match corresponding wiring devices.
 - 1. Material for Spaces: Stainless steel with stainless steel screws.
 - 2. Material for Damp Locations: Stainless steel with spring-loaded lift cover, and listed and labeled for use in "wet locations."
- B. Wet-Location, Weatherproof Cover Plates: NEMA 250, complying with type 3R weather-resistant thermoplastic "while in use" with lockable cover.

2.08 FINISHES

- A. Color: Wiring device catalog numbers in Section Text do not designate device color.
 - 1. Wiring Devices Connected to Normal Power System: As selected by Architect, unless otherwise indicated or required by NFPA 70 or device listing.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Comply with NECA 1, including the mounting heights listed in that standard, unless otherwise noted.
- B. Coordination with Other Trades:
 - 1. Take steps to insure that devices and their boxes are protected. Do not place wall finish materials over device boxes and do not cut holes for boxes with routers that are guided by riding against outside of the boxes.
 - 2. Keep outlet boxes free of plaster, drywall joint compound, mortar, cement, concrete, dust, paint, and other material that may contaminate the raceway system, conductors, and cables.
 - 3. Install device boxes in brick or block walls so that the cover plate does not cross a joint unless the joint is troweled flush with the face of the wall.

4. Install wiring devices after all wall preparation, including painting, is complete.
- C. Conductors:
1. Do not strip insulation from conductors until just before they are spliced or terminated on devices.
 2. Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting strands from stranded wire.
 3. The length of free conductors at outlets for devices shall meet provisions of NFPA 70, Article 300, without pigtails.
 4. Existing Conductors:
 - a. Cut back and pigtail, or replace all damaged conductors.
 - b. Straighten conductors that remain and remove corrosion and foreign matter.
 - c. Pigtailing existing conductors is permitted provided the outlet box is large enough.
- D. Device Installation:
1. Replace all devices that have been in temporary use during construction or that show signs that they were installed before building finishing operations were complete.
 2. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.
 3. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.
 4. Connect devices to branch circuits using pigtails that are not less than 6 inches (152 mm) in length.
 5. When there is a choice, use side wiring with binding-head screw terminals. Wrap solid conductor tightly clockwise, 2/3 to 3/4 of the way around terminal screw.
 6. Use a torque screwdriver when a torque is recommended or required by the manufacturer.
 7. When conductors larger than No. 12 AWG are installed on 15- or 20-A circuits, splice No. 12 AWG pigtails for device connections.
 8. Tighten unused terminal screws on the device.
 9. When mounting into metal boxes, remove the fiber or plastic washers used to hold device mounting screws in yokes, allowing metal-to-metal contact.
- E. Receptacle Orientation:
1. Install ground pin of vertically mounted receptacles up, and on horizontally mounted receptacles to the right.
- F. Device Plates: Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.
- G. Dimmers:
1. Install dimmers within terms of their listing.
 2. Install unshared neutral conductors on line and load side of dimmers according to manufacturers' device listing conditions in the written instructions.

- H. Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical and with grounding terminal of receptacles on top. Group adjacent switches under single, multigang wall plates.

3.02 IDENTIFICATION

- A. Comply with Division 26 Section "Identification for Electrical Systems."
 - 1. Receptacles: Identify panelboard and circuit number from which served. Use hot, stamped or engraved machine printing with black-filled lettering on face of plate, and durable wire markers or tags inside outlet boxes.

3.03 FIELD QUALITY CONTROL

- A. A qualified inspector shall perform tests and inspections and prepare test reports. Inspections are to be performed by an independent third party and are intended to ensure that the work of the prime contractor is in accordance with the Contract Documents and applicable building codes.
 - 1. Test Instruments: Use instruments that comply with UL 1436.
 - 2. Test Instrument for Convenience Receptacles: Digital wiring analyzer with digital readout or illuminated LED indicators of measurement.
- B. Tests for Convenience Receptacles:
 - 1. Line Voltage: Acceptable range is 105 to 132 V.
 - 2. Percent Voltage Drop under 15-A Load: A value of 6 percent or higher is not acceptable.
 - 3. Ground Impedance: Values of up to 2 ohms are acceptable.
 - 4. GFCI Trip: Test for tripping values specified in UL 1436 and UL 943.
 - 5. Using the test plug, verify that the device and its outlet box are securely mounted.
 - 6. The tests shall be diagnostic, indicating damaged conductors, high resistance at the circuit breaker, poor connections, inadequate fault current path, defective devices, or similar problems. Correct circuit conditions, remove malfunctioning units and replace with new, and retest as specified above.

END OF SECTION

SECTION 26 28 13

FUSES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: Cartridge fuses rated 600-V ac and less for use in enclosed switches and enclosed controllers.

1.02 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Operation and maintenance data.

1.03 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with NEMA FU 1 for cartridge fuses.
- C. Comply with NFPA 70.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
 1. Cooper Bussmann, Inc.
 2. Edison Fuse, Inc.
 3. Ferraz Shawmut, Inc.
 4. Littelfuse, Inc.

2.02 CARTRIDGE FUSES

- A. Characteristics: NEMA FU 1, nonrenewable cartridge fuses with voltage ratings consistent with circuit voltages.

PART 3 EXECUTION

3.01 FUSE APPLICATIONS

- A. Motor Branch Circuits: Class RK1, time delay.
- B. Other Branch Circuits: Class RK1, time delay.

3.02 INSTALLATION

- A. Install fuses in fusible devices. Arrange fuses so rating information is readable without removing fuse.

3.03 IDENTIFICATION

- A. Install labels complying with requirements for identification specified in Division 26 Section "Identification for Electrical Systems" and indicating fuse replacement information on inside door of each fused switch and adjacent to each fuse block and holder.

END OF SECTION

SECTION 26 28 16

ENCLOSED SWITCHES AND CIRCUIT BREAKERS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Fusible switches.
 - 2. Nonfusible switches.
 - 3. Receptacle switches.
 - 4. Shunt trip switches.
 - 5. Molded-case circuit breakers (MCCBs).
 - 6. Enclosures.

1.02 DEFINITIONS

- A. NC: Normally closed.
- B. NO: Normally open.
- C. SPDT: Single pole, double throw.

1.03 PERFORMANCE REQUIREMENTS

- A. Seismic Performance: Enclosed switches and circuit breakers shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.
 - 1. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified and the unit will be fully operational after the seismic event."

1.04 SUBMITTALS

- A. Product Data: For each type of enclosed switch, circuit breaker, accessory, and component indicated.
- B. Shop Drawings: For enclosed switches and circuit breakers. Include plans, elevations, sections, details, and attachments to other work.
 - 1. Wiring Diagrams: For power, signal, and control wiring.
- C. Seismic Qualification Certificates: For enclosed switches and circuit breakers, accessories, and components, from manufacturer.
- D. Field quality-control reports.
- E. Operation and maintenance data.

1.05 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with NFPA 70.

PART 2 PRODUCTS

2.01 FUSIBLE SWITCHES

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
 - 1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
 - 2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
 - 3. Siemens Energy & Automation, Inc.
 - 4. Square D; a brand of Schneider Electric.
- B. Type HD, Heavy Duty, Single Throw, 240 or 600-V ac, 1200 A and Smaller: UL 98 and NEMA KS 1, horsepower rated, with clips or bolt pads to accommodate specified fuses, lockable handle with capability to accept three padlocks, and interlocked with cover in closed position.
- C. Accessories:
 - 1. Equipment Ground Kit: Internally mounted and labeled for copper and aluminum ground conductors.
 - 2. Class R Fuse Kit: Provides rejection of other fuse types when Class R fuses are specified.
 - 3. Lugs: Suitable for number, size, and conductor material.

2.02 NONFUSIBLE SWITCHES

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
 - 1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
 - 2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
 - 3. Siemens Energy & Automation, Inc.
 - 4. Square D; a brand of Schneider Electric.
- B. Type HD, Heavy Duty, Single Throw, 240 or 600-V ac, 1200 A and Smaller: UL 98 and NEMA KS 1, horsepower rated, lockable handle with capability to accept three padlocks, and interlocked with cover in closed position.
- C. Accessories:
 - 1. Equipment Ground Kit: Internally mounted and labeled for copper and aluminum ground conductors.
 - 2. Lugs: Suitable for number, size, and conductor material.

2.03 RECEPTACLE SWITCHES

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
 - 1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
 - 2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
 - 3. Siemens Energy & Automation, Inc.
 - 4. Square D; a brand of Schneider Electric.
- B. Type HD, Heavy-Duty, Single-Throw Fusible Switch: 240 or 600-V ac, 30, 60, 100 A; UL 98 and NEMA KS 1; horsepower rated, with clips or bolt pads to accommodate

specified fuses; lockable handle with capability to accept three padlocks; interlocked with cover in closed position.

- C. Interlocking Linkage: Provided between the receptacle and switch mechanism to prevent inserting or removing plug while switch is in the on position, inserting any plug other than specified, and turning switch on if an incorrect plug is inserted or correct plug has not been fully inserted into the receptacle.
- D. Receptacle: Polarized, three-phase, four-wire receptacle (fourth wire connected to enclosure ground lug).

2.04 SHUNT TRIP SWITCHES

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
 - 1. Cooper Bussmann, Inc.
 - 2. Ferraz Shawmut, Inc.
 - 3. Littelfuse, Inc.
- B. General Requirements: Comply with ASME A17.1, UL 50, and UL 98, with 200-kA interrupting and short-circuit current rating when fitted with Class J fuses.
- C. Switches: Three-pole, horsepower rated, with integral shunt trip mechanism and Class J fuse block; lockable handle with capability to accept three padlocks; interlocked with cover in closed position.
- D. Control Circuit: 120-V ac; obtained from integral control power transformer, with primary and secondary fuses, with a control power transformer of enough capacity to operate shunt trip, connected pilot, and indicating and control devices.
- E. Accessories:
 - 1. Oiltight key switch for key-to-test function.
 - 2. Oiltight ON pilot light.
 - 3. Isolated neutral lug.
 - 4. Mechanically interlocked auxiliary contacts that change state when switch is opened and closed.
 - 5. Form C alarm contacts that change state when switch is tripped.
 - 6. Three-pole, double-throw, fire-safety and alarm relay; 120-V ac coil voltage.
 - 7. Three-pole, double-throw, fire-alarm voltage monitoring relay complying with NFPA 72.

2.05 MOLDED-CASE CIRCUIT BREAKERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following or approved equal:
 - 1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
 - 2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
 - 3. Siemens Energy & Automation, Inc.
 - 4. Square D; a brand of Schneider Electric.
- B. General Requirements: Comply with UL 489, NEMA AB 1, and NEMA AB 3, with interrupting capacity to comply with available fault currents.

- C. Thermal-Magnetic Circuit Breakers: Inverse time-current element for low-level overloads and instantaneous magnetic trip element for short circuits. Adjustable magnetic trip setting for circuit-breaker frame sizes 250 A and larger.
- D. Features and Accessories:
 - 1. Standard frame sizes, trip ratings, and number of poles.
 - 2. Lugs: Suitable for number, size, trip ratings, and conductor material.
 - 3. Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HID for feeding fluorescent and high-intensity discharge lighting circuits.

2.06 ENCLOSURES

- A. Enclosed Switches and Circuit Breakers: NEMA AB 1, NEMA KS 1, NEMA 250, and UL 50, to comply with environmental conditions at installed location.
 - 1. Indoor, Dry and Clean Locations: NEMA 250, Type 1.
 - 2. Outdoor Locations: NEMA 250, Type 4X stainless steel.
 - 3. Kitchen and Wash-Down Areas: NEMA 250, Type 4X stainless steel.
 - 4. Other Wet or Damp, Indoor Locations: NEMA 250, Type 4X, stainless steel.
 - 5. Indoor Locations Subject to Dust, Falling Dirt, and Dripping Noncorrosive Liquids: NEMA 250, Type 12.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install individual wall-mounted switches and circuit breakers with tops at uniform height unless otherwise indicated.
- B. Comply with mounting and anchoring requirements specified in Division 26 Section "Vibration and Seismic Controls for Electrical Systems."
- C. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from enclosures and components.
- D. Install fuses in fusible devices.
- E. Comply with NECA 1.

3.02 IDENTIFICATION

- A. Comply with requirements in Division 26 Section "Identification for Electrical Systems."
 - 1. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs.
 - 2. Label each enclosure with engraved metal or laminated-plastic nameplate.

3.03 FIELD QUALITY CONTROL

- A. A qualified inspector shall perform tests and inspections. Inspections are to be performed by an independent third party and are intended to ensure that the work of the prime contractor is in accordance with the Contract Documents and applicable building codes.
- B. Acceptance Testing Preparation:
 - 1. Test insulation resistance for each enclosed switch and circuit breaker, component, connecting supply, feeder, and control circuit.

2. Test continuity of each circuit.
- C. Tests and Inspections:
1. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
 2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
- D. Enclosed switches and circuit breakers will be considered defective if they do not pass tests and inspections.
- E. Prepare test and inspection reports, including a certified report that identifies enclosed switches and circuit breakers and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

END OF SECTION

SECTION 26 56 00

EXTERIOR LIGHTING (LED)

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Exterior luminaires with LED diodes and drivers.
 - 2. Poles and accessories.

1.02 SUBMITTALS

- A. Product Data: For each luminaire, pole, and support component, arranged in order of lighting unit designation. Include data on features, accessories, and finishes.

1.03 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with IEEE C2, "National Electrical Safety Code."
- C. Luminaire Photometric Data Testing Laboratory Qualifications: Luminaire manufacturer's laboratory that is accredited under the NVLAP for Energy Efficient Lighting Products.
- D. Luminaire Photometric Data Testing Laboratory Qualifications: Provided by an independent agency, with the experience and capability to conduct the testing indicated, that is an NRTL as defined by OSHA in 29 CFR 1910.7, accredited under the NVLAP for Energy Efficient Lighting Products, and complying with the applicable IES testing standards.
- E. Provide luminaires from a single manufacturer for each luminaire type.
- F. Each luminaire type shall be binned within a three-step MacAdam Ellipse to ensure color consistency among luminaires.

1.04 WARRANTY

- A. Warranty: Manufacturer and Installer agree to repair or replace components of luminaires that fail in materials or workmanship within specified warranty period.
- B. Warranty Period: Five year(s) from date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide product indicated on Drawings.

2.02 GENERAL REQUIREMENTS FOR LUMINAIRES

- A. Luminaires shall comply with UL 1598 and be listed and labeled for installation in wet locations by an NRTL acceptable to authorities having jurisdiction.
 - 1. LER Tests Incandescent Fixtures: Where LER is specified, test according to NEMA LE 5A.
- B. Lateral Light Distribution Patterns: Comply with IESNA RP-8 for parameters of lateral light distribution patterns indicated for luminaires.
- C. Metal Parts: Free of burrs and sharp corners and edges.
- D. Sheet Metal Components: Corrosion-resistant aluminum unless otherwise indicated. Form and support to prevent warping and sagging.
- E. Housings: Rigidly formed, weather- and light-tight enclosures that will not warp, sag, or deform in use. Provide filter/breather for enclosed luminaires.
- F. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit relamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position. Doors shall be removable for cleaning or replacing lenses. Designed to disconnect ballast when door opens.
- G. Exposed Hardware Material: Stainless steel.
- H. Plastic Parts: High resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.
- I. Light Shields: Metal baffles, factory installed and field adjustable, arranged to block light distribution to indicated portion of normally illuminated area or field.
- J. Reflecting surfaces shall have minimum reflectance as follows unless otherwise indicated:
 - 1. White Surfaces: 85 percent.
 - 2. Specular Surfaces: 83 percent.
 - 3. Diffusing Specular Surfaces: 75 percent.
- K. Lenses and Refractors Gaskets: Use heat- and aging-resistant resilient gaskets to seal and cushion lenses and refractors in luminaire doors.
- L. Luminaire Finish: Manufacturer's standard paint applied to factory-assembled and -tested luminaire before shipping. Where indicated, match finish process and color of pole or support materials.
- M. Factory-Applied Finish for Steel Luminaires: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
 - 1. Surface Preparation: Clean surfaces to comply with SSPC-SP 1, "Solvent Cleaning," to remove dirt, oil, grease, and other contaminants that could impair paint bond. Grind welds and polish surfaces to a smooth, even finish. Remove mill scale and rust, if present, from uncoated steel, complying with SSPC-SP 5/NACE No. 1, "White Metal Blast Cleaning," or SSPC-SP 8, "Pickling."
 - 2. Exterior Surfaces: Manufacturer's standard finish consisting of one or more coats of primer and two finish coats of high-gloss, high-build polyurethane enamel.

- a. Color: As selected by Architect from manufacturer's full range.
- N. Factory-Applied Finish for Aluminum Luminaires: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
 - 1. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
 - 2. Natural Satin Finish: Provide fine, directional, medium satin polish (AA-M32); buff complying with AA-M20; and seal aluminum surfaces with clear, hard-coat wax.
 - 3. Class I, Clear Anodic Finish: AA-M32C22A41 (Mechanical Finish: medium satin; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, clear coating 0.018 mm or thicker) complying with AAMA 611.
 - 4. Class I, Color Anodic Finish: AA-M32C22A42/A44 (Mechanical Finish: medium satin; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, integrally colored or electrolytically deposited color coating 0.018 mm or thicker) complying with AAMA 611.
 - a. Color: Per architect.
- O. Factory-Applied Labels: Comply with UL 1598. Include recommended LED diodes and drivers. Labels shall be located where they will be readily visible to service personnel, but not seen from normal viewing angles when lamps are in place.
 - 1. Label shall include the following LED diodes and drivers characteristics:
 - a. "USES ONLY" and include specific lamp type.
 - b. CCT and CRI for all luminaires.

2.03 LUMINAIRE REQUIREMENTS

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. NRTL Compliance: Luminaires for hazardous locations shall be listed and labeled for indicated class and division of hazard by an NRTL.
- C. Recessed Fixtures: Comply with NEMA LE 4.
- D. Bulb shape complying with ANSI C79.1.
- E. Lamp base complying with ANSI C81.61 or IEC 60061-1.
- F. CRI of minimum 80. CCT of 2700 K, 3000 K, 3500 K, 4000 K or 5000 K.
- G. Rated lamp life of 35,000 hours minimum.
- H. Lamps dimmable from 100 percent to 0 percent of maximum light output.
- I. Integral driver.
- J. Nominal Operating Voltage: 120 V ac, 208 V ac or 277 V ac.
 - 1. Lens Thickness: At least 0.125 inch (3.175 mm) minimum unless otherwise indicated.
- K. Housings:
 - 1. Extruded-aluminum housing and heat sink.
 - 2. Clear, anodized, powder-coated or painted finish.

2.04 SURFACE MOUNT, LINEAR

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following or approved equal:
 - 1. Cooper Lighting.
 - 2. Lightolier; a Philips group brand.
 - 3. Lithonia Lighting; Acuity Brands Lighting, Inc.
- B. Minimum 750 lumens. Minimum allowable efficacy of 80 lumens per watt.
- C. Integral junction box with conduit fittings.

2.05 SURFACE MOUNT, NONLINEAR

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include or approved equal to the following:
 - 1. Cooper Lighting.
 - 2. Lightolier; a Philips group brand.
 - 3. Lithonia Lighting; Acuity Brands Lighting, Inc.
- B. Minimum 750 lumens. Minimum allowable efficacy of 80 lumens per watt.
- C. Integral junction box with conduit fittings.

2.06 METAL FINISHES

- A. Variations in finishes are unacceptable in the same piece. Variations in finishes of adjoining components are acceptable if they are within the range of approved Samples and if they can be and are assembled or installed to minimize contrast.

2.07 LUMINAIRE FIXTURE SUPPORT COMPONENTS

- A. Comply with requirements in Section 260529 "Hangers and Supports for Electrical Systems" for channel and angle iron supports and nonmetallic channel and angle supports.
- B. Single-Stem Hangers: 1/2-inch (13-mm) steel tubing with swivel ball fittings and ceiling canopy. Finish same as luminaire.
- C. Wires: ASTM A 641/A 641 M, Class 3, soft temper, zinc-coated steel, 12 gage (2.68 mm).
- D. Rod Hangers: 3/16-inch (5-mm) minimum diameter, cadmium-plated, threaded steel rod.
- E. Hook Hangers: Integrated assembly matched to luminaire, line voltage, and equipment with threaded attachment, cord, and locking-type plug.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

- B. Examine roughing-in for luminaire to verify actual locations of luminaire and electrical connections before fixture installation. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 LUMINAIRE INSTALLATION

- A. Comply with NECA 1.
- B. Install luminaires level, plumb, and square with ceilings and walls unless otherwise indicated.
- C. Install lamps in each luminaire.
- D. Supports:
 - 1. Sized and rated for luminaire weight.
 - 2. Able to maintain luminaire position after cleaning and relamping.
 - 3. Provide support for luminaire without causing deflection of ceiling or wall.
 - 4. Luminaire mounting devices shall be capable of supporting a horizontal force of 100 percent of luminaire weight and vertical force of 400 percent of luminaire weight.
- E. Wall-Mounted Luminaire Support:
 - 1. Attached to structural members in walls, to a minimum 20 gauge backing plate attached to wall structural members or using through bolts and backing plates on either side of wall.
 - 2. Do not attach luminaires directly to gypsum board.

3.03 INSTALLATION OF INDIVIDUAL GROUND-MOUNTING LUMINAIRES

- A. Install on concrete base with top 4 inches (100 mm) above finished grade or surface at luminaire location. Cast conduit into base, and finish by troweling and rubbing smooth. Concrete materials, installation, and finishing are specified in Division 03 Section "Cast-in-Place Concrete."

3.04 CORROSION PREVENTION

- A. Aluminum: Do not use in contact with earth or concrete. When in direct contact with a dissimilar metal, protect aluminum by insulating fittings or treatment.
- B. Steel Conduits: Comply with Division 26 Section "Raceway and Boxes for Electrical Systems." In concrete foundations, wrap conduit with 0.010-inch- (0.254-mm-) thick, pipe-wrapping plastic tape applied with a 50 percent overlap.

3.05 GROUNDING

- A. Ground metal poles and support structures according to Division 26 Section "Grounding and Bonding for Electrical Systems."
 - 1. Install grounding electrode for each pole unless otherwise indicated.
 - 2. Install grounding conductor pigtail in the base for connecting luminaire to grounding system.
- B. Ground nonmetallic poles and support structures according to Division 26 Section "Grounding and Bonding for Electrical Systems."
 - 1. Install grounding electrode for each pole.
 - 2. Install grounding conductor and conductor protector.
 - 3. Ground metallic components of pole accessories and foundations.

3.06 IDENTIFICATION

- A. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

3.07 FIELD QUALITY CONTROL

- A. A qualified inspector shall perform the following tests and inspections. Inspections are to be performed by an independent third party and are intended to ensure that the work of the prime contractor is in accordance with the Contract Documents and applicable building codes.
 - 1. Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.
 - 2. Test for Emergency Lighting: Interrupt power supply to demonstrate proper operation. Verify transfer from normal power to battery power and retransfer to normal.
- B. Luminaire will be considered defective if it does not pass operation tests and inspections.
- C. Prepare test and inspection reports.

3.08 STARTUP SERVICE

- A. Comply with requirements for startup specified in Section 260923 "Lighting Control Devices."

END OF SECTION

SUPPLEMENTARY SPECIAL PROVISIONS
APPENDICES

APPENDIX A
MITIGATED NEGATIVE DECLARATION



THE CITY OF SAN DIEGO

MITIGATED NEGATIVE DECLARATION

Project No. 553076

SCH No. NA

SUBJECT: EB SCRIPPS COMFORT STATION CDP/SDP

UPDATE: The Mitigated Negative Declaration (MND) has been revised to identify the project site as a designated historical resource; however, this revision is a clarification and amplification to the analysis and conclusions of the draft MND. The physical scope of the project, project environmental impacts, proposed mitigation measures, and conclusions of the draft Mitigated Negative Declaration are not affected by the revisions. Therefore, recirculation of the draft MND is not required pursuant to Section 15073.5 of CEQA Guidelines. Double underline has been used to denote additions to the MND and Initial Study and strikethrough has been used to denote deletions from the MND and initial study.

- I. PROJECT DESCRIPTION: See attached Initial Study.
- II. ENVIRONMENTAL SETTING: See attached Initial Study.
- III. DETERMINATION:

The City of San Diego conducted an Initial Study which determined that the proposed project could have a significant environmental effect in the following areas(s): **HISTORICAL RESOURCES (ARCHAEOLOGY) AND PALEONTOLOGICAL RESOURCES**. Subsequent revisions in the project proposal create the specific mitigation identified in Section V of this Mitigated Negative Declaration. The project as revised now avoids or mitigates the potentially significant environmental effects previously identified, and the preparation of an Environmental Impact Report will not be required.

- IV. DOCUMENTATION: The attached Initial Study documents the reasons to support the above Determination.
- V. MITIGATION, MONITORING AND REPORTING PROGRAM:

A. GENERAL REQUIREMENTS – PART I
Plan Check Phase (prior to permit issuance)

1. Prior to the issuance of a Notice To Proceed (NTP) for a subdivision, or any construction permits, such as Demolition, Grading or Building, or beginning any construction related activity on-site, the Development Services Department (DSD) Director's Environmental Designee (ED) shall review and approve all Construction Documents (CD), (plans, specification, details, etc.) to ensure the MMRP requirements are incorporated into the design.

2. In addition, the ED shall verify that the MMRP Conditions/Notes that apply ONLY to the construction phases of this project are included VERBATIM, under the heading, **"ENVIRONMENTAL/MITIGATION REQUIREMENTS."**

3. These notes must be shown within the first three (3) sheets of the construction documents in the format specified for engineering construction document templates as shown on the City website:

<http://www.sandiego.gov/development-services/industry/standtemp.shtml>

4. The **TITLE INDEX SHEET** must also show on which pages the "Environmental/Mitigation Requirements" notes are provided.

5. **SURETY AND COST RECOVERY** – The Development Services Director or City Manager may require appropriate surety instruments or bonds from private Permit Holders to ensure the long term performance or implementation of required mitigation measures or programs. The City is authorized to recover its cost to offset the salary, overhead, and expenses for City personnel and programs to monitor qualifying projects.

B. GENERAL REQUIREMENTS – PART II
Post Plan Check (After permit issuance/Prior to start of construction)

1. PRE CONSTRUCTION MEETING IS REQUIRED TEN (10) WORKING DAYS PRIOR TO BEGINNING ANY WORK ON THIS PROJECT. The PERMIT HOLDER/OWNER is responsible to arrange and perform this meeting by contacting the CITY RESIDENT ENGINEER (RE) of the Field Engineering Division and City staff from MITIGATION MONITORING COORDINATION (MMC). Attendees must also include the Permit holder's Representative(s), Job Site Superintendent and the following consultants:

Qualified Archaeologist, Native American Monitor, Qualified Paleontologist

Note:

Failure of all responsible Permit Holder's representatives and consultants to attend shall require an additional meeting with all parties present.

CONTACT INFORMATION:

a) The PRIMARY POINT OF CONTACT is the **RE** at the **Field Engineering Division – 858-627-3200**

b) For Clarification of ENVIRONMENTAL REQUIREMENTS, it is also required to call **RE and MMC at 858-627-3360**

2. MMRP COMPLIANCE: This Project, Project Tracking System (PTS) # 553076 and /or Environmental Document # 553076, shall conform to the mitigation requirements contained in the associated Environmental Document and implemented to the satisfaction of the DSD's Environmental Designee (MMC) and the City Engineer (RE). The requirements may not be reduced or changed but may be annotated (i.e. to explain when and how compliance is being met and location of verifying proof, etc.). Additional clarifying information may also be added to other relevant plan sheets and/or specifications as appropriate (i.e., specific locations, times of monitoring, methodology, etc.

Note:

Permit Holder's Representatives must alert RE and MMC if there are any discrepancies in the plans or notes, or any changes due to field conditions. All conflicts must be approved by RE and MMC BEFORE the work is performed.

3. OTHER AGENCY REQUIREMENTS: Evidence of compliance with all other agency requirements or permits shall be submitted to the RE and MMC for review and acceptance prior to the beginning of work or within one week of the Permit Holder obtaining documentation of those permits or requirements. Evidence shall include copies of permits, letters of resolution or other documentation issued by the responsible agency.

None

4. MONITORING EXHIBITS

All consultants are required to submit , to RE and MMC, a monitoring exhibit on a 11x17 reduction of the appropriate construction plan, such as site plan, grading, landscape, etc., marked to clearly show the specific areas including the **LIMIT OF WORK**, scope of that discipline's work, and notes indicating when in the construction schedule that work will be performed. When necessary for clarification, a detailed methodology of how the work will be performed shall be included.

5. OTHER SUBMITTALS AND INSPECTIONS:

The Permit Holder/Owner's representative shall submit all required documentation, verification letters, and requests for all associated inspections to the RE and MMC for approval per the following schedule:

Issue Area	Document Submittal/Task	Associated Inspection/Approvals/Notes
General	Contribution to the City of San Diego Habitat Acquisition Fund	Prior to the issuance of any Construction Permits

	(HAF) plus a ten percent (10%) administrative fee.	
General	Consultant Qualification Letters	Prior to Preconstruction Meeting
General	Consultant Construction Monitoring Exhibits	Prior to or at Preconstruction Meeting
Archaeology	Archeological Reports	Archeology Site Observation
Paleontology	Paleontology Reports	Paleontology Site Observation
Final inspection	Request for Final inspection	1 week after request

C. SPECIFIC MMRP ISSUE AREA CONDITIONS/REQUIREMENTS

HISTORICAL RESOURCES (ARCHAEOLOGY)

I. Prior to Permit Issuance or Bid Opening/Bid Award

A. Entitlements Plan Check

1. Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Archaeological Monitoring and Native American monitoring have been noted on the applicable construction documents through the plan check process.

B. Letters of Qualification have been submitted to ADD

1. Prior to Bid Award, the applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the archaeological monitoring program, as defined in the City of San Diego Historical Resources Guidelines (HRG). If applicable, individuals involved in the archaeological monitoring program must have completed the 40-hour HAZWOPER training with certification documentation.
2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the archaeological monitoring of the project meet the qualifications established in the HRG.
3. Prior to the start of work, the applicant must obtain written approval from MMC for any personnel changes associated with the monitoring program.

II. Prior to Start of Construction

A. Verification of Records Search

1. The PI shall provide verification to MMC that a site specific records search (1/4 mile radius) has been completed. Verification includes, but is not limited to a copy of a confirmation letter from South Coastal Information Center, or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.
3. The PI may submit a detailed letter to MMC requesting a reduction to the ¼ mile

radius.

B. PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring; the Applicant shall arrange a Precon Meeting that shall include the PI, Native American consultant/monitor (where Native American resources may be impacted), Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified Archaeologist and Native American Monitor shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the Construction Manager and/or Grading Contractor.
 - a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.
2. Acknowledgement of Responsibility for Curation (CIP or Other Public Projects)
The applicant shall submit a letter to MMC acknowledging their responsibility for the cost of curation associated with all phases of the archaeological monitoring program.
3. Identify Areas to be Monitored
Prior to the start of any work that requires monitoring, the PI shall submit an Archaeological Monitoring Exhibit (AME) (with verification that the AME has been reviewed and approved by the Native American consultant/monitor when Native American resources may be impacted) based on the appropriate construction documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits.
The AME shall be based on the results of a site specific records search as well as information regarding the age of existing pipelines, laterals and associated appurtenances and/or any known soil conditions (native or formation).
MMC shall notify the PI that the AME has been approved.
4. When Monitoring Will Occur
 - a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.
 - b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as age of existing pipe to be replaced, depth of excavation and/or site graded to bedrock, etc., which may reduce or increase the potential for resources to be present.
5. Approval of AME and Construction Schedule
After approval of the AME by MMC, the PI shall submit to MMC written authorization of the AME and Construction Schedule from the CM.

III. **During Construction**

A. Monitor Shall be Present During Grading/Excavation/Trenching

1. The Archaeological Monitor shall be present full-time during all soil disturbing and grading/excavation/trenching activities which could result in impacts to archaeological resources as identified on the AME. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction**

activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the AME.

2. The Native American consultant/monitor shall determine the extent of their presence during soil disturbing and grading/excavation/trenching activities based on the AME and provide that information to the PI and MMC. If prehistoric resources are encountered during the Native American consultant/monitor's absence, work shall stop and the Discovery Notification Process detailed in Section III.B-C and IV.A-D shall commence.
3. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as modern disturbance post-dating the previous grading/trenching activities, presence of fossil formations, or when native soils are encountered that may reduce or increase the potential for resources to be present.
4. The archaeological and Native American consultant/monitor shall document field activity via the Consultant Site Visit Record (CSV). The CSV's shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion**), and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process

1. In the event of a discovery, the Archaeological Monitor shall direct the contractor to temporarily divert all soil disturbing activities, including but not limited to digging, trenching, excavating or grading activities in the area of discovery and in the area reasonably suspected to overlay adjacent resources and immediately notify the RE or BI, as appropriate.
2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.
4. No soil shall be exported off-site until a determination can be made regarding the significance of the resource specifically if Native American resources are encountered.

C. Determination of Significance

1. The PI and Native American consultant/monitor, where Native American resources are discovered shall evaluate the significance of the resource. If Human Remains are involved, follow protocol in Section IV below.
 - a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required.
 - b. If the resource is significant, the PI shall submit an Archaeological Data Recovery Program (ADRP) and obtain written approval of the program from MMC, CM and RE. ADRP and any mitigation must be approved by MMC, RE and/or CM before ground disturbing activities in the area of discovery will be allowed to resume.
Note: If a unique archaeological site is also an historical resource as defined in CEQA Section 15064.5, then the limits on the amount(s) that a project applicant may be required to pay to cover mitigation costs as

indicated in CEQA Section 21083.2 shall not apply.

- (1). Note: For pipeline trenching and other linear projects in the public Right-of-Way, the PI shall implement the Discovery Process for Pipeline Trenching projects identified below under "D."
- c. If the resource is not significant, the PI shall submit a letter to MMC indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that that no further work is required.
 - (1). Note: For Pipeline Trenching and other linear projects in the public Right-of-Way, if the deposit is limited in size, both in length and depth; the information value is limited and is not associated with any other resource; and there are no unique features/artifacts associated with the deposit, the discovery should be considered not significant.
 - (2). Note, for Pipeline Trenching and other linear projects in the public Right-of-Way, if significance cannot be determined, the Final Monitoring Report and Site Record (DPR Form 523A/B) shall identify the discovery as Potentially Significant.

D. Discovery Process for Significant Resources - Pipeline Trenching and other Linear Projects in the Public Right-of-Way

The following procedure constitutes adequate mitigation of a significant discovery encountered during pipeline trenching activities or for other linear project types within the Public Right-of-Way including but not limited to excavation for jacking pits, receiving pits, laterals, and manholes to reduce impacts to below a level of significance:

1. Procedures for documentation, curation and reporting
 - a. One hundred percent of the artifacts within the trench alignment and width shall be documented in-situ, to include photographic records, plan view of the trench and profiles of side walls, recovered, photographed after cleaning and analyzed and curated. The remainder of the deposit within the limits of excavation (trench walls) shall be left intact.
 - b. The PI shall prepare a Draft Monitoring Report and submit to MMC via the RE as indicated in Section VI-A.
 - c. The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) the resource(s) encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines. The DPR forms shall be submitted to the South Coastal Information Center for either a Primary Record or SDI Number and included in the Final Monitoring Report.
 - d. The Final Monitoring Report shall include a recommendation for monitoring of any future work in the vicinity of the resource.

IV. Discovery of Human Remains

If human remains are discovered, work shall halt in that area and no soil shall be exported off-site until a determination can be made regarding the provenance of the human remains; and the following procedures as set forth in CEQA Section 15064.5(e), the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken:

A. Notification

1. Archaeological Monitor shall notify the RE or BI as appropriate, MMC, and the PI, if

the Monitor is not qualified as a PI. MMC will notify the appropriate Senior Planner in the Environmental Analysis Section (EAS) of the Development Services Department to assist with the discovery notification process.

2. The PI shall notify the Medical Examiner after consultation with the RE, either in person or via telephone.
- B. Isolate discovery site
1. Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner in consultation with the PI concerning the provenience of the remains.
 2. The Medical Examiner, in consultation with the PI, will determine the need for a field examination to determine the provenience.
 3. If a field examination is not warranted, the Medical Examiner will determine with input from the PI, if the remains are or are most likely to be of Native American origin.
- C. If Human Remains **ARE** determined to be Native American
1. The Medical Examiner will notify the Native American Heritage Commission (NAHC) within 24 hours. By law, **ONLY** the Medical Examiner can make this call.
 2. NAHC will immediately identify the person or persons determined to be the Most Likely Descendent (MLD) and provide contact information.
 3. The MLD will contact the PI within 24 hours or sooner after the Medical Examiner has completed coordination, to begin the consultation process in accordance with CEQA Section 15064.5(e), the California Public Resources and Health & Safety Codes.
 4. The MLD will have 48 hours to make recommendations to the property owner or representative, for the treatment or disposition with proper dignity, of the human remains and associated grave goods.
 5. Disposition of Native American Human Remains will be determined between the MLD and the PI, and, if:
 - a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after being notified by the Commission, OR;
 - b. The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner, THEN
 - c. To protect these sites, the landowner shall do one or more of the following:
 - (1) Record the site with the NAHC;
 - (2) Record an open space or conservation easement; or
 - (3) Record a document with the County.
 - d. Upon the discovery of multiple Native American human remains during a ground disturbing land development activity, the landowner may agree that additional conferral with descendants is necessary to consider culturally appropriate treatment of multiple Native American human remains. Culturally appropriate treatment of such a discovery may be ascertained from review of the site utilizing cultural and archaeological standards. Where the parties are unable to agree on the appropriate treatment measures the human remains and items associated and buried with Native American human remains shall be reinterred with appropriate dignity, pursuant to Section 5.c., above.
- D. If Human Remains are **NOT** Native American

1. The PI shall contact the Medical Examiner and notify them of the historic era context of the burial.
2. The Medical Examiner will determine the appropriate course of action with the PI and City staff (PRC 5097.98).
3. If the remains are of historic origin, they shall be appropriately removed and conveyed to the San Diego Museum of Man for analysis. The decision for internment of the human remains shall be made in consultation with MMC, EAS, the applicant/landowner, any known descendant group, and the San Diego Museum of Man.

V. Night and/or Weekend Work

- A. If night and/or weekend work is included in the contract
 1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the precon meeting.
 2. The following procedures shall be followed.
 - a. No Discoveries
In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSV and submit to MMC via fax by 8AM of the next business day.
 - b. Discoveries
All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction, and IV - Discovery of Human Remains. Discovery of human remains shall always be treated as a significant discovery.
 - c. Potentially Significant Discoveries
If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction and IV-Discovery of Human Remains shall be followed.
 - d. The PI shall immediately contact the RE and MMC, or by 8AM of the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.
- B. If night and/or weekend work becomes necessary during the course of construction
 1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
 2. The RE, or BI, as appropriate, shall notify MMC immediately.
- C. All other procedures described above shall apply, as appropriate.

VI. Post Construction

- A. Submittal of Draft Monitoring Report
 1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Historical Resources Guidelines (Appendix C/D) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program (with appropriate graphics) to MMC via the RE for review and approval within 90 days following the completion of monitoring. **It should be noted that if the PI is unable to submit the Draft Monitoring Report within the allotted 90-day timeframe as a result of delays with analysis, special study results or other complex issues, a schedule shall be submitted to MMC**

establishing agreed due dates and the provision for submittal of monthly status reports until this measure can be met.

- a. For significant archaeological resources encountered during monitoring, the Archaeological Data Recovery Program or Pipeline Trenching Discovery Process shall be included in the Draft Monitoring Report.
 - b. Recording Sites with State of California Department of Parks and Recreation
The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines, and submittal of such forms to the South Coastal Information Center with the Final Monitoring Report.
2. MMC shall return the Draft Monitoring Report to the PI via the RE for revision or, for preparation of the Final Report.
 3. The PI shall submit revised Draft Monitoring Report to MMC via the RE for approval.
 4. MMC shall provide written verification to the PI of the approved report.
 5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.
- B. Handling of Artifacts
1. The PI shall be responsible for ensuring that all cultural remains collected are cleaned and catalogued
 2. The PI shall be responsible for ensuring that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.
- C. Curation of artifacts: Accession Agreement and Acceptance Verification
1. The PI shall be responsible for ensuring that all artifacts associated with the survey, testing and/or data recovery for this project are permanently curated with an appropriate institution. This shall be completed in consultation with MMC and the Native American representative, as applicable.
 2. When applicable to the situation, the PI shall include written verification from the Native American consultant/monitor indicating that Native American resources were treated in accordance with state law and/or applicable agreements. If the resources were reinterred, verification shall be provided to show what protective measures were taken to ensure no further disturbance occurs in accordance with Section IV – Discovery of Human Remains, Subsection C.
 3. The PI shall submit the Accession Agreement and catalogue record(s) to the RE or BI, as appropriate for donor signature with a copy submitted to MMC.
 4. The RE or BI, as appropriate shall obtain signature on the Accession Agreement and shall return to PI with copy submitted to MMC.
 5. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.
- D. Final Monitoring Report(s)
1. The PI shall submit one copy of the approved Final Monitoring Report to the RE or BI as appropriate, and one copy to MMC (even if negative), within 90 days after notification from MMC of the approved report.
 2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance

Verification from the curation institution.

PALEONTOLOGICAL RESOURCES

I. Prior to Permit Issuance or Bid Opening/Bid Award

A. Entitlements Plan Check

1. Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Paleontological Monitoring have been noted on the appropriate construction documents.

B. Letters of Qualification have been submitted to ADD

1. Prior to Bid Award, the applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the paleontological monitoring program, as defined in the City of San Diego Paleontology Guidelines.
2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the paleontological monitoring of the project.
3. Prior to the start of work, the applicant shall obtain approval from MMC for any personnel changes associated with the monitoring program.

II. Prior to Start of Construction

A. Verification of Records Search

1. The PI shall provide verification to MMC that a site specific records search has been completed. Verification includes, but is not limited to a copy of a confirmation letter from San Diego Natural History Museum, other institution or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.

B. PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring, the Applicant shall arrange a Precon Meeting that shall include the PI, Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified paleontologist shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Paleontological Monitoring program with the Construction Manager and/or Grading Contractor.
 - a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.
2. Acknowledgement of Responsibility for Curation (CIP or Other Public Projects)
The applicant shall submit a letter to MMC acknowledging their responsibility for the cost of curation associated with all phases of the paleontological monitoring program.
3. Identify Areas to be Monitored
 - a. Prior to the start of any work that requires monitoring, the PI shall submit a Paleontological Monitoring Exhibit (PME) based on the appropriate construction documents (reduced to 11x17) to MMC for approval identifying the areas to be

monitored including the delineation of grading/excavation limits. Monitoring shall begin at depths below 10 feet from existing grade or as determined by the PI in consultation with MMC. The determination shall be based on site specific records search data which supports monitoring at depths less than ten feet.

- b. The PME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation).
 - c. MMC shall notify the PI that the PME has been approved.
4. When Monitoring Will Occur
 - a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.
 - b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as depth of excavation and/or site graded to bedrock, presence or absence of fossil resources, etc., which may reduce or increase the potential for resources to be present.
 5. Approval of PME and Construction Schedule
After approval of the PME by MMC, the PI shall submit to MMC written authorization of the PME and Construction Schedule from the CM.

III. During Construction

- A. Monitor Shall be Present During Grading/Excavation/Trenching
 1. The monitor shall be present full-time during grading/excavation/trenching activities including, but not limited to mainline, laterals, jacking and receiving pits, services and all other appurtenances associated with underground utilities as identified on the PME that could result in impacts to formations with high and/or moderate resource sensitivity. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the PME.**
 2. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as trenching activities that do not encounter formational soils as previously assumed, and/or when unique/unusual fossils are encountered, which may reduce or increase the potential for resources to be present.
 3. The monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR's shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion**), and in the case of ANY discoveries. The RE shall forward copies to MMC.
- B. Discovery Notification Process
 1. In the event of a discovery, the Paleontological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.
 2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.

3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.
- C. Determination of Significance
1. The PI shall evaluate the significance of the resource.
 - a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required. The determination of significance for fossil discoveries shall be at the discretion of the PI.
 - b. If the resource is significant, the PI shall submit a Paleontological Recovery Program (PRP) and obtain written approval of the program from MMC, MC and/or RE. PRP and any mitigation must be approved by MMC, RE and/or CM before ground disturbing activities in the area of discovery will be allowed to resume.
 - (1). Note: For pipeline trenching projects only, the PI shall implement the Discovery Process for Pipeline Trenching projects identified below under "D."
 - c. If resource is not significant (e.g., small pieces of broken common shell fragments or other scattered common fossils) the PI shall notify the RE, or BI as appropriate, that a non-significant discovery has been made. The Paleontologist shall continue to monitor the area without notification to MMC unless a significant resource is encountered.
 - d. The PI shall submit a letter to MMC indicating that fossil resources will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required.
 - (1). Note: For Pipeline Trenching Projects Only. If the fossil discovery is limited in size, both in length and depth; the information value is limited and there are no unique fossil features associated with the discovery area, then the discovery should be considered not significant.
 - (2). Note, for Pipeline Trenching Projects Only: If significance cannot be determined, the Final Monitoring Report and Site Record shall identify the discovery as Potentially Significant.
- D. Discovery Process for Significant Resources - Pipeline Trenching Projects
- The following procedure constitutes adequate mitigation of a significant discovery encountered during pipeline trenching activities including but not limited to excavation for jacking pits, receiving pits, laterals, and manholes to reduce impacts to below a level of significance.
1. Procedures for documentation, curation and reporting
 - a. One hundred percent of the fossil resources within the trench alignment and width shall be documented in-situ photographically, drawn in plan view (trench and profiles of side walls), recovered from the trench and photographed after cleaning, then analyzed and curated consistent with Society of Invertebrate Paleontology Standards. The remainder of the deposit within the limits of excavation (trench walls) shall be left intact and so documented.
 - b. The PI shall prepare a Draft Monitoring Report and submit to MMC via the RE as indicated in Section VI-A.

- c. The PI shall be responsible for recording (on the appropriate forms for the San Diego Natural History Museum) the resource(s) encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines. The forms shall be submitted to the San Diego Natural History Museum and included in the Final Monitoring Report.
- d. The Final Monitoring Report shall include a recommendation for monitoring of any future work in the vicinity of the resource.

IV. Night and/or Weekend Work

- A. If night and/or weekend work is included in the contract
 - 1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the precon meeting.
 - 2. The following procedures shall be followed.
 - a. No Discoveries
In the event that no discoveries were encountered during night and/or weekend work, The PI shall record the information on the CSVr and submit to MMC via the RE via fax by 8AM on the next business day.
 - b. Discoveries
All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction.
 - c. Potentially Significant Discoveries
If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction shall be followed.
 - d. The PI shall immediately contact the RE and MMC, or by 8AM on the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.
- B. If night and/or weekend work becomes necessary during the course of construction
 - 1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
 - 2. The RE, or BI, as appropriate, shall notify MMC immediately.
- C. All other procedures described above shall apply, as appropriate.

V. Post Construction

- A. Preparation and Submittal of Draft Monitoring Report
 - 1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Paleontological Guidelines which describes the results, analysis, and conclusions of all phases of the Paleontological Monitoring Program (with appropriate graphics) to MMC via the RE for review and approval within 90 days following the completion of monitoring.
 - a. For significant paleontological resources encountered during monitoring, the Paleontological Recovery Program or Pipeline Trenching Discovery Process shall be included in the Draft Monitoring Report.
 - b. Recording Sites with the San Diego Natural History Museum
The PI shall be responsible for recording (on the appropriate forms) any significant or potentially significant fossil resources encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological

- Guidelines, and submittal of such forms to the San Diego Natural History Museum with the Final Monitoring Report.
2. MMC shall return the Draft Monitoring Report to the PI via the RE for revision or, for preparation of the Final Report.
 3. The PI shall submit revised Draft Monitoring Report to MMC via the RE for approval.
 4. MMC shall provide written verification to the PI of the approved report.
 5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.
- B. Handling of Fossil Remains
1. The PI shall be responsible for ensuring that all fossil remains collected are cleaned and catalogued.
- C. Curation of artifacts: Deed of Gift and Acceptance Verification
1. The PI shall be responsible for ensuring that all fossil remains associated with the monitoring for this project are permanently curated with an appropriate institution.
 2. The PI shall submit the Deed of Gift and catalogue record(s) to the RE or BI, as appropriate for donor signature with a copy submitted to MMC.
 3. The RE or BI, as appropriate shall obtain signature on the Deed of Gift and shall return to PI with copy submitted to MMC.
 4. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.
- D. Final Monitoring Report(s)
1. The PI shall submit two copies of the Final Monitoring Report to MMC (even if negative), within 90 days after notification from MMC of the approved report.
 2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

The above mitigation monitoring and reporting program will require additional fees and/or deposits to be collected prior to the issuance of building permits, certificates of occupancy and/or final maps to ensure the successful completion of the monitoring program.

VI. PUBLIC REVIEW DISTRIBUTION:

Draft copies or notice of this Mitigated Negative Declaration were distributed to:

STATE OF CALIFORNIA

California Coastal Commission (47)

CITY OF SAN DIEGO

Mayor's Office

Councilmember Bry - District 1

City Attorney's Office (93C)

Development Services:

EAS - Mark Brunette

Development Project Manager – Helene Deisher

Geology – Jacobe Washburn

Historic – Jodie Brown

Parks & Recreation:
Bethany Windle

Public Works:
George Freiha
Elizabeth Schroth-Nichols
Gretchen Eichar

San Diego Central Library (81A)
La Jolla/Riford Branch Library (81L)

OTHER ORGANIZATIONS AND INTERESTED PARTIES

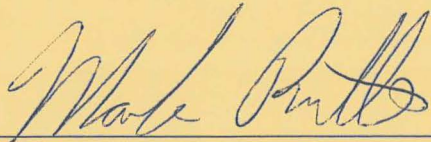
Carmen Lucas (206)
South Coastal Information Center (210)
San Diego History Center (211)
San Diego Archaeological Center (212)
Save Our Heritage Organization (214)
Ron Christman (215)
Clint Linton (215B)
Frank Brown, Inter-Tribal Cultural Resources Council (216)
Campo Band of Mission Indians (217)
San Diego County Archaeological Society, Inc. (218)
Native American Heritage Commission
Kumeyaay Cultural Heritage Preservation (223)
Kumeyaay Cultural Repatriation Committee (225)
Native American Distribution - Public Notice and Location Map Only (225A-S)
San Diego Natural History Museum (166)
La Jolla Community Planning Association (275)
La Jolla Village News (271)
La Jolla Town Council (273)
La Jolla Historical Society (274)
La Jolla Light (280)
Lisa Cumper

VII. RESULTS OF PUBLIC REVIEW:

- () No comments were received during the public input period.
- () Comments were received but did not address the accuracy or completeness of the draft environmental document. No response is necessary and the letters are incorporated herein.

- (X) Comments addressing the accuracy or completeness of the draft environmental document were received during the public input period. The letters and responses are incorporated herein.

Copies of the draft Mitigated Negative Declaration, the Mitigation, Monitoring and Reporting Program and any Initial Study material are available in the office of the Entitlements Division for review, or for purchase at the cost of reproduction.



MARK BRUNETTE,
SENIOR PLANNER
Development Services Department

April 26, 2018
Date of Draft Report

May 23, 2018
Date of Final Report

Analyst: MARK BRUNETTE, SENIOR PLANNER

Attachments: Figure 1 – Vicinity Map
Figure 2 – Site Plan
Initial Study Checklist

LETTER A



P.O. Box 908
Alpine, CA 91903
#1 Viejas Grade Road
Alpine, CA 91901

Phone: 6194453810
Fax: 6194455337
viejas.com

May 3, 2018

Mark Brunette
Environmental Planner
City of San Diego Development Services Center
1222 First Avenue, MS 501
San Diego, CA 92101

RE: Ellen Browning Scripps Comfort Station

Dear Mr. Brunette,

The Viejas Band of Kumeyaay Indians ("Viejas") has reviewed the proposed project and at this time we have determined that the project site has cultural significance or ties to Viejas.

Viejas Band request that a Kumeyaay Cultural Monitor be on site for ground disturbing activities to inform us of any new developments such as inadvertent discovery of cultural artifacts, cremation sites, or human remains.

Please call me at 619-659-2312 or Ernest Pingleton at 619-659-2314 or email, rteran@viejas-nsn.gov or epingleton@viejas-nsn.gov , for scheduling. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Ray Teran".

Ray Teran, Resource Management
VIEJAS BAND OF KUMEYAAY INDIANS

RESPONSE TO LETTER A

The archaeological mitigation in Section V of the MND requires that a Native American monitor be present during ground disturbing activities. The archaeological mitigation follows standard City of San Diego Development Services Department archaeological mitigation and monitoring requirements including notification of Native American community representatives.

LETTER B



San Diego County Archaeological Society, Inc.

Environmental Review Committee

6 May 2018

To: Mr. Mark Brunette
Development Services Department
City of San Diego
1222 First Avenue, Mail Station 501
San Diego, California 92101

Subject: Draft Mitigated Negative Declaration
Ellen Browning Scripps Comfort Station
Project No. 553076

Dear Mr. Brunette:

I have reviewed the subject DMND on behalf of this committee of the San Diego County Archaeological Society.

Based on the information contained in the DMND and the archaeological report for the project, we agree with the impact analysis and mitigation measures as proposed.

SDCAS appreciates being included in the City's environmental review process.

Sincerely,


James W. Royle, Jr., Chairperson
Environmental Review Committee

cc: RECON
SDCAS President
File

P.O. Box 81106 San Diego, CA 92138-1106 (858) 538-0935

RESPONSE TO LETTER B

Comment noted. No response required.

LETTER C

Brunette, Mark

From: Susie <smcwalden@aol.com>
Sent: Thursday, May 17, 2018 11:23 AM
To: DSD EAS
Cc: editor@lajollalight.com
Subject: "Ellen Browning Scripps Comfort Station" Project #553076

Follow Up Flag: Follow up
Flag Status: Flagged

Attention: Mark Brunette, Environmental Planner, Environmental Planner

According to the La Jolla Light May 10, 2018 article, "Last Call for Comments on Scripps Park Restroom Replacement Project", the city's "most recent budget puts the pricetag at \$3,060,784" for two relatively small buildings with toilets, benches, outdoor showers and storage for beach equipment".

At that price, using a \$250 per square foot measure, one could build a luxury house of over 12,000 square feet.

I believe it to be unconscionable to estimate that cost, which if anything like the La Jolla Shores lifeguard station, will increase substantially before completion.

I would like to ask for an itemized breakdown of the cost, a daily penalty to the construction company for delay on preset completion date and procedures for dealing with faulty material that needs to be replaced, ie windows at LJS lifeguard station.

Thank you, S Walden

1

RESPONSE TO LETTER C

Comment is noted. However, the comment does not address the adequacy of the draft MND, therefore, no further response is required under CEQA.

LETTER D

Brunette, Mark

From: kaia's desk <maxandkaia@san.rr.com>
Sent: Thursday, May 17, 2018 5:16 PM
To: DSD EAS
Subject: Ellen Browning Scripps Comfort Station Project No. 553076 *** Please include bike racks

Follow Up Flag: Follow up
Flag Status: Flagged

(To: City of SD Development Services Ctr. -- accepting comments until May 21.)

Bike Racks --

Please include bike racks in several locations & as many as space permits.

Sincerely,

Kaia Gantzel

LJ resident since 1962

RESPONSE TO LETTER D

Comment is noted. However, the comment does not address the adequacy of the draft MND, therefore, no further response is required under CEQA.



LETTER E

Save Our Heritage Organisation
Saving San Diego's Past for the Future

Friday, May 18, 2018

Mark Brunette, Environmental Planner
City of San Diego Development Services Center
1222 First Avenue, MS 501
San Diego, CA 92101

Re: EB Scripps Comfort Station, Project No. 553076

Mr. Brunette,

Save Our Heritage Organisation (SOHO) understands that coastal and site development permits have been requested for the EB Scripps Comfort Station Replacement and Sewer Pump Station 33 demolition project, which is subject to CEQA. SOHO appreciates that the City consulted with two tribal entities and, due to the cultural sensitivity for various areas of La Jolla's coastline, strongly encourages that if archaeological monitors are needed on site, that Native Monitors also be present. Further, since only a records search is possible to have occurred, and because the Mitigated Negative Declaration states the project could reach 13' below the existing grade, the Institute for Canine Forensics should be strongly considered to help determine if there are unrecorded Ancestor burials in and around the project area prior to the start of construction. Last, the results of this canine investigation and Monitoring, if positive, should influence project design with regard to preservation in place or impact minimization, in consult with tribes, which could occur as part of the final design and project options.

Thank you for the opportunity to comment,

Bruce Coons
Executive Director
Save Our Heritage Organisation

RESPONSE TO LETTER E

An archaeological resources survey was conducted for the project site as referenced in the Initial Study Cultural Resources and References sections of the MND. The survey recommended that a qualified archaeologist and Native American monitor be present during ground disturbing activities, but did not recommend that a representative of the Institute of Canine Forensics be present during ground disturbing activities.

The archaeological mitigation in Section V of the MND requires that a qualified archaeologist and Native American monitor be present during ground disturbing activities. The archaeological mitigation follows standard City of San Diego Development Services Department archaeological mitigation and monitoring requirements.

LETTER F

Brunette, Mark

From: Judy Mayer <rsvptojudymayer@gmail.com>
Sent: Sunday, May 20, 2018 11:22 AM
To: DSD EAS
Subject: Ellen Browning Scripps Comfort Station Project No. 553076: ref. Date of completion etc

Follow Up Flag: Follow up
Flag Status: Flagged

Scripps Comfort Station

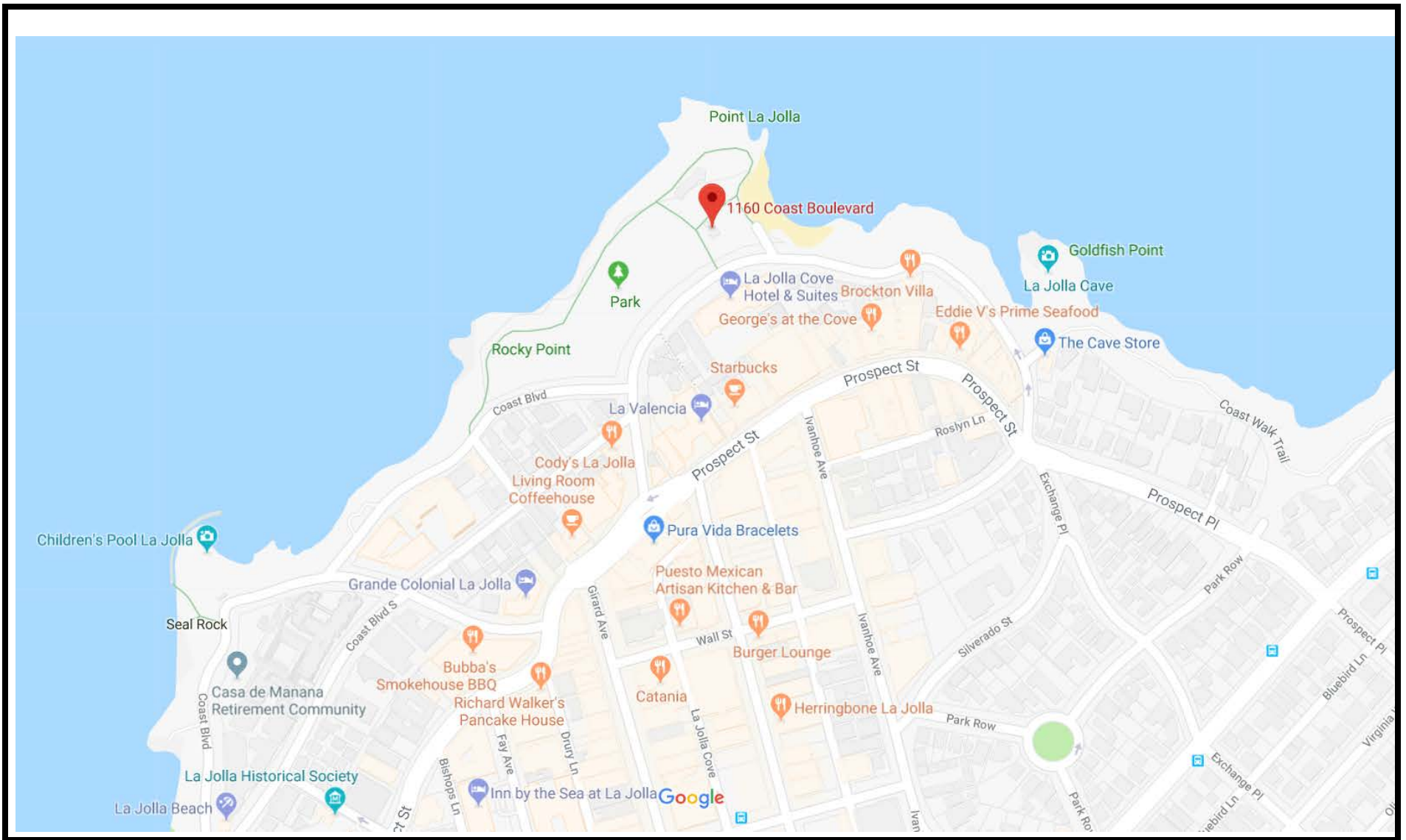
Heaven forbid that we have antiquated comfort stations. I would suggest that our roads are in that same category, rather antiquated.

Hopefully, we are not at that same stage “let them eat cake” like we were with the lifeguard towers.

Will someone at City Hall have the foresight to oversee the contract with the Scripps Park restroom replacement project? Or at least read the contract this time? I would like to know which portion of the project cost is covered with private money? That might be helpful to those of us who doubt our money is being spent carefully. For some reason I thought that our roads could have used that money instead of the Parks division. Silly me.

RESPONSE TO LETTER F

Comment is noted. However, the comment does not address the adequacy of the draft MND, therefore, no further response is required under CEQA.



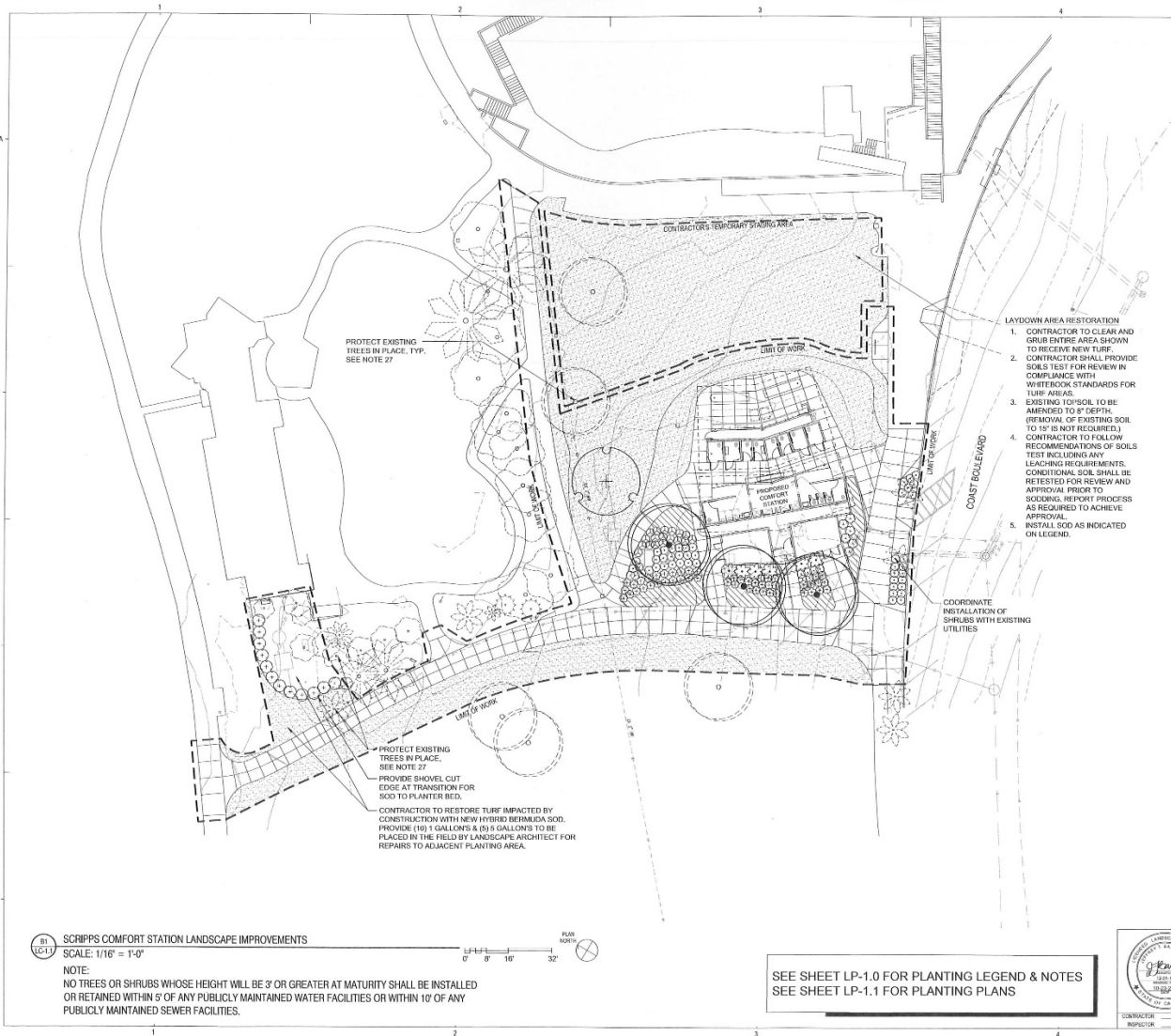
Vicinity Map

EB Scripps Comfort Station CDP SDP/Project No. 553076

Address: 1160 Coast Blvd., La Jolla, CA 92037

FIGURE

No. 1



PLANTING NOTES

1. EXISTING TREES TO REMAIN ON SITE WITHIN THE AREA OF WORK WILL BE PROTECTED IN PLACE. THE FOLLOWING PROTECTION MEASURES WILL BE PROVIDED:
 A. A BRIGHT YELLOW OR ORANGE TEMPORARY FENCE WILL BE PLACED AROUND EXISTING TREES AT THE DRIP LINE.
 B. DISCOURAGING TOPSOIL DISTURBANCE, VEHICULAR USE, AND MATERIAL STORAGE OF ANY KIND IS PROHIBITED WITHIN THE DRIP LINE.
 C. ANY NECESSARY WORK THAT NEEDS TO BE PERFORMED WITHIN THE DRIP LINE OF EXISTING TREES WILL NEED TO BE DONE WITH A CERTIFIED ARBORIST PRESENT THROUGHOUT THE WORK BEING PERFORMED IN THIS AREA.
 D. A TREE MAINTENANCE SCHEDULE WILL BE MAINTAINED AND DOCUMENTED DURING CONSTRUCTION.
 E. ALL DAMAGED TREES WILL BE REPLACED WITH ONE OF EQUAL OR GREATER SIZE WITH A MINIMUM REPLACEMENT TREE SIZE OF 4" DBH.

- LAYDOWN AREA RESTORATION**
1. CONTRACTOR TO CLEAR AND GRUB ENTIRE AREA SHOWN TO RECEIVE NEW TURF.
 2. CONTRACTOR SHALL PROVIDE SOILS TEST FOR REVIEW IN COMPLIANCE WITH WHITEBOOK STANDARDS FOR TURF AREAS.
 3. EXISTING TOPSOIL TO BE AMENDED TO 8" DEPTH (REMOVAL OF EXISTING SOIL TO 12" IS NOT REQUIRED.)
 4. CONTRACTOR TO FOLLOW RECOMMENDATIONS OF SOILS TEST INCLUDING ANY LEACHING REQUIREMENTS. CONDITIONAL SOIL SHALL BE RETESTED FOR REVIEW AND APPROVAL PRIOR TO SOILING. REPORT PROCESS AS REQUIRED TO ACHIEVE APPROVAL.
 5. INSTALL SOD AS INDICATED ON LEGEND.

PROTECT EXISTING TREES IN PLACE, TYP. SEE NOTE 27

PROTECT EXISTING TREES IN PLACE, TYP. SEE NOTE 27
 PROVIDE SHOVEL CUT EDGE AT TRANSITION FOR SOD TO PLANTER BED.
 CONTRACTOR TO RESTORE TURF IMPACTED BY CONSTRUCTION WITH NEW HYBRID BERBERMA SOD. PROVIDE 100 1 GALLONS & 50 5 GALLONS TO BE PLACED IN THE FIELD BY LANDSCAPE ARCHITECT FOR REPAIRS TO ADJACENT PLANTING AREA.

SCHMIDT DESIGN GROUP, INC.
 MAINTAINING ARCHITECTS PROFESSIONAL SERVICES
 ENVIRONMENTAL SUSTAINABILITY
 111 South Avenue, Suite 400, San Diego, CA 92101
 telephone (619) 441-4410 fax (619) 441-4290
 www.schmidtgroup.com
 LIC. CA 4138, 107 219, 47 3459
 805 814 1111

100% CD SUBMITTAL LP-1.1

**PLANS FOR THE CONSTRUCTION OF
 EB SCRIPPS PARK COMFORT STATION
 PLANTING PLAN**

CITY OF SAN DIEGO, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
 SHEET 12 OF 62 SHEETS

DESIGNED BY	DATE	APPROVED BY	DATE	PROJECT NO.	553076
FORNEY ENGINEER		DATE		PROJECT MANAGER	REGINA FERRERA
PROJECT DATE	BY	APPROVED	DATE	PROJECT NUMBER	250-5563
ORIGINAL	TYP	001		CDSY COORDINATOR	1880-6243
				CDSY COORDINATOR	39742-12-D
CONTRACTOR	DATE STARTED	DATE COMPLETED			

SEE SHEET LP-1.0 FOR PLANTING LEGEND & NOTES
 SEE SHEET LP-1.1 FOR PLANTING PLANS

SCRIPPS COMFORT STATION LANDSCAPE IMPROVEMENTS
 SCALE: 1/16" = 1'-0"

NOTE:
 NO TREES OR SHRUBS WHOSE HEIGHT WILL BE 3' OR GREATER AT MATURITY SHALL BE INSTALLED OR RETAINED WITHIN 5' OF ANY PUBLICLY MAINTAINED WATER FACILITIES OR WITHIN 10' OF ANY PUBLICLY MAINTAINED SEWER FACILITIES.



Site Plan
 EB Scripps Comfort Station CDP SDP/Project No. 553076
 Address: 1160 Coast Blvd., La Jolla, CA 92037

**FIGURE
 No. 2**

INITIAL STUDY CHECKLIST

1. Project title/Project number: EB Scripps Comfort Station CDP / 553076
2. Lead agency name and address: City of San Diego, 1222 First Avenue, MS-501, San Diego, California 92101
3. Contact person and phone number: Mark Brunette, Senior Planner / (619) 446-5379
4. Project location: The project is located in Elizabeth Browning Scripps Park near 1160 Coast Blvd., above La Jolla Cove, within the La Jolla Community Planning Area in the City of San Diego. La Jolla, CA 92037
5. Project Applicant/Sponsor's name and address: Elizabeth Schroth-Nichols, Project Engineer, City of San Diego Public Works Department. 525 B Street, Suite 750, San Diego, CA 92101. Contact: (619) 533-6649.
6. General/Community Plan designation: Parks, Open Space.
7. Zoning: OP-1-1 (Open Space-Park)
8. Description of project (Describe the whole action involved, including but not limited to, later phases of the project, and any secondary, support, or off-site features necessary for its implementation.):

A COASTAL DEVELOPMENT PERMIT and SITE DEVELOPMENT PERMIT (CIP-5) for the EB Scripps Comfort Station Replacement & Sewer Pump Station 33 demolition project. The existing comfort station servicing EB Scripps Park was built in 1967 and has aged and deteriorated. The project scope includes the removal and replacement of the existing comfort station in accordance with the community approved conceptual plans.

The new, approximately 2,700 square-foot (SF) comfort station, will include Americans with Disabilities Act (ADA) compliant new restrooms, toilet rooms and open shower facilities, and will be located in the same general location as the existing comfort station. The project also proposes approximately 2,000 SF of ornamental landscaping, and new, ADA compliant pathways from Coast Boulevard to the comfort station and the ocean walkway beyond.

The existing comfort station, servicing EB Scripps Park, contains a sewer pump station #33 for the La Jolla Bridge Club which the Public Utilities Department (PUD) will demolish, as well as surrounding concrete walkways and existing landscaping. A new private sewer lift pump station will be constructed serving the adjacent La Jolla Bridge Club with a force main connecting to a new manhole adjacent to the new comfort station. The new

comfort station sewer will tie into the new manhole, gravity feeding to the existing Coast Boulevard sewer main. The site is not included on any Government Code listing of hazardous waste sites.

9. Surrounding Land Uses and Setting:

The site is located in Ellen Browning Scripps Park approximately 130 feet northwest of the edge of La Jolla Cove and north of Coast Boulevard in the La Jolla Community of the City of San Diego. Nearly vertical cliff faces associated with coastal bluffs are located greater than 100 feet away from the project site on the north, east, and west. The project site is surrounded by hardscape walkways and landscape lawns, shrubs and large trees. The site is relatively flat and slopes downward to the north with a high of approximately 33 feet above mean sea level (AMSL) at the southern portion of the site to approximately 31 feet AMSL at the northern portion of the site. The Pacific Ocean is located to the west and north of the park. Existing multi-story residential and commercial buildings are situated to the east and south of the park across Coast Boulevard.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.):

None required.

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

Yes, two Native American Tribes traditionally and culturally affiliated with the project area have requested consultation with the City of San Diego pursuant to Public Resources Code section 21082.3 (c). Consultation has concluded, and the tribes concurred that the cultural resources report's recommendation, to implement archaeological and Native American monitoring during the project's ground disturbing activities, would mitigate potentially significant impacts to Tribal Cultural Resources to a less than significant level. No additional mitigation concerning this issue area or further consultation under Public Resources Code section 21080.3.1. is required.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | | | | |
|-------------------------------------|------------------------------------|--------------------------|-------------------------------|-------------------------------------|---------------------------------|
| <input type="checkbox"/> | Aesthetics | <input type="checkbox"/> | Greenhouse Gas Emissions | <input type="checkbox"/> | Population/Housing |
| <input type="checkbox"/> | Agriculture and Forestry Resources | <input type="checkbox"/> | Hazards & Hazardous Materials | <input type="checkbox"/> | Public Services |
| <input type="checkbox"/> | Air Quality | <input type="checkbox"/> | Hydrology/Water Quality | <input type="checkbox"/> | Recreation |
| <input type="checkbox"/> | Biological Resources | <input type="checkbox"/> | Land Use/Planning | <input type="checkbox"/> | Transportation/Traffic |
| <input checked="" type="checkbox"/> | Cultural Resources | <input type="checkbox"/> | Mineral Resources | <input checked="" type="checkbox"/> | Tribal Cultural Resources |
| <input type="checkbox"/> | Geology/Soils | <input type="checkbox"/> | Noise | <input type="checkbox"/> | Utilities/Service System |
| | | | | <input type="checkbox"/> | Mandatory Findings Significance |

DETERMINATION: (To be completed by Lead Agency)

On the basis of this initial evaluation:

- The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (a) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (b) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required.
- Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or (MITIGATED) NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or (MITIGATED) NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis.)
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
- 4) “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses”, as described in (5) below, may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or (mitigated) negative declaration. *Section 15063(c)(3)(D)*. In this case, a brief discussion should identify the following:
 - a. Earlier Analysis Used. Identify and state where they are available for review.
 - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c. Mitigation Measures. For effects that are “Less Than Significant With Mitigation Measures Incorporated”, describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a. The significance criteria or threshold, if any, used to evaluate each question; and
 - b. The mitigation measure identified, if any, to reduce the impact to less than significant.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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I) AESTHETICS – Would the project:

- a) Have a substantial adverse effect on a scenic vista?

Subarea E: Coast Boulevard – Visual Access in Appendix G of the La Jolla Community Plan identifies Coast Boulevard as a Scenic Roadway. A Scenic Roadway is defined as a partially obstructed view over private properties and down a public right-of-way. The Policies of the La Jolla Community Plan state that public views from identified vantage points (in Appendix G) to scenic vistas of the ocean shall be retained and enhanced for public use. City of San Diego CEQA Significance Determination Thresholds state that projects that would substantially block a view through a designated public view corridor as shown in an adopted community plan may result in a significant impact on visual quality and neighborhood character. Minor view blockages are not considered to meet this condition.

Due to the fact that the proposed comfort station would be in the same location and approximately the same footprint and height as the existing comfort station, no substantial blockage of the existing public view from Coast Boulevard toward the ocean would occur. Furthermore, existing mature trees and the existing shuffleboard building located in the vicinity of the comfort station currently block public views from Coast Boulevard toward the ocean. Therefore, the proposed project would result, at most, in minor view blockages and as a result would be considered a less than significant impact on existing designated public views. As such, no mitigation is required.

- b) Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Refer to I.a. The project is situated in an existing community park. No identified scenic resources such as trees, rock outcroppings, ~~historic buildings~~ and state scenic highways are located on, near, or adjacent to the project site. [The project site is a designated historic resource and is listed as HRB Site #915. However, the proposed project has been reviewed by City historic review staff and, as described under Initial Study section V.a, determined to be consistent with the U.S. Secretary of the Interior historic standards.](#) Therefore, ~~no impacts~~ [a less than significant impact](#) would result.

- c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Refer to I.a. Construction of the comfort station would be compatible and is permitted by the community plan and zoning designation and would not substantially degrade the existing visual character of the neighborhood in a general sense. Furthermore, the proposed project would replace an aged and deteriorated comfort station structure with a new comfort station that will incorporate a high quality contemporary architecture and building materials palette that is approximately the same bulk and scale as the existing comfort station, which enhance the visual character of the site and surroundings. Therefore, any impacts would be less than significant.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
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Development of the new comfort station would comply with City glare regulations. All permanent exterior lighting would be required to comply with City and Land Use Adjacency regulations to reduce potential adverse effects on neighboring properties. In addition, no substantial sources of light would be generated during project construction, as construction activities would occur during daylight hours. The project would also be subject to the City's Outdoor Lighting Regulations per Municipal Code Section 142.0740. As such, any impacts would be less than significant.

II. AGRICULTURAL AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. – Would the project:

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Converts Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

The project is located within an existing community park and is surrounded by the Pacific Ocean, and commercial and residential uses. The project site does not contain, and is not adjacent to, any lands identified as Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as show on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resource Agency. Therefore, the project would not result in the conversion of such lands to non-agricultural use. No significant impacts would occur, and no mitigation measures are required.

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Refer to response to II (a) above. There are no Williamson Act Contract lands on or within the vicinity of the project site. The project is consistent with the community plan land use designation and the underlying zone. The project does not conflict with any agricultural use. No impacts would result.

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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defined in Public Resources Code section 1220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

The project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. No designated forest land or timberland occur onsite. No impacts would result.

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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Refer to response II (c) above. Additionally, the project would not contribute to the conversion of any forested land to non-forest use, as surrounding land uses are built out commercial and residential uses. No impacts would result.

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| e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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No Impact, Refer to II (a) and (c) above.

III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations – Would the project:

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| a) Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
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The San Diego Air Pollution Control District (SDAPCD) and San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the San Diego Air Basin (SDAB). The County Regional Air Quality Strategy (RAQS) was initially adopted in 1991, and is updated on a triennial basis (most recently in 2009). The RAQS outlines the SDAPCD's plans and control measures designed to attain the state air quality standards for ozone (O3). The RAQS relies on information from the California Air Resources Board (CARB) and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in San Diego County and the cities in the county, to project future emissions and then determine the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by San Diego County and the cities in the county as part of the development of their general plans.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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The RAQS relies on SANDAG growth projections based on population, vehicle trends, and land use plans developed by the cities and by the county as part of the development of their general plans. As such, projects that propose development that is consistent with the growth anticipated by local plans would be consistent with the RAQS. However, if a project proposes development that is greater than that anticipated in the local plan and SANDAG's growth projections, the project might be in conflict with the RAQS and may contribute to a potentially significant cumulative impact on air quality.

The project encompasses the construction of new comfort station to replace an existing comfort station. The project is consistent with the General Plan, La Jolla Community Plan, and the underlying Zoning designation for park development. Therefore, the project would be Consistent at a sub-regional level with the underlying growth forecasts in the RAQS, and would not obstruct implementation of the RAQS. As such, any impacts would be less than significant.

- b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Refer to III.a. In addition, the proposed new comfort station would not involve any future actions that would generate a substantial increase in air quality emissions as a result of the proposed use (e.g. increased vehicle miles traveled) beyond what is generated by the existing comfort station. However, emissions would occur during the construction phase of the project and could increase the amount of harmful pollutants entering the air basin. The emissions would be minimal and would only occur temporarily during construction. When appropriate, dust suppression methods would be included as project components. As such, the project would not conflict with the region's air quality plan.

- c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

As described above, construction operations may temporarily increase the emissions of dust and other pollutants. However, construction emissions would be temporary and short-term in duration. Implementation of Best Management Practices (BMP's) would reduce potential impacts related to construction activities to a less than significant level. Therefore, the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under applicable federal or state ambient air quality standards. Impacts would be less than significant.

- d) Create objectionable odors affecting a substantial number of people?

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Operation of construction equipment and vehicles could generate odors associated with fuel combustion. However, these odors would dissipate into the atmosphere upon release and would only remain temporarily in proximity to the construction equipment and vehicles. Therefore, the project would not create odors affecting a substantial number of people.

IV. BIOLOGICAL RESOURCES – Would the project:

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| <p>a) Have substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?</p> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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The proposed comfort station would be constructed within an existing community park in the same location as the existing comfort station. The park consists of ornamental landscape and does not contain sensitive habitat or wetlands, nor is there sensitive habitat or wetlands adjacent to the project site. Therefore, the proposed project would have no adverse effects on sensitive or special status species.

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| <p>b) Have a substantial adverse effect on any riparian habitat or other community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?</p> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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Refer to response IV (a) above. There would be no impacts on any riparian habitat or other community identified by the wildlife agencies because none are present on or near the project site.

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| <p>c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?</p> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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Refer to response IV (a) above. There would be no impact on wetlands as none are present on or near the project site.

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| <p>d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or</p> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Refer to response IV (a) above. The project site is an existing park in an urbanized area, thus there are no wildlife corridors across the project site such as natural open space or waterways.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Refer to response IV (a) above. In addition, the project would not remove any trees that a protected by a tree preservation ordinance. Therefore, there would be no impact.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Refer to response IV (a) above. In addition, the project site is not located within or adjacent to the City's Multi-Habitat Planning Area (MHPA).

V. CULTURAL RESOURCES – Would the project:

a) Cause a substantial adverse change in the significance of an historical resource as defined in §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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The purpose and intent of the Historical Resources Regulations of the Land Development Code (Chapter 14, Division 3, and Article 2) is to protect, preserve and, where damaged, restore the historical resources of San Diego. The regulations apply to all proposed development within the City of San Diego when historical resources are present on the premises. Before approving discretionary projects, CEQA requires the Lead Agency to identify and examine the significant adverse environmental effects which may result from that project. A project that may cause a substantial adverse change in the significance of a historical resource may have a significant effect on the environment (Sections 15064.5(b) and 21084.1). A substantial adverse change is defined as demolition, destruction, relocation, or alteration activities, which would impair historical significance (Sections 15064.5(b)(1)). Any historical resource listed in, or eligible to be listed in the California Register of Historical Resources, including archaeological resources, is considered to be historically or culturally significant.

Archaeological Resources

The Archaeological Resources Survey for the Ellen Browning Scripps Park Comfort Station Replacement project, prepared by RECON, and dated June 28, 2017, determined that based on a CHRIS records search and a site survey, there are no known important archaeological sites recorded in the area of project effect. However the survey concludes that there is the potential for the project to adversely impact unknown archaeological deposits. Therefore, the survey report recommends that a qualified archaeologist and Native American monitor be present during all ground-disturbing activities to reduce potentially significant impact to archaeological

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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resources to a less than significant level. This monitoring requirement is included in the Mitigation Monitoring and Reporting Program in Section V of this MND.

Built Environment

Qualified City of San Diego Historical Resources staff reviewed the proposed comfort station replacement and determined that it is consistent with the U.S. Secretary of the Interior Standards for historical resources. Therefore, the proposed project would have a less than significant impact on built-environment historical resources.

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|---|--------------------------|-------------------------------------|--------------------------|--------------------------|
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
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Refer to response V (a) above.

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|---|--------------------------|-------------------------------------|--------------------------|--------------------------|
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
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According to the "Geology of the San Diego Metropolitan Area, California, La Jolla, 7.5 Minute Quadrangle Maps" (Kennedy and Peterson, 1975), and the project's geotechnical investigation (SCST, Inc. Engineering, September 16, 2016) the project site is underlain by Baypoint geologic formation at a depth of approximately 2.5 feet below existing grade. According to the City of San Diego CEQA Significance Determination Thresholds Baypoint Formation is highly sensitive for the discovery of paleontological resources.

Excavation for the proposed comfort station footings and sewer pump station replacement, and overexcavation recommended by the geotechnical investigation would result in excavation depths of up to 13 feet below existing grade into Baypoint Formation. City of San Diego Development Services Department paleontological resource sensitivity maps indicate there are four fossil recovery sites in Baypoint Formation in the vicinity of the project site.

The City's CEQA Significance Determination Thresholds state that when a highly sensitive formation may be disturbed by a project with excavation depths shallower than 10 feet, and this formation has been found to contain fossil remain in nearby areas, paleontological monitoring shall be required during all ground disturbing activities to reduce potentially significant impacts to paleontological resources to a less than significant level. Therefore, paleontological monitoring is required for the project as described in the Mitigation Monitoring and Reporting Program in Section V of this MND.

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|---|--------------------------|-------------------------------------|--------------------------|--------------------------|
| d) Disturb any human remains, including those interred outside of dedicated cemeteries? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
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Refer to response V (a) above. Although no known burial sites are known to be on the site, there is a potential for buried archaeological resources, including human remains, to be on-site. Please

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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see Section V of the MND and the Initial Study. Furthermore, there are no dedicated cemeteries within the project site.

VI. GEOLOGY AND SOILS – Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

<p>i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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According to the project’s geotechnical investigation (GI), the project site is not mapped within an Alquist-Priolo Earthquake Fault Zone and no active faults are known to underlie or project toward the site (Geotechnical Investigation La Jolla Cove Comfort Station Ellen Browning Scripps Park, SCST, Inc. Engineering, September 16, 2016). The GI states that the closest known fault to the project site is the potentially active Country Club Fault, located approximately 1,000 feet east of the project site. Based on this, the GI concludes that the probability of fault rupture at the site is considered low.

Furthermore, the project would be required to comply with seismic requirement of the California Building Code, utilize proper engineering design and utilization of standard construction practices, to be verified at the building permit stage, in order to ensure that potential impacts based on regional geologic hazards would remain less than significant and mitigation is not required.

<p>ii) Strong seismic ground shaking?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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The site could be affected by seismic activity as a result of earthquakes on major active faults located throughout the Southern California area. The project would utilize proper engineering design and utilization of standard construction practices, to be verified at the building permit stage, in order to ensure that potential impacts from regional geologic hazards would remain less than significant and mitigation is not required.

<p>iii) Seismic-related ground failure, including liquefaction?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Liquefaction occurs when loose, unconsolidated, water-laden soils are subject to shaking, causing the soils to lose cohesion. According to the project’s GI, due to the lack of shallow groundwater, and given the relatively dense nature of the materials beneath the site, the potential for liquefaction and dynamic settlement is considered low. Furthermore, the project would utilize proper engineering design and utilization of standard construction practices, to be verified at the building permit stage, in order to ensure that potential impacts from regional geologic hazards would remain less than significant and mitigation is not required.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Per the project’s GI the site is not mapped as being underlain by know landslides. The GI also states that site reconnaissance did not reveal indications of landslides or slope instabilities within or adjacent to the project site. The GI indicates that based on the distant proximity of the proposed improvements to the existing bluff faces and subsurface investigation, it is the GI consultant’s opinion that the proposed project improvements will not be compromised by existing bluff stability or diminish existing slope stability. Furthermore, the project would utilize proper engineering design and utilization of standard construction practices, to be verified at the building permit stage, in order to ensure that potential impacts from regional geologic hazards would remain less than significant and mitigation is not required.

b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Construction of the project would temporarily disturb onsite soils during grading activities, thereby increasing the potential for soil erosion to occur; however, the use of standard erosion control measures during construction would reduce potential impacts to a less than a significant level. Therefore, impacts would be less than significant, and no mitigation measures are required.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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According to the project’s GI, the City of San Diego Seismic Safety Study Maps (2008 Edition, Sheet 29) have designated the geology at the project location as being within the City of San Diego Geologic Hazard Categories 43, which is defined as generally unstable areas with unfavorable jointing and local high erosion. However, the GI states that, based on the distance (greater than 100 feet) of the proposed improvements to the existing bluff faces and a subsurface investigation, it is the GI consultant’s opinion that the proposed project improvements will not be compromised by the existing geologic conditions or diminish existing slope stability. Furthermore, with the utilization of proper engineering design and utilization of standard construction practices, to be verified at the building permit stage, in order to ensure that potential impacts from regional geologic hazards would remain less than significant and mitigation is not required.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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The project’s GI states that there are relatively dense materials beneath the project site. In addition, the GI recommends that existing old paralic deposits and fill material should be removed and replaced with suitable fill material, as identified in the GI, to provide foundation stability for the proposed comfort station. With the recommendations of this report incorporated

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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as “Project Design” features and given the fact the project would utilize proper engineering design and utilization of standard construction practices, to be verified at the building permit stage, potential impacts from regional geologic hazards would remain less than significant and mitigation is not required.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Not Applicable, as the project will be connected to the existing municipal sanitary sewer system.

VII. GREENHOUSE GAS EMISSIONS – Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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The construction of the project is consistent with the land use and designated zone and would not be expected to have a significant impact related to greenhouse gases.

In December 2015, the City adopted a Climate Action Plan (CAP) that outlines the actions that City will undertake to achieve its proportional share of State greenhouse gas (GHG) emission reductions. The purpose of the Climate Action Plan Consistency Checklist (Checklist) is to, in conjunction with the CAP, provide a streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to the California Environmental Quality Act (CEQA).

Analysis of GHG emissions and potential climate change impacts from new development is required under CEQA. The CAP is a plan for the reduction of GHG emissions in accordance with CEQA Guidelines Section 15183.5. Pursuant to CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b), a project’s incremental contribution to a cumulative GHG emissions effect may be determined not to be cumulatively considerable if it complies with the requirements of the CAP.

This Checklist is part of the CAP and contains measures that are required to be implemented on a project-by-project basis to ensure that the specified emissions targets identified in the CAP are achieved. Implementation of these measures would ensure that new development is consistent with the CAP’s assumptions for relevant CAP strategies toward achieving the identified GHG reduction targets. Projects that are consistent with the CAP as determined through the use of this Checklist may rely on the CAP for the cumulative impacts analysis of GHG emissions. Projects that are not consistent with the CAP must prepare a comprehensive project-specific analysis of GHG emissions, including quantification of existing and projected GHG emissions and incorporation of the measures in this Checklist to the extent feasible. Cumulative GHG impacts would be significant for any project that is not consistent with the CAP.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Per the project’s Climate Action Plan (CAP) Consistency Checklist (Elizabeth Schroth Nichols; City of San Diego Public Works Dept., PTS Review Cycle 3), the proposed project will have a less-than-significant impact on the environment, either directly or indirectly, because the proposed project is consistent with the existing General Plan and Community Plan land use and underlying zoning designations. The proposed project is located in a Park, Open Space community plan designation and is within the OP-1-1 (Open Space-Park) zone; and, therefore, meets the criteria for consistency with the General Plan, Community Plan land use and zoning designations. Furthermore, as demonstrated by Step 2 of the project’s CAP Checklist, the project will implement all applicable CAP consistency strategies.

With the incorporation of the applicable CAP consistency strategies as project design features, impacts from greenhouse gas emissions are considered less than significant, and no mitigation measures are required; however, the improvements as described within the checklist will be addressed within the project’s Condition of Approval.

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Refer to VII.a. Therefore, the project as proposed would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing greenhouse gas emissions. In addition, the project is consistent with the underlying zone and community plan designation.

VIII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:

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|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
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Construction of the project may require the use of hazardous materials (e.g. fuels, lubricants, solvents, etc.) which would require proper storage, handling, use and disposal. Construction specifications would include requirements for the contractor regarding where routine handling or disposal of hazardous materials could occur and what measures to implement in the event of a spill from equipment. Compliance with contract specifications would ensure that potential hazards during project construction are minimized to below a level of significance. Operation of the new comfort station does not require routine transport, use, or disposal of hazardous material beyond the use of cleaning supplies for the comfort station. All cleaning supplies will be used and disposed of in compliance with all applicable hazardous materials and health and safety laws, which would ensure that potential impacts are below a level of significance.

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|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
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Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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release of hazardous materials into the environment?

Refer to response VIII (a) above.

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| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

Please see response VII (a). The proposed comfort station would not emit hazardous emissions or involve handling of substantial hazardous waste or materials. Any impacts from the minor, occasional use of cleaning supplies will be reduced to below a level of significance through the compliance with manufacturers' specifications and applicable federal, state, and local health and safety regulations. As such, any impacts would be less than significant.

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

A hazardous waste site records search was completed in April 2018 using the Geotracker database (<https://geotracker.waterboards.ca.gov/>). The records search showed that no hazardous waste sites exist onsite or in the surrounding area. No impacts would result.

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two mile of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Construction of the replacement comfort station would not increase the potential to result in a safety hazard for people residing or working in areas surrounding the project site from an airport do to the fact that the site is several miles from the nearest airport and the one-story low scale design of the replacement comfort station is similar to the existing comfort station. Long-term operation of the fire station facility would not interfere with the operations of any airport, specifically MCAS Miramar. Therefore, no significant impacts would occur, and no mitigation measures are required.

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Refer to response VIII (e) above. The project site is not in proximity to any private airstrip. Therefore, no significant impacts will occur, and no mitigation measures are required.

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|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

The project would not impair the implementation of, or physically interfere with an adopted emergency response plan or evacuation plan because it proposes to replace an existing comfort station in a community park in the same location as an existing comfort station. Vehicular emergency access will not be affected by the project. The comfort station has adequate exits to allow egress from the building. Impacts would be less than significant.

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

The project site is surrounded by irrigated landscaping and there are no wildland areas in the vicinity of the project site. Therefore, the project would not expose people or structures to loss, risk or injury involving wildland fires.

IX. HYDROLOGY AND WATER QUALITY - Would the project:

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|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Violate any water quality standards or waste discharge requirements? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

The project would comply with all storm water quality standards during and after construction, and appropriate Best Management Practices (BMP's) will be utilized and provided for on-site. Implementation of these BMP's would preclude any violations of existing standards and discharge regulations. This will be addressed through the project's Conditions of Approval; therefore, impacts would be less than significant, and no mitigation measures are required.

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|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

The project does not require the construction of wells. The project is located within a developed residential and commercial neighborhood with existing public water supply infrastructure. The

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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proposed project would generate an incremental increase in water demand as it replaces an existing comfort station. As such, operation of the proposed project would not substantially deplete groundwater supplies. As such, any impacts would be less than significant, and no mitigation measures are required.

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|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

The project would not substantially alter the existing drainage pattern of the site or the area. Streams or rivers do not occur on or adjacent to the site. Although grading is proposed, the project would implement on-site BMPs, therefore ensuring that substantial erosion or siltation on- or off-site would not occur. Impacts would be less than significant, and no mitigation measures are required.

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|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

The project would implement low impact development principles ensuring that a substantial increase in the rate or amount of surface runoff resulting in flooding on or off-site, or a substantial alteration to the existing drainage pattern would not occur. Streams or rivers do not occur on or adjacent to the project site. Impacts would be less than significant, and no mitigation measures are required.

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|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| e) Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

The project would comply with all City storm water quality standards during and after construction. Appropriate BMP's would be implemented to ensure that water quality is not degraded; therefore, ensuring that the project runoff is directed to appropriate onsite drainage systems. As such, any impacts would be less than significant with incorporation of "Project Design" features addressing drainage. As such, no mitigation measures are required.

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|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| f) Otherwise substantially degrade water quality? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
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Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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The project would comply with all City storm water quality standards during and after construction. Appropriate BMP's would be implemented to ensure that water quality is not degraded. Impacts would be less than significant, and no mitigation measures are required.

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| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

The project site is not located within a 100-year flood hazard area or any other known flood area. No impacts would result.

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| h) Place within a 100-year flood hazard area, structures that would impede or redirect flood flows? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

See Response (IX) (g). No impacts would result.

X. LAND USE AND PLANNING – Would the project:

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

The proposed project would replace an existing comfort station in a community park with a new comfort station in the same location and approximately the same size. The comfort station is consistent with the underlying Park, Open Space community plans designation and Open Space-Park zoning designation. Therefore, no impacts would result.

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|--|--------------------------|-------------------------------------|--------------------------|--------------------------|
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|

See Response X (a). The project would obtain a Site Development Permit and Coastal Development permit as required by the City of San Diego Municipal Code.

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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See Responses to IV and X (a) and (b). The project is not located within or adjacent to the MHPA. No impacts would result.

XI. MINERAL RESOURCES – Would the project?

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

There are no known mineral resources located on the project site. This project site is located within a community park in a developed neighborhood which is not suitable for mineral extraction. Additionally, the site has never been used for mineral extraction. Therefore, the project would not result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the state. No impacts would occur.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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See response XI (a) above. The project site has not been delineated on a local general plan, specific plan, or other land use plan as a locally important mineral resource recovery site, and no such resources would be affected with project implementation. Therefore, no significant impacts were identified, and no mitigation measures are required.

XII. NOISE – Would the project result in:

a) Generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Short-term noise impacts would be associated with onsite grading, and construction activities for the project. Construction-related short-term noise levels would be higher than existing ambient noise levels in the project area, but would no longer occur once construction is completed. Sensitive receptors (e.g. residential uses) occur in the immediate area and may be temporarily affected by construction noise; however, construction activities would be required to comply with the construction hours specified in the City's Municipal Code (Section 59.5.0404, Construction Noise), which are intended to reduce potential adverse effects resulting from construction noise. The operation and use of the comfort station does not generate a substantial amount of noise beyond the noise levels that are currently generated by the existing comfort station.

Since the project would comply with the City's construction noise requirements and would generate minimal operational noise levels, potential noise impacts would be less than significant, and no mitigation measures are required.

b) Generation of, excessive ground borne vibration or ground borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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See response XII (a) above. Potential short-term effects from construction noise would be reduced through compliance with City restrictions. No significant long-term impacts would occur, and no mitigation measures are required.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

See response XII (a). The project would not significantly increase long-term (ambient) noise levels beyond what presently exists with the current comfort station. As such, a less than significant impact would result, and no mitigation measures are required.

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|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

See response XII (a). The project would not expose people to a substantial increase in temporary or periodic ambient noise levels. Construction noise would result during grading and construction activities, but would be temporary in nature. Construction-related noise impacts from the project would generally be higher than existing ambient noise levels in the project area, but would no longer occur once construction is completed. In addition, the project would be required to comply with the San Diego Municipal Code, Article 9.5, Noise Abatement and Control, with the exemption of short term impacts associated with emergency response activities. Implementation of these standard measures would reduce potential impacts from an increase in ambient noise level during construction to a less than significant level, and no mitigation measures are required.

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|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| e) For a project located within an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport would the project expose people residing or working in the area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

The project site is not located within two miles of a public airport or within an adopted airport land use plan. Therefore, the project would not expose people to excessive noise levels and effects would be less than significant.

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

The project site is not located within the vicinity of a private airstrip. As such no impacts would result, and no mitigation measures are required.

XIII. POPULATION AND HOUSING – Would the project:

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

No permanent residences or major infrastructure that could induce population growth are included as part of the proposed project. The proposed project consists of the replacement of an existing comfort station in a community park. The proposed project would serve an existing and forecasted population in the La Jolla area of the City of San Diego. Therefore, the proposed project would not induce substantial population growth. As such, no impacts would occur.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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There is no housing on the project site that would be displaced as none is present within the community park. As such, no impacts would occur.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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See response XIII (b) above. No impacts would result.

XIV. PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service rations, response times or other performance objectives for any of the public services:

i) Fire Protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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The project would not result in adverse physical impacts of fire facilities or adversely affect existing levels of fire services

ii) Police Protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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The project would not affect existing levels of police protection service and would not require the construction or expansion of a police facility.

iii) Schools	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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The project would not affect existing levels of public services and would not require the construction or expansion of a school facility.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
v) Parks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The proposed project would replace an older comfort station with a new comfort station, that has a high quality architectural design, within and existing park. Therefore, the project would actually improve the conditions in the existing park. As such, no adverse impacts would occur.

vi) Other public facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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The proposed Project would not increase the resident population generating a need for additional public facilities (example libraries, etc.). See Response XIV (a)(i) through (v) for additional details, As such, no impacts would occur.

XV. RECREATION

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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As discussed in Section XIV (a) Population and Housing, the proposed project consists of the construction of a replacement comfort station in an existing community park that serves existing and forecasted population in the City. No population growth would occur as a result of the proposed project. As such, the proposed project would not result in an increased demand for parks or recreational services. No impacts would occur.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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See response to XIV (a) above. The project replaces an existing comfort station with a new comfort station in the same location and approximately the same size. Therefore the comfort station facilities would not be expanded and no impacts would result.

XVI. TRANSPORTATION/TRAFFIC – Would the project?

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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freeways, pedestrian and bicycle paths, and mass transit?

Construction of the project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. The project would not affect any existing pedestrian or bicycle paths or any existing public streets. No impacts would result.

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| <p>b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?</p> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Refer to response XVI (a) above. The project would not conflict with any applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. No impacts would result since the project is the replacement of an existing comfort station of approximately the same size.

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| <p>c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?</p> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

The project would not result in a change to air traffic patterns. The project is not located within an adopted airport land use plan and is situated several miles from the nearest airport. Furthermore, the bulk and scale of the proposed one-story comfort station is substantially the same as the existing comfort station. No impacts would result.

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| <p>d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?</p> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

The project would not alter existing circulation patterns on Coast boulevard or nearby public streets. All construction would occur within the boundaries of the existing park. No impacts would result.

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| <p>e) Result in inadequate emergency access?</p> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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The project would not result in inadequate emergency access as it would not impact any public streets and would provide adequate pedestrian egress from the comfort station as required by the applicable building and fire codes. No impacts would result.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Refer to response XVI (a) above. Any impacts would be less than significant.

XVII. TRIBAL CULTURAL RESOURCES- Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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No tribal cultural resources as defined by Public Resources Code section 21074 have been identified on the project site. However, AB 52 consultation occurred between the City of San Diego and the Lipay Nation of Santa Ysabel and Jamul Indian Village of Kumeyaay Nation. The Kumeyaay representatives determined that the archaeological and native American monitoring that would be required for the project's ground disturbing activities, would reduce potentially significant impacts to Tribal Cultural Resources to a less than significant level. Required archaeological and Native American monitoring and mitigation is described in Section V of this MND.

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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No significant resources pursuant to subdivision (c) of Public Resources Code Section 5024.1 have been identified on the project site. However, potentially significant impacts to tribal cultural

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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resources would be mitigated to a less than significant level through archaeological and Native American monitoring during ground disturbing activities. Please see discussion in XVII (a) above.

XVIII. UTILITIES AND SERVICE SYSTEMS – Would the project:

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|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

Implementation of the project would not interrupt existing sewer or water service to the project site or other surrounding uses. Since the project would replace an existing comfort station with a new comfort station of approximately the same size, demand for water, or wastewater disposal or treatment is not expected to increase substantially, as compared to current conditions. Adequate services are already available to serve the project. Impacts would be less than significant, and no mitigation measures are required.

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|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

See response XVIII (a) above. Adequate services are available to serve the project site. Impacts would be less than significant, and no mitigation measures are required.

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

The project would not exceed the capacity of the existing storm water drainage systems and therefore, would not require construction of new or expansion of existing storm water drainage facilities of which could cause significant environmental effects. The project was reviewed by qualified City staff who determined that the existing facilities are adequately sized to accommodate the proposed development. Impacts would be less than significant, and no mitigation measures are required.

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

The project does not meet the CEQA significance threshold requiring the need for the project to prepare a water supply assessment. The existing comfort station currently receives water service from the City, and adequate services are available to serve the proposed comfort station without requiring new or expanded entitlements. Impacts would be less than significant.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Construction of the project would not adversely affect existing wastewater treatment services. Adequate services are available to serve the project site without requiring new or expanded entitlements. Impacts would be less than significant, and no mitigation measures are required.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------	-------------------------------------	--------------------------

Construction debris and waste would be generated from the construction of the project. All construction waste from the project site would be transported to an appropriate facility, which would have sufficient permitted capacity to accept that generated by the project. Long-term operation of the comfort station is not anticipated to generate a substantially larger amount of solid waste than the existing comfort station. Furthermore, the project would be required to comply with the City's Municipal Code requirement for diversion of both construction waste during the short-term, construction phase and solid waste during the long-term, operational phase. Impacts are considered to be less than significant, and no mitigation measures are required.

g) Comply with federal, state, and local statutes and regulation related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------	-------------------------------------	--------------------------

The project would comply with all Federal, State, and local statutes and regulations related to the handling and disposal of solid waste. The project would not result in a substantial increase in solid waste generation, beyond what is generated by the existing comfort station. All demolition activities would comply with any City of San Diego requirements for diversion of both construction waste during the demolition phase and solid waste during the long-term, operational phase. Impacts would be less than significant, and no mitigation measures are required.

XVIX. MANDATORY FINDINGS OF SIGNIFICANCE –

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
---	--------------------------	-------------------------------------	--------------------------	--------------------------

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
-------	--------------------------------	--	------------------------------	-----------

major periods of California history or prehistory?

As discussed in the Initial Study, the project site is not located within or adjacent to the MHPA and there are no sensitive biological resources on or immediately adjacent to the project site since it is an existing community park with ornamental vegetation. Therefore, the project would not significantly impact sensitive biological resources. With respect to cultural resources, mitigation measures for potential impacts to archaeological, tribal cultural, and paleontological resources are identified in Section V of the MND and would reduce potential impacts to a less than significant level. Historical built environmental resources would not be significantly impacted by the project as stated in the Initial Study.

- b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable futures projects)?
-

Based on the project’s consistency with the Climate Action Plan it would not result in cumulatively considerable environmental impacts relative to greenhouse gas emissions. Furthermore, when considering all potential environmental impacts of the proposed project, including impacts identified as less than significant in the Initial Study Checklist, together with the impacts of other present, past and reasonably foreseeable future projects, there would not be a cumulatively considerable impact on the environment with the mitigation and monitoring measures identified in Section V of the MND incorporated into the proposed project.

- c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?
-

The construction of a replacement comfort station is consistent with the community plan and zoning designations, and would be located in the same location and with the same operational characteristics as the existing comfort station. The project would comply with all applicable laws and municipal code regulations. Based on the analysis presented above, the project would not result in environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly. Impacts would be less than significant.

INITIAL STUDY CHECKLIST

REFERENCES

I. Aesthetics / Neighborhood Character

- City of San Diego General Plan.
- Community Plans: University Community Plan
- Site Specific Report: Proposed Site Exhibit, Architectural Drawings

II. Agricultural Resources & Forest Resources

- City of San Diego General Plan
- U.S. Department of Agriculture, Soil Survey - San Diego Area, California, Part I and II, 1973
- California Agricultural Land Evaluation and Site Assessment Model (1997)
- Site Specific Report:

III. Air Quality

- California Clean Air Act Guidelines (Indirect Source Control Programs) 1990
- Regional Air Quality Strategies (RAQS) - APCD
- Site Specific Report:

IV. Biology

- City of San Diego, Multiple Species Conservation Program (MSCP), Subarea Plan, 1997
- City of San Diego, MSCP, "Vegetation Communities with Sensitive Species and Vernal Pools" Maps, 1996
- City of San Diego, MSCP, "Multiple Habitat Planning Area" maps, 1997
- Community Plan - Resource Element
- California Department of Fish and Game, California Natural Diversity Database, "State and Federally-listed Endangered, Threatened, and Rare Plants of California," January 2001
- California Department of Fish & Game, California Natural Diversity Database, "State and Federally-listed Endangered and Threatened Animals of California," January 2001
- City of San Diego Land Development Code Biology Guidelines

___ Site Specific Report:

V. Cultural Resources (includes Historical Resources)

X City of San Diego Historical Resources Guidelines

X City of San Diego Archaeology Library

___ Historical Resources Board List

___ Community Historical Survey:

X Site Specific Report: Archaeological Resources Survey for the Ellen Browning Scripps Park Comfort Station Replacement/Pump Station 33 Demolition Project, San Diego, California, RECON Environmental, Inc. Carmen Zepeda-Herman, Project Archaeologist, June 28, 2017.

VI. Geology/Soils

X City of San Diego Seismic Safety Study

___ U.S. Department of Agriculture Soil Survey - San Diego Area, California, Part I and II, December 1973 and Part III, 1975

X Site Specific Report(s): Geotechnical Investigation La Jolla Cove Comfort Station Ellen Browning Scripps Park, SCST, Inc. Engineering, September 16, 2016; Response to Comments and Geotechnical Addendum La Jolla Cove Comfort Station Ellen Browning Scripps Park, SCST, Inc. Engineering, August 28, 2017.

VII. Greenhouse Gas Emissions

X Site Specific Report: Climate Action Plan (CAP) Consistency Checklist, EB Scripps Comfort Station Project, Elizabeth Schroth Nichols, City of San Diego Public Works Dept., DSD PTS Review Cycle 3 version.

VIII. Hazards and Hazardous Materials

___ San Diego County Hazardous Materials Environmental Assessment Listing

___ San Diego County Hazardous Materials Management Division

___ FAA Determination

___ State Assessment and Mitigation, Unauthorized Release Listing, Public Use Authorized

X State Water Resources Control Board GeoTracker: <http://geotracker.waterboards.ca.gov/>

Airport Land Use Compatibility Plan

Site Specific Report:

IX. Hydrology/Water Quality

Flood Insurance Rate Map (FIRM)

Federal Emergency Management Agency (FEMA), National Flood Insurance Program-Flood Boundary and Floodway Map

Clean Water Act Section 303(b) list, http://www.swrcb.ca.gov/tmdl/303d_lists.html

Site Specific Report:

X. Land Use and Planning

City of San Diego General Plan

Community Plans: University

Airport Land Use Compatibility Plan

City of San Diego Zoning Maps

FAA Determination

Site Specific Report:

XI. Mineral Resources

California Department of Conservation - Division of Mines and Geology, Mineral Land Classification

Division of Mines and Geology, Special Report 153 - Significant Resources Maps

Site Specific Report:

XII. Noise

City of San Diego General Plan

Community Plan

San Diego International Airport - Lindbergh Field CNEL Maps

Brown Field Airport Master Plan CNEL Maps

- Montgomery Field CNEL Maps
- San Diego Association of Governments - San Diego Regional Average Weekday Traffic Volumes
- San Diego Metropolitan Area Average Weekday Traffic Volume Maps, SANDAG
- Site Specific Report:

XIII. Paleontological Resources

- City of San Diego Paleontological Guidelines
- Deméré, Thomas A., and Stephen L. Walsh, "Paleontological Resources City of San Diego," Department of Paleontology San Diego Natural History Museum, 1996
- Kennedy, Michael P., and Gary L. Peterson, "Geology of the San Diego Metropolitan Area, California. Del Mar, La Jolla, Point Loma, La Mesa, Poway, and SW 1/4 Escondido 7 1/2 Minute Quadrangles," California Division of Mines and Geology Bulletin 200, Sacramento, 1975
- Kennedy, Michael P., and Siang S. Tan, "Geology of National City, Imperial Beach and Otay Mesa Quadrangles, Southern San Diego Metropolitan Area, California," Map Sheet 29, 1977
- Site Specific Report:

XIV. Population / Housing

- City of San Diego General Plan
- Community Plans: University
- Series 11/Series 12 Population Forecasts, SANDAG
- Other:

XV. Public Services

- City of San Diego General Plan
- Community Plans: University

XVI. Recreational Resources

- City of San Diego General Plan

- Community Plans: University
- Department of Park and Recreation
- City of San Diego - San Diego Regional Bicycling Map
- Additional Resources:

XVII. Transportation / Circulation

- City of San Diego General Plan
- Community Plans: Community Plans: University
- San Diego Metropolitan Area Average Weekday Traffic Volume Maps, SANDAG
- San Diego Region Weekday Traffic Volumes, SANDAG
- Site Specific Report:

XVIII. Utilities

- City of San Diego General Plan
- Site Specific Report:

XIX. Water Conservation

- Sunset Magazine, New Western Garden Book, Rev. ed. Menlo Park, CA: Sunset Magazine

Created: REVISED - October 11, 2013

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.)

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- 3.2 **Temporary Water Use:** Water provided to the customer for no longer than twelve (12) months.
- 3.3 **Backflow Preventor:** A Reduced Pressure Principal Assembly connected to the outlet side of a Fire Hydrant Meter.

4. **POLICY**

- 4.1 The Water Department shall collect a deposit from every customer requiring a fire hydrant meter and appurtenances prior to providing the meter and appurtenances (see Section 7.1 regarding the Fees and Deposit Schedule). The deposit is refundable upon the termination of use and return of equipment and appurtenances in good working condition.
- 4.2 Fire hydrant meters will have a 2 ½" swivel connection between the meter and fire hydrant. The meter shall not be connected to the 4" port on the hydrant. All Fire Hydrant Meters issued shall have a Reduced Pressure Principle Assembly (RP) as part of the installation. Spanner wrenches are the only tool allowed to turn on water at the fire hydrant.
- 4.3 The use of private hydrant meters on City hydrants is prohibited, with exceptions as noted below. All private fire hydrant meters are to be phased out of the City of San Diego. All customers who wish to continue to use their own fire hydrant meters must adhere to the following conditions:
 - a. Meters shall meet all City specifications and American Water Works Association (AWWA) standards.
 - b. Customers currently using private fire hydrant meters in the City of San Diego water system will be allowed to continue using the meter under the following conditions:
 - 1. The customer must submit a current certificate of accuracy and calibration results for private meters and private backflows annually to the City of San Diego, Water Department, Meter Shop.

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2. The meter must be properly identifiable with a clearly labeled serial number on the body of the fire hydrant meter. The serial number shall be plainly stamped on the register lid and the main casing. Serial numbers shall be visible from the top of the meter casing and the numbers shall be stamped on the top of the inlet casing flange.
3. All meters shall be locked to the fire hydrant by the Water Department, Meter Section (see Section 4.7).
4. All meters shall be read by the Water Department, Meter Section (see Section 4.7).
5. All meters shall be relocated by the Water Department, Meter Section (see Section 4.7).
6. These meters shall be tested on the anniversary of the original test date and proof of testing will be submitted to the Water Department, Meter Shop, on a yearly basis. If not tested, the meter will not be allowed for use in the City of San Diego.
7. All private fire hydrant meters shall have backflow devices attached when installed.
8. The customer must maintain and repair their own private meters and private backflows.
9. The customer must provide current test and calibration results to the Water Department, Meter Shop after any repairs.
10. When private meters are damaged beyond repair, these private meters will be replaced by City owned fire hydrant meters.

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11. When a private meter malfunctions, the customer will be notified and the meter will be removed by the City and returned to the customer for repairs. Testing and calibration results shall be given to the City prior to any re-installation.
 12. The register shall be hermetically sealed straight reading and shall be readable from the inlet side. Registration shall be in hundred cubic feet.
 13. The outlet shall have a 2 ½ “National Standards Tested (NST) fire hydrant male coupling.
 14. Private fire hydrant meters shall not be transferable from one contracting company to another (i.e. if a company goes out of business or is bought out by another company).
- 4.4 All fire hydrant meters and appurtenances shall be installed, relocated and removed by the City of San Diego, Water Department. All City owned fire hydrant meters and appurtenances shall be maintained by the City of San Diego, Water Department, Meter Services.
- 4.5 If any fire hydrant meter is used in violation of this Department Instruction, the violation will be reported to the Code Compliance Section for investigation and appropriate action. Any customer using a fire hydrant meter in violation of the requirements set forth above is subject to fines or penalties pursuant to the Municipal Code, Section 67.15 and Section 67.37.
- 4.6 Conditions and Processes for Issuance of a Fire Hydrant Meter**
- Process for Issuance
- a. Fire hydrant meters shall only be used for the following purposes:
 1. Temporary irrigation purposes not to exceed one year.

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2. Construction and maintenance related activities (see Tab 2).
 - b. No customer inside or outside the boundaries of the City of San Diego Water Department shall resell any portion of the water delivered through a fire hydrant by the City of San Diego Water Department.
 - c. The City of San Diego allows for the issuance of a temporary fire hydrant meter for a period not to exceed 12 months (365 days). An extension can only be granted in writing from the Water Department Director for up to 90 additional days. A written request for an extension by the consumer must be submitted at least 30 days prior to the 12 month period ending. No extension shall be granted to any customer with a delinquent account with the Water Department. No further extensions shall be granted.
 - d. Any customer requesting the issuance of a fire hydrant meter shall file an application with the Meter Section. The customer must complete a "Fire Hydrant Meter Application" (Tab 1) which includes the name of the company, the party responsible for payment, Social Security number and/or California ID, requested location of the meter (a detailed map signifying an exact location), local contact person, local phone number, a contractor's license (or a business license), description of specific water use, duration of use at the site and full name and address of the person responsible for payment.
 - e. At the time of the application the customer will pay their fees according to the schedule set forth in the Rate Book of Fees and Charges, located in the City Clerk's Office. All fees must be paid by check, money order or cashiers check, made payable to the City Treasurer. Cash will not be accepted.
 - f. No fire hydrant meters shall be furnished or relocated for any customer with a delinquent account with the Water Department.
 - g. After the fees have been paid and an account has been created, the

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meter shall be installed within 48 hours (by the second business day). For an additional fee, at overtime rates, meters can be installed within 24 hours (within one business day).

4.7 Relocation of Existing Fire Hydrant Meters

- a. The customer shall call the Fire Hydrant Meter Hotline (herein referred to as “Hotline”), a minimum of 24 hours in advance, to request the relocation of a meter. A fee will be charged to the existing account, which must be current before a work order is generated for the meter’s relocation.
- b. The customer will supply in writing the address where the meter is to be relocated (map page, cross street, etc). The customer must update the original Fire Hydrant Meter Application with any changes as it applies to the new location.
- c. Fire hydrant meters shall be read on a monthly basis. While fire hydrant meters and backflow devices are in service, commodity, base fee and damage charges, if applicable, will be billed to the customer on a monthly basis. If the account becomes delinquent, the meter will be removed.

4.8 Disconnection of Fire Hydrant Meter

- a. After ten (10) months a “Notice of Discontinuation of Service” (Tab 3) will be issued to the site and the address of record to notify the customer of the date of discontinuance of service. An extension can only be granted in writing from the Water Department Director for up to 90 additional days (as stated in Section 4.6C) and a copy of the extension shall be forwarded to the Meter Shop Supervisor. If an extension has not been approved, the meter will be removed after twelve (12) months of use.
- b. Upon completion of the project the customer will notify the Meter Services office via the Hotline to request the removal of the fire hydrant meter and appurtenances. A work order will be generated

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for removal of the meter.

- c. Meter Section staff will remove the meter and backflow prevention assembly and return it to the Meter Shop. Once returned to the Meter Shop the meter and backflow will be tested for accuracy and functionality.
- d. Meter Section Staff will contact and notify Customer Services of the final read and any charges resulting from damages to the meter and backflow or its appurtenance. These charges will be added on the customer's final bill and will be sent to the address of record. Any customer who has an outstanding balance will not receive additional meters.
- e. Outstanding balances due may be deducted from deposits and any balances refunded to the customer. Any outstanding balances will be turned over to the City Treasurer for collection. Outstanding balances may also be transferred to any other existing accounts.

5. **EXCEPTIONS**

- 5.1 Any request for exceptions to this policy shall be presented, in writing, to the Customer Support Deputy Director, or his/her designee for consideration.

6. **MOBILE METER**

- 6.1 Mobile meters will be allowed on a case by case basis. All mobile meters will be protected by an approved backflow assembly and the minimum requirement will be a Reduced Pressure Principal Assembly. The two types of Mobile Meters are vehicle mounted and floating meters. Each style of meters has separate guidelines that shall be followed for the customer to retain service and are described below:

- a) **Vehicle Mounted Meters:** Customer applies for and receives a City owned Fire Hydrant Meter from the Meter Shop. The customer mounts the meter on the vehicle and brings it to the Meter Shop for

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inspection. After installation is approved by the Meter Shop the vehicle and meter shall be brought to the Meter Shop on a monthly basis for meter reading and on a quarterly basis for testing of the backflow assembly. Meters mounted at the owner's expense shall have the one year contract expiration waived and shall have meter or backflow changed if either fails.

b) **Floating Meters:** Floating Meters are meters that are not mounted to a vehicle. **(Note: All floating meters shall have an approved backflow assembly attached.)** The customer shall submit an application and a letter explaining the need for a floating meter to the Meter Shop. The Fire Hydrant Meter Administrator, after a thorough review of the needs of the customer, (i.e. number of jobsites per day, City contract work, lack of mounting area on work vehicle, etc.), may issue a floating meter. At the time of issue, it will be necessary for the customer to complete and sign the "Floating Fire Hydrant Meter Agreement" which states the following:

- 1) The meter will be brought to the Meter Shop at 2797 Caminito Chollas, San Diego on the third week of each month for the monthly read by Meter Shop personnel.
- 2) Every other month the meter will be read and the backflow will be tested. This date will be determined by the start date of the agreement.

If any of the conditions stated above are not met the Meter Shop has the right to cancel the contract for floating meter use and close the account associated with the meter. The Meter Shop will also exercise the right to refuse the issuance of another floating meter to the company in question.

Any Fire Hydrant Meter using reclaimed water shall not be allowed use again with any potable water supply. The customer shall incur the cost of replacing the meter and backflow device in this instance.

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7. **FEE AND DEPOSIT SCHEDULES**

7.1 **Fees and Deposit Schedules:** The fees and deposits, as listed in the Rate Book of Fees and Charges, on file with the Office of the City Clerk, are based on actual reimbursement of costs of services performed, equipment and materials. These deposits and fees will be amended, as needed, based on actual costs. Deposits, will be refunded at the end of the use of the fire hydrant meter, upon return of equipment in good working condition and all outstanding balances on account are paid. Deposits can also be used to cover outstanding balances.

All fees for equipment, installation, testing, relocation and other costs related to this program are subject to change without prior notification. The Mayor and Council will be notified of any future changes.

8. **UNAUTHORIZED USE OF WATER FROM A HYDRANT**

8.1 Use of water from any fire hydrant without a properly issued and installed fire hydrant meter is theft of City property. Customers who use water for unauthorized purposes or without a City of San Diego issued meter will be prosecuted.

8.2 If any unauthorized connection, disconnection or relocation of a fire hydrant meter, or other connection device is made by anyone other than authorized Water Department personnel, the person making the connection will be prosecuted for a violation of San Diego Municipal Code, Section 67.15. In the case of a second offense, the customer's fire hydrant meter shall be confiscated and/or the deposit will be forfeited.

8.3 Unauthorized water use shall be billed to the responsible party. Water use charges shall be based on meter readings, or estimates when meter readings are not available.

8.4 In case of unauthorized water use, the customer shall be billed for all applicable charges as if proper authorization for the water use had been obtained, including but not limited to bi-monthly service charges, installation charges and removal charges.

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- 8.5 If damage occurs to Water Department property (i.e. fire hydrant meter, backflow, various appurtenances), the cost of repairs or replacements will be charged to the customer of record (applicant).

Water Department Director

- Tabs: 1. Fire Hydrant Meter Application
2. Construction & Maintenance Related Activities With No Return To Sewer
3. Notice of Discontinuation of Service

APPENDIX

Administering Division: Customer Support Division

Subject Index: Construction Meters
Fire Hydrant
Fire Hydrant Meter Program
Meters, Floating or Vehicle Mounted
Mobile Meter
Program, Fire Hydrant Meter

Distribution: DI Manual Holders



Application for Fire Hydrant Meter (EXHIBIT A)

(For Office Use Only)

NS REQ	FAC#
DATE	BY

METER SHOP (619) 527-7449

Meter Information

Application Date	Requested Install Date:
------------------	-------------------------

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: <small>(PERSON IN ACCOUNTS PAYABLE)</small>			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: ()

<input type="checkbox"/> City Meter	<input type="checkbox"/> 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 WITH SPEND CURVE

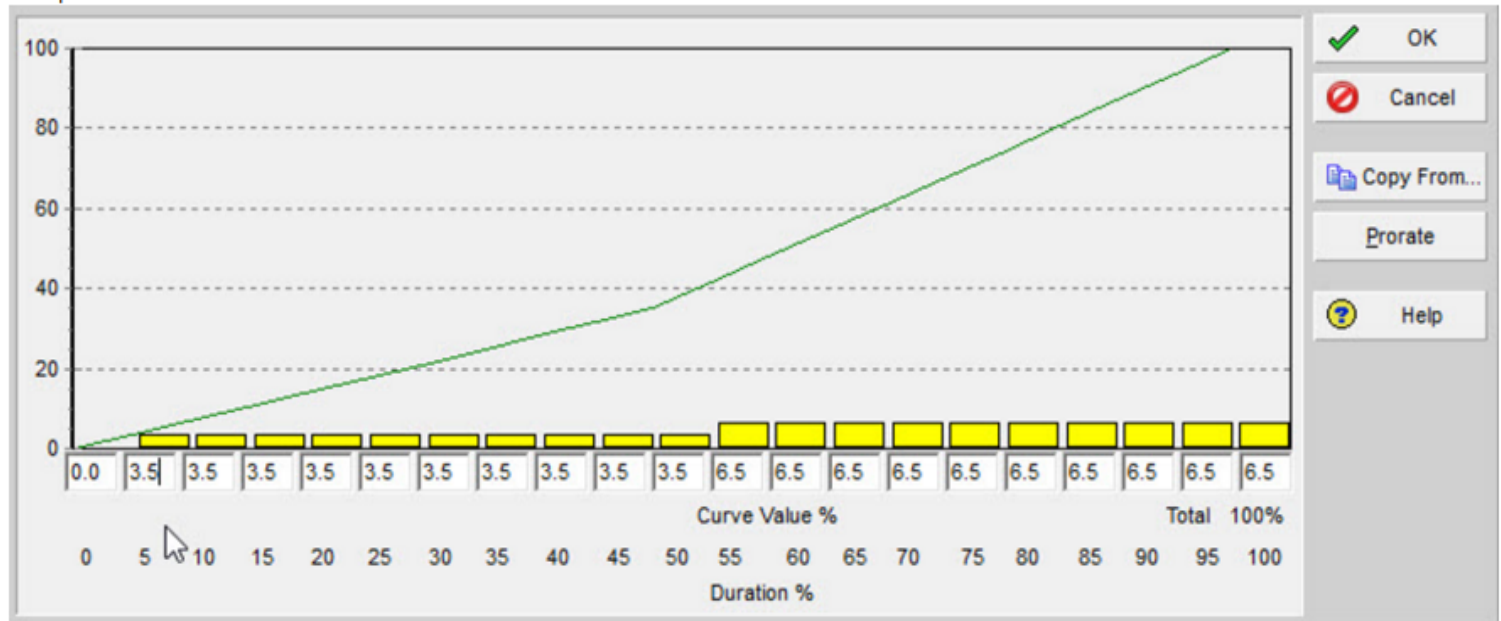
Sample Project Spend Curve

Sample Date Entries Required

Incremental Curve Value
Duration % Increment

0.0%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
0%	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	100%

Sample Screenshot from Primavera P6



APPENDIX E
LOCATION MAP

PREDESIGN LOCATION MAP EB SCRIPPS PARK COMFORT STATION REPLACEMENT



PROJECT MANAGER
Elizabeth Schroth-Nichols
619-533-6649

SENIOR ENGINEER
George Freiha
619-533-7749

PROJECT ENGINEER
Tamara Miller
619-235-1968



Legend

 **Project Location (New Comfort Station)**



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PREDESIGN LOCATION MAP SEWER PUMP STATION 33 DEMOLITION



PROJECT MANAGER
Elizabeth Schroth-Nichols
619-533-6649

SENIOR ENGINEER
George Freiha
619-533-7749

PROJECT ENGINEER
Tamara Miller
619-235-1968



Legend

- New Pump
- New Force Main
- New Sewer Line
- New MH
- Existing Sewer Main
- Existing MH #13



COMMUNITY NAME: LA JOLLA

COUNCIL DISTRICT: 01

SAP ID: B-16104

Date: December 9, 2015
EB Scripps Park Comfort Station
Appendix E - Location Map



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APPENDIX F
HAZARDOUS WASTE LABEL AND FORMS

HAZARDOUS WASTE

STATE AND FEDERAL LAW PROHIBITS IMPROPER DISPOSAL
IF FOUND, CONTACT THE NEAREST POLICE, OR PUBLIC SAFETY
AUTHORITY, OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY
OR THE CALIFORNIA DEPARTMENT OF HEALTH SERVICES

GENERATOR NAME _____

ADDRESS _____ 24 HR. PHONE () _____

CITY _____ STATE _____ ZIP _____

EPA ID NO. _____ MANIFEST DOCUMENT NO. _____

EPA WASTE NO. _____ CA WASTE NO. _____ ACCUMULATION START DATE _____ / ____ / ____

CONTENTS, COMPOSITION _____

PROPER DOT SHIPPING NAME _____

TECHNICAL NAME (S) _____

UN/NA NO. WITH PREFIX _____

PHYSICAL STATE HAZARDOUS PROPERTIES FLAMMABLE TOXIC
 SOLID LIQUID CORROSIVE REACTIVE OTHER _____

HANDLE WITH CARE!
CONTAINS HAZARDOUS OR TOXIC WASTES

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?	<input type="checkbox"/>	<input type="checkbox"/>
2. Did anyone, other than employees in the immediate area of the release, evacuate?	<input type="checkbox"/>	<input type="checkbox"/>
3. Did the release cause off-site damage to public or private property?	<input type="checkbox"/>	<input type="checkbox"/>
4. Is the release greater than or equal to a reportable quantity (RQ)?	<input type="checkbox"/>	<input type="checkbox"/>
5. Was there an uncontrolled or unpermitted release to the air?	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>
7. Will control, containment, decontamination, and/or clean up require the assistance of federal, state, county, or municipal response elements?	<input type="checkbox"/>	<input type="checkbox"/>
8. Was the release or threatened release involving an unknown material or contains an unknown hazardous constituent?	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>

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 <input type="checkbox"/> Yes <input type="checkbox"/> 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?: <input type="checkbox"/> Yes <input type="checkbox"/> 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 <input type="checkbox"/> GAL <input type="checkbox"/> LBS <input type="checkbox"/> FT ³
Chemical	Quantity <input type="checkbox"/> GAL <input type="checkbox"/> LBS <input type="checkbox"/> FT ³
Chemical	Quantity <input type="checkbox"/> GAL <input type="checkbox"/> LBS <input type="checkbox"/> 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
D	CHECK IF CHEMICAL IS LISTED IN 40 CFR 355, APPENDIX A <input type="checkbox"/>	CHECK IF RELEASE REQUIRES NOTIFICATION UNDER 42 U.S.C. Section 9603 (a) <input type="checkbox"/>	
D	PHYSICAL STATE CONTAINED <input type="checkbox"/> SOLID <input type="checkbox"/> LIQUID <input type="checkbox"/> GAS	PHYSICAL STATE RELEASED <input type="checkbox"/> SOLID <input type="checkbox"/> LIQUID <input type="checkbox"/> GAS	QUANTITY RELEASED
D	ENVIRONMENTAL CONTAMINATION <input type="checkbox"/> AIR <input type="checkbox"/> WATER <input type="checkbox"/> GROUND <input type="checkbox"/> 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)		
F	<input type="checkbox"/> ACUTE OR IMMEDIATE (explain) _____		
F	<input type="checkbox"/> CHRONIC OR DELAYED (explain) _____		
F	<input type="checkbox"/> 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.		
I	REPORTING FACILITY REPRESENTATIVE (print or type) _____		
I	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
SAMPLE OF PUBLIC NOTICE



CONSTRUCTION NOTICE

PROJECT TITLE

Work on your street will begin within one week to replace the existing water mains servicing your community.

The work will consist of:

- Saw-cutting and trench work on Ingulf Street from Morena Boulevard to Galveston Street to install new water mains, water laterals and fire hydrants.
• Streets where trenching takes place will be resurfaced and curb ramps will be upgraded to facilitate access for persons with disabilities where required.
• This work is anticipated to be complete in your community by December 2016.

How your neighborhood may be impacted:

- Water service to some properties during construction will be provided by a two-inch highline pipe that will run along the curb. To report a highline leak call 619-515-3525.
• Temporary water service disruptions are planned. If planned disruptions impact your property, you will receive advance notice.
• Parking restrictions will exist because of the presence of construction equipment and materials.
• "No Parking" signs will be displayed 72 hours in advance of the work.
• Cars parked in violation of signs will be TOWED.

Hours and Days of Operation:

Monday through Friday X:XX AM to X:XX PM.

City of San Diego Contractor:

Company Name, XXX-XXX-XXXX



CONSTRUCTION NOTICE

PROJECT TITLE

Work on your street will begin within one week to replace the existing water mains servicing your community.

The work will consist of:

- Saw-cutting and trench work on Ingulf Street from Morena Boulevard to Galveston Street to install new water mains, water laterals and fire hydrants.
• Streets where trenching takes place will be resurfaced and curb ramps will be upgraded to facilitate access for persons with disabilities where required.
• This work is anticipated to be complete in your community by December 2016.

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- Water service to some properties during construction will be provided by a two-inch highline pipe that will run along the curb. To report a highline leak call 619-515-3525.
• Temporary water service disruptions are planned. If planned disruptions impact your property, you will receive advance notice.
• Parking restrictions will exist because of the presence of construction equipment and materials.
• "No Parking" signs will be displayed 72 hours in advance of the work.
• Cars parked in violation of signs will be TOWED.

Hours and Days of Operation:

Monday through Friday X:XX AM to X:XX PM.

City of San Diego Contractor:

Company Name, XXX-XXX-XXXX

To contact the City of San Diego: SD Public Works 619-533-4207 | engineering@sandiego.gov | sandiego.gov/CIP

To contact the City of San Diego: SD Public Works 619-533-4207 | engineering@sandiego.gov | sandiego.gov/CIP

APPENDIX H
GEOTECHNICAL INVESTIGATION

**GEOTECHNICAL INVESTIGATION
LA JOLLA COVE COMFORT STATION
(WBS S-15035)
ELLEN BAKER SCRIPPS PARK
LA JOLLA, CALIFORNIA**

PREPARED FOR:

**MR. BILL MOSHER
ARCHITECTS MOSHER DREW
4206 WEST POINT LOMA BOULEVARD, SUITE 200
SAN DIEGO, CALIFORNIA 92011**

PREPARED BY:

**SCST, INC.
6280 RIVERDALE STREET
SAN DIEGO, CALIFORNIA 92120**

Providing Professional Engineering Services Since 1959

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September 16, 2016
Revised: June 28, 2017

SCST No. 160226P3.2
Report No. 1R

Mr. Bill Mosher
Architects Mosher Drew
4206 West Point Loma Boulevard, Suite 200
San Diego, California 92011

Subject: GEOTECHNICAL INVESTIGATION
LA JOLLA COVE COMFORT STATION
(WBS S-15035)
ELLEN BAKER SCRIPPS PARK
LA JOLLA, CALIFORNIA

Dear Mr. Mosher:

This report presents the results of the subsurface investigation SCST, Inc. (SCST) performed for the subject project. We understand that the project will consist of the design and construction of a new comfort station to replace the existing facility just northwest of La Jolla Cove in Ellen Baker Scripps Park. This investigation consisted of performing a field investigation, logging the subsurface conditions, collecting samples of the soils encountered, testing selected soil samples in our laboratory, developing conclusions and recommendations regarding the geotechnical aspects of the project, and preparing this report.

1 SITE DESCRIPTION

The site is located in Ellen Browning Scripps Park approximately 130 feet northwest of the edge of La Jolla Cove and north of Coast Boulevard in the La Jolla community of the city of San Diego. Figure 1 presents the site location map. The park was developed sometime prior to 1953. Grading of the site and surrounding area likely involved minor cuts and fill to create a level building pad at the top of an existing bluff. Nearly vertical cliff faces associated with coastal bluffs are located greater than 100 feet away from the project site on the north, east, and west. The bluff faces have a maximum height of about 40 feet. The project site is surrounded by hardscape walkways and landscaped lawns, shrubs and large trees. The site slopes to the north with a high of approximately 33 feet at the southern portion of the site to approximately 31 feet at the northern portion of the site.

2 FIELD EXPLORATION

The subsurface conditions were explored by excavating two borings to depths of between about 10 and 11 feet below the existing ground surface using a tripod-mounted drill rig equipped with

a solid-flight auger. Additionally, two borehole percolation tests were performed at the site. One borehole percolation test (I-2) was performed in the boring B-1 excavation. The second borehole percolation test (I-1) was performed approximately 5 feet north of boring B-2. An SCST geologist logged the borings and collected samples of the materials encountered for examination and laboratory testing. Figure 2 shows the approximate boring and percolation test locations. Logs of the borings are presented in Appendix I. Soils are classified according to the Unified Soil Classification System illustrated on Figure I-1.

3 SUBSURFACE CONDITIONS

The material encountered in the exploratory borings consists of fill, old paralic deposits, and sandstone associated with the Cretaceous-age Point Loma Formation. The fill was encountered between about 2 ½ to 3 ½ feet thick and consists of medium dense silty sand. The old paralic deposits are composed of medium dense clayey sand and was encountered about 3 feet in thickness. The fill and old paralic deposits are underlain by the Point Loma Formation. The Point Loma Formation, at the subject site, consists of a medium cleanse to very dense, fine grained, massive, intensely weathered sandstone. Groundwater was not encountered in the borings. However, groundwater levels may fluctuate in the future due to rainfall, irrigation, broken pipes, or changes in site drainage. Because groundwater rise or seepage is difficult to predict, such conditions are typically mitigated if and when they occur.

4 GEOLOGIC HAZARDS

A review of the City of San Diego Seismic Safety Study Geologic Hazards and Fault Maps (2008), Sheet 29 indicates the site is within Geologic Hazards Category 43, which is defined as generally unstable areas with unfavorable jointing and local high erosion. Based on the distance (greater than 100 feet) of the proposed improvements to the existing bluff faces and our subsurface investigation, it is our opinion that the proposed improvements will not be compromised by the existing geologic conditions or diminish existing slope stability.

4.1 FAULTING AND SURFACE RUPTURE

The closest known fault is the potentially active Country Club Fault located about 1,000 feet east of the site. The site is not mapped within an Alquist-Priolo Earthquake Fault Zone. No active faults are known to underlie or project toward the site. The probability of fault rupture at the site is considered low.

4.2 LIQUEFACTION AND DYNAMIC SETTLEMENT

Liquefaction occurs when loose, saturated, generally fine sands and silts are subjected to strong ground shaking. The soils lose shear strength and become liquid; resulting in large total and differential ground surface settlements as well as possible lateral spreading during

an earthquake. Due to the lack of shallow groundwater, and given the relatively dense nature of the materials beneath the site, the potential for liquefaction and dynamic settlement to occur is considered low.

4.3 LANDSLIDE AND SLOPE STABILITY

The site is not mapped as being underlain by known landslides. Our site reconnaissance did not reveal indications of landslides or slope instabilities within or adjacent to the project site. Based on the distant proximity of the proposed improvements to the existing bluff faces and our subsurface investigation, it is our opinion that the proposed improvements will not be compromised by existing bluff stability or diminish existing slope stability.

4.4 FLOODING, TSUNAMIS, AND SEICHES

The site is not located within a flood zone or dam inundation area (County of San Diego, 2012). The site is not located within a mapped area on the State of California Tsunami Inundation Maps; therefore, damage due to tsunamis is considered negligible. Seiches are periodic oscillations in large bodies of water such as lakes, harbors, bays, or reservoirs. The site is not located adjacent to lakes or confined bodies of water; therefore, the potential for a seiche to affect the site is considered low.

4.5 HYDRO-CONSOLIDATION

Hydro-consolidation can occur in recently deposited (less than 10,000 years old) sediments that were deposited in a semi-arid environment. Examples of such sediments are aeolian sands, alluvial fan deposits, and mudflow sediments deposited during flash floods. The pore space between particle grains can re-adjust when inundated by groundwater causing the material to consolidate. In our opinion, soil below this depth is not susceptible to hydro-consolidation.

5 LABORATORY TESTING

The laboratory tests consisted of grain size distribution, Atterberg Limits, expansion index, and corrosivity. The results of the laboratory tests, and brief explanations of the test procedures, are presented in Appendix II.

6 CALIFORNIA BUILDING CODE SEISMIC DESIGN VALUES

A geologic hazard likely to affect the project is groundshaking as a result of movement along an active fault zone in the vicinity of the subject site. The site coefficients and adjusted maximum considered earthquake spectral response acceleration parameters in accordance with the 2013 California Building Code are presented below:

Site Coordinates: Latitude 32.85016°
 Longitude -117.27347°
 Site Class: D
 Site Coefficient $F_a = 1.000$
 $F_v = 1.512$
 Spectral Response Acceleration at Short Periods $S_s = 1.265$ g
 Spectral Response Acceleration at 1-Second Period $S_1 = 0.488$ g
 $S_{DS} = 0.843$ g
 $S_{D1} = 0.492$ g
 $PGA_M = 0.564$ g

7 PERCOLATION TESTING

Although site specific storm water Best Management Practices (BMP's) are not yet designed for the site, borehole percolation testing was performed at two locations at depths of about 4 and 11 feet below the existing ground surface. The testing was performed by an SCST engineer in general accordance with the County of San Diego percolation test procedure. The material encountered at the bottom of the percolation test holes consists of intensely weathered sandstone associated with the Point Loma Formation. Table 1 presents the tested infiltration rates. The results of the percolation testing are presented in Appendix III.

Table 1: Infiltration Rate Test Results

Test Location	Test Depth (feet)	Material Type at Test Depth	Infiltration Rate (inches/hour)
I-1	4	POINT LOMA FORMATION, sandstone, very dense, intensely weathered	>10
I-2	7	POINT LOMA FORMATION, sandstone, very dense, intensely weathered	>10

Once the final design and location of site specific BMP's are determined, additional testing may be required.

8 CONCLUSIONS

The main geotechnical consideration affecting the planned improvements is the presence of fill and potentially compressible old paralic deposits. Therefore, we recommend remedial earthwork be performed to prepare the site for the planned improvements.

9 RECOMMENDATIONS

9.1 EARTHWORK

9.1.1 Site Preparation

Site preparation should begin with the removal of existing improvements, vegetation and debris. The existing fill and potentially compressible old paralic deposits should be excavated 2 feet below the deepest planned footing bottom and evaluated by an SCST representative. Horizontally, the excavation should extend at least 3 feet outside the perimeter of planned addition, or up to existing improvements, whichever is less. Footing bottoms should rest entirely on compacted fill. Excavations of up to 4 feet deep should be anticipated.

In hardscape areas, the existing materials within 2 feet below the planned subgrade elevation should be excavated. Horizontally, the excavation should extend at least 2 feet outside the perimeter of planned hardscape, or up to existing improvements, whichever is less.

An SCST representative should observe conditions exposed in the bottom of the excavation to assess if additional excavation is recommended.

9.1.2 Fill and Backfill

Unless otherwise recommended, the material exposed in the bottom of the excavation should be scarified to a depth of 12 inches, moisture conditioned to 2 to 3% above optimum moisture content and compacted to 90% relative compaction based on ASTM 1557 laboratory test procedure. All references to relative compaction and optimum moisture content in this report are based on this test procedure. Excavated material, except for vegetation, debris and rocks no greater than 6 inches can be used as compacted fill. Material with an expansion index of 20 or less determined in accordance with ASTM D4829 should be used as compacted fill. We expect that most of the onsite materials will meet the expansion index criteria and can be used as compacted fill. Fill should be moisture conditioned to 2 to 3% above optimum moisture content and compacted to at least 90% relative compaction. To reduce the potential for distress, materials with an expansion index (EI) of 20 or less should be used from 2 feet below the planned footing bottom level to finish pad grade elevation. Exterior slabs should be underlain by at least 2 feet of material with an EI of 20 or less.

Fill should be placed in horizontal lifts at a thickness appropriate for the equipment spreading, mixing, and compacting the material, but generally should not exceed 8 inches in loose thickness. Utility trench backfill beneath structures, pavements and hardscape should be compacted to at least 95% relative compaction. The top 12 inches

of subgrade beneath pavements should be compacted to at least 95% relative compaction.

9.1.3 Site Excavation Characteristics

It is anticipated that excavation can be achieved with conventional earthwork equipment in good working order. However, hard Point Loma Formational material should be anticipated in shallow materials, particularly during trenching for drain lines.

9.1.4 Temporary Excavations

Temporary slopes in fill and old paralic deposits should not be steeper than 1:1/2:1. Temporary slopes in the Point Loma Formation should not be steeper than 3/4:1 (horizontal:vertical). The faces of temporary slopes should be inspected daily by the contractor's Competent Person before personnel are allowed to enter the excavation. Zones of potential instability, sloughing or raveling should be brought to the attention of the Engineer and corrective action implemented before personnel begin working in the excavation. Excavated materials should not be stockpiled behind temporary excavations within a distance equal to the depth of the excavation. SCST should be notified if other surcharge loads are anticipated so that lateral load criteria can be developed for the specific situation. If temporary slopes are to be maintained during the rainy season, berms are recommended along the tops of the slopes to prevent runoff water from entering the excavation and eroding the slope faces.

9.2 FOUNDATIONS

9.2.1 Shallow Spread Footings

Footings should extend at least 18 inches below lowest adjacent finished grade. A minimum width of 12 inches is recommended for continuous footings and 24 inches for isolated or retaining wall footings. An allowable bearing capacity of 2,500 psf can be used. The bearing value can be increased by 1/3 when considering short term loads, including wind or seismic forces.

Lateral loads will be resisted by friction between the bottoms of footings and passive pressure on the faces of footings and other structural elements below grade. An allowable coefficient of friction of 0.25 can be used. Passive pressure can be computed using an allowable lateral pressure of 250 psf per foot of depth below the ground surface for level ground conditions. Reductions for sloping ground should be made. The passive pressure can be increased by 1/3 when considering the total of all loads, including wind or seismic forces. The upper 1 foot of soil should not be relied on for passive support unless the ground is covered with pavements or slabs.

9.2.2 Settlement Characteristics

Total foundation settlements are estimated to be less than 1 inch. Differential settlements between adjacent columns and across continuous footings are estimated to be less than ½ inch over a distance of 40 feet. Settlements should be completed shortly after structural loads are applied.

9.2.3 Foundation Excavation Observations

A representative from SCST should observe the foundation excavations prior to forming or placing reinforcing steel.

9.3 SLABS-ON-GRADE

9.3.1 Interior Slabs-on-Grade

The project structural engineer should design the Interior concrete slabs-on-grade. However, we recommend that the slab have a minimum thickness of 5 inches and be reinforced with No. 4 bars on 24 inch centers each way. Reinforcement should be placed approximately at mid-height of the slab.

A vapor retarder should be placed beneath the slab-on-grade where moisture sensitive floor coverings or equipment are planned. If plastic is used, a minimum 10-mil is recommended. The plastic should comply with ASTM E1745. Installation should comply with ASTM E1643. Current construction practice typically includes placement of a 2-inch thick sand cushion between the bottom of the concrete slab and the moisture vapor retarder. This cushion can provide some protection to the vapor retarder during construction, and may assist in reducing the potential for edge curling in the slab during curing. However, the sand layer also provides a source of moisture to the underside of the slab that can increase the time required to reduce vapor emissions to limits acceptable for the type of floor covering placed on top of the slab. The slab can be placed directly on the vapor retarder. The floor covering manufacturer should be contacted to determine the volume of moisture vapor allowable and treatment needed to reduce moisture vapor emissions to acceptable limits for the particular type of floor covering installed.

9.3.2 Exterior Slabs-on-Grade

Exterior slabs should be at least 4 inches thick and reinforced with at least No. 3 bars at 18 inches on center each way. Hardscape surfaces where vehicle traffic is anticipated should be underlain by a layer of Class II aggregate base with a minimum thickness of 8-inches and compacted to at least 95% relative compaction. Slabs should be provided with weakened plane joints. Joints should be placed in accordance with the American

Concrete Institute (ACI) guidelines. The project architect should select the final joint patterns. A 1-inch maximum size aggregate mix is recommended for concrete for exterior slabs. The corrosion potential of on-site soils with respect to reinforced concrete will need to be taken into account in concrete mix design. Coarse and fine aggregate in concrete should conform to the “Greenbook” Standard Specifications for Public Works Construction.

9.4 SOIL CORROSIVITY

Representative samples of the onsite soils were tested to evaluate corrosion potential. The test results are presented in Appendix II. The project design engineer can use the sulfate results in conjunction with ACI 318 to specify the water/cement ratio, compressive strength and cementitious material types for concrete exposed to soil.

A corrosion engineer should be contacted to provide specific corrosion control recommendations.

9.5 INFILTRATION

Evaluation of storm water infiltration feasibility was performed in general accordance with the City of San Diego BMP Design Manual, Appendix C. Worksheet C.4-1 is provided in Appendix IV. Additional infiltration testing may need to be performed after the existing buildings have been demolished and the site cut to planned finish grade. In our opinion, the Point Loma Formation tested during this evaluation is generally representative of the materials that will be encountered below proposed BMP locations.

The tested infiltration rates exceeded 10 inches per hour. The tested material is believed to be generally representative of the material that will be encountered below proposed BMP locations. The tested infiltration rates do support full infiltration.

10 GEOTECHNICAL ENGINEERING DURING CONSTRUCTION

The geotechnical engineer should review project plans and specifications prior to bidding and construction to check that the intent of the recommendations in this report has been incorporated. Observations and tests should be performed during construction. If the conditions encountered during construction differ from those anticipated based on the subsurface exploration program, the presence of the geotechnical engineer during construction will enable an evaluation of the exposed conditions and modifications of the recommendations in this report or development of additional recommendations in a timely manner.

11 CLOSURE

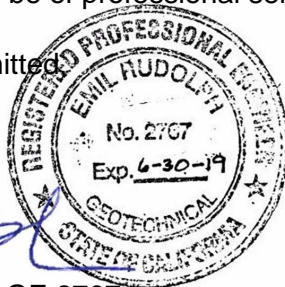
SCST should be advised of changes in the project scope so that the recommendations contained in this report can be evaluated with respect to the revised plans. The findings in this


report are valid as of the date of this report. Changes in the condition of the street can occur with time. In addition, changes in the standards of practice and government regulations can occur. Thus, the findings in this report may be invalidated wholly or in part by changes beyond our control. This report should not be relied upon after a period of two years without a review by us verifying the suitability of the conclusions and recommendations to site conditions at that time.

In the performance of our professional services, we comply with that level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions and in the same locality. Subsurface conditions can vary from those encountered at the boring locations, and our data, interpretations, and recommendations are based solely on the information obtained by us. We will be responsible for those data, interpretations, and recommendations, but will not be responsible for interpretations by others of the information developed. Our services consist of professional consultation and observation only, and no warranty of any kind whatsoever, express or implied, is made or intended in connection with the work performed or to be performed by us, or by our proposal for consulting or other services, or by our furnishing of oral or written reports or findings.

This opportunity to be of professional service is sincerely appreciated.

Respectfully Submitted,
SCST, INC.




Emil Rudolph, PE, GE 2767
Principal Engineer




Douglas A. Skinner, CEG 2472
Senior Geologist

ER:DAS:aw

Attachments

Figures

Figure 1 - Site Vicinity Map

Figure 2 - Geotechnical Map

Figure 3 - Geologic Cross Section

Appendices

Appendix I – Boring Logs

Appendix II – Expansion Index

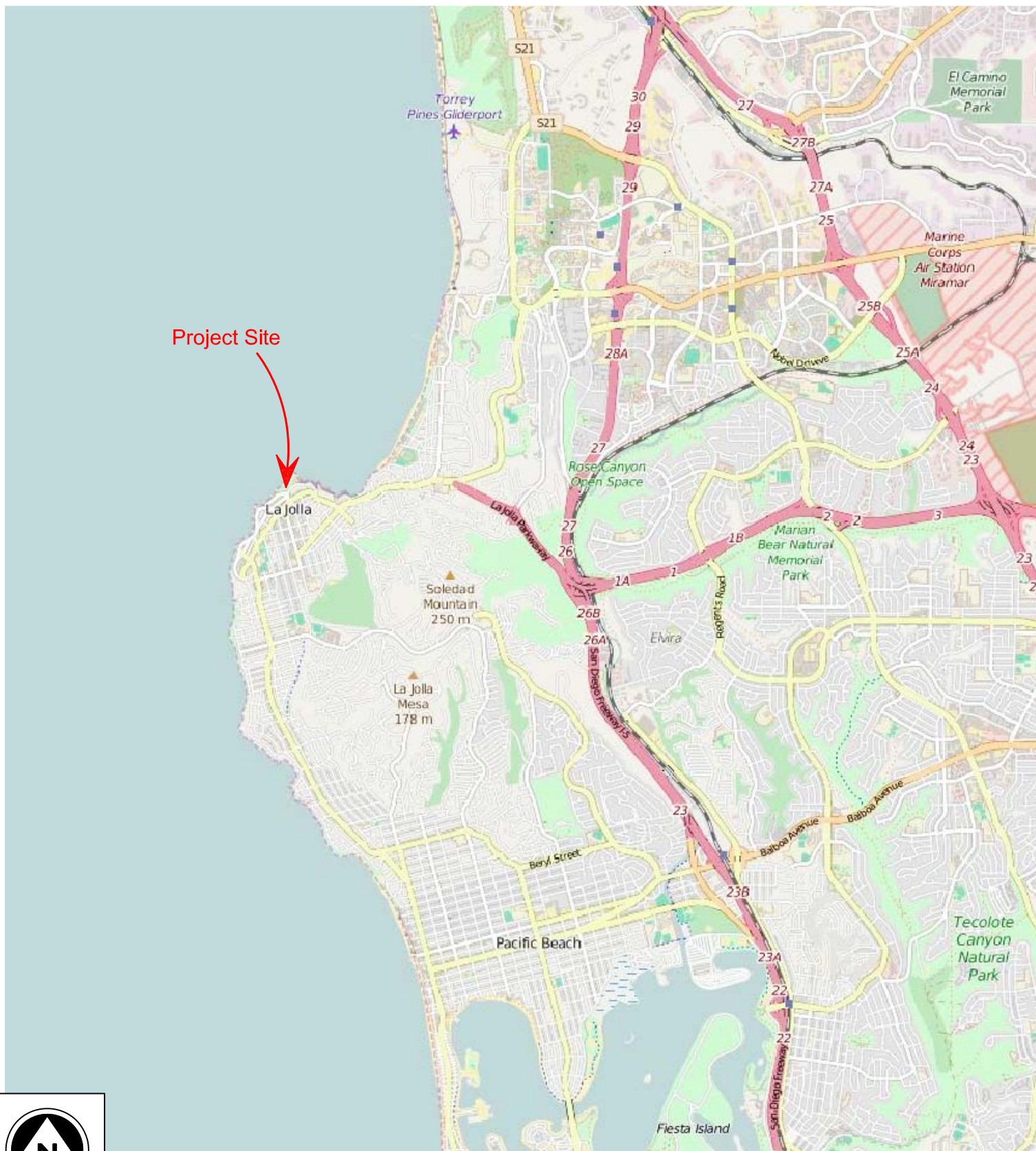
Appendix III – Percolation Testing

Appendix IV – Infiltration Feasibility Condition

(1) Addressee via e-mail: BillM@mosherdrew.com

12 REFERENCES

- American Concrete Institute (ACI) (2012), Building Code Requirements for Structural Concrete (ACI 318-11) and Commentary, August.
- California Emergency Management Agency (Cal EMA) (2009), Tsunami Inundation Map for Emergency Planning, California Geological Survey, La Jolla Quadrangle, June 1.
- Caltrans (2010), Standard Specifications.
- City of San Diego (1967), Grading Plans Muirlands West Unit No. 5, DWG 12635-6 Engineering Department, March 3.
- City of San Diego (2008), Seismic Safety Study, Geologic Hazards and Faults, Grid Tile: 25, Development Services Department, April 3.
- International Code Council (2012), 2013 California Building Code, California Code of Regulations, Title 24, Part 2, Volume 2 of 2, Based on the 2012 International Existing Building Code, Effective Date: January 1, 2014.
- Kennedy, M.P. and Tan, S.S. (2008), Geologic Map of the San Diego 30' x 60' Quadrangle, California, California Geological Survey.
- Public Works Standards, Inc. (2011), "Greenbook" Standard Specifications for Public Works Construction, 2012 Edition.



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SCST, Inc.

SITE VICINITY MAP
EB Scripps Park Comfort Station &
Sewer Pump Station 33
San Diego, California

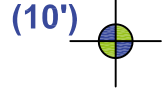
Date: September, 2016
 By: JCU
 Job No.: 160226P3.2-1

Figure:

1

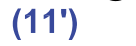
SCST LEGEND:

B-2

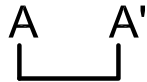


Approximate Location of Boring (Depth in Feet)

I-2



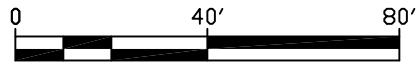
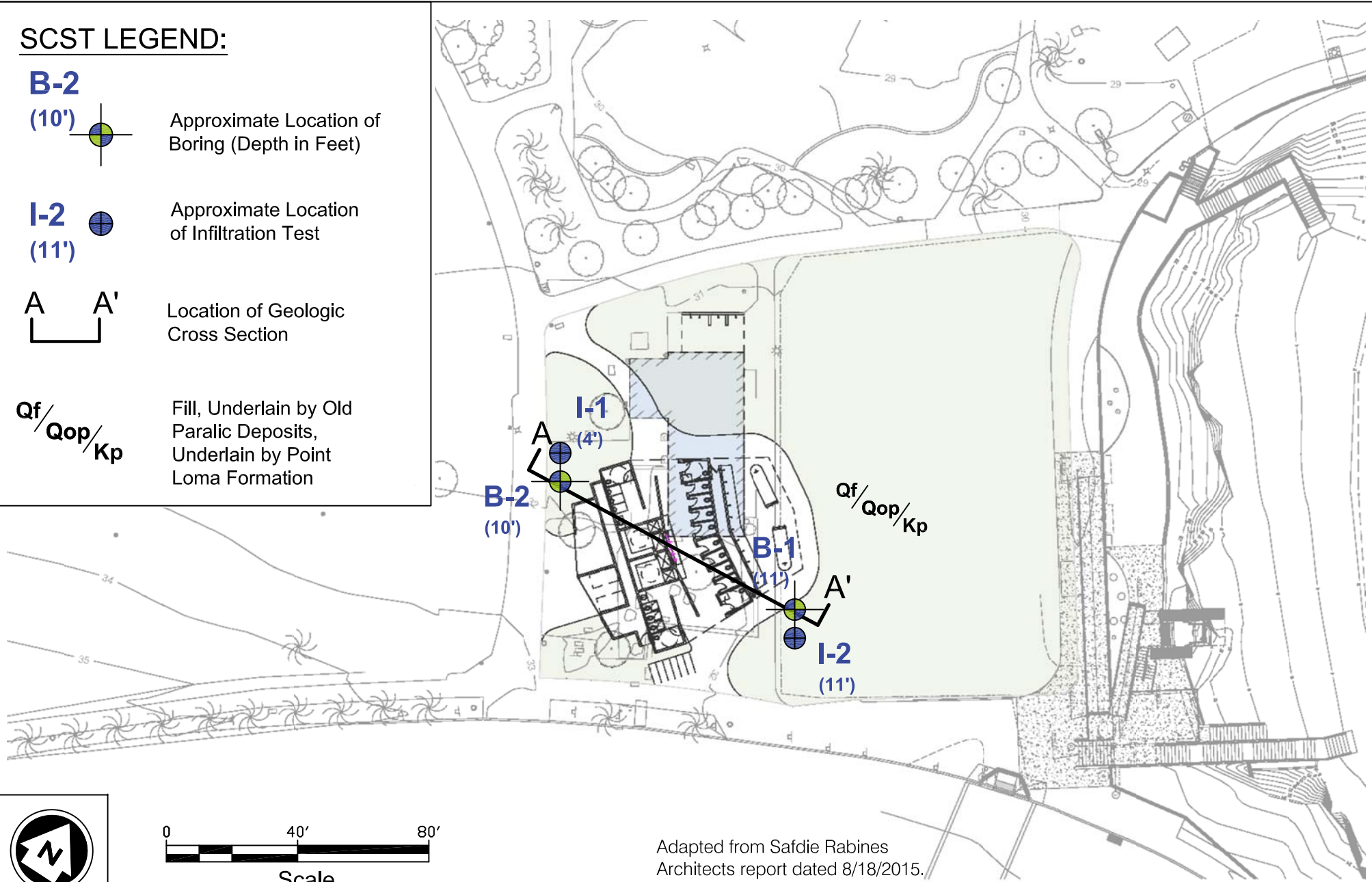
Approximate Location of Infiltration Test



Location of Geologic Cross Section

**Qf/
Qop/
Kp**

Fill, Underlain by Old Paralic Deposits, Underlain by Point Loma Formation



Scale

Adapted from Safdie Rabines Architects report dated 8/18/2015.

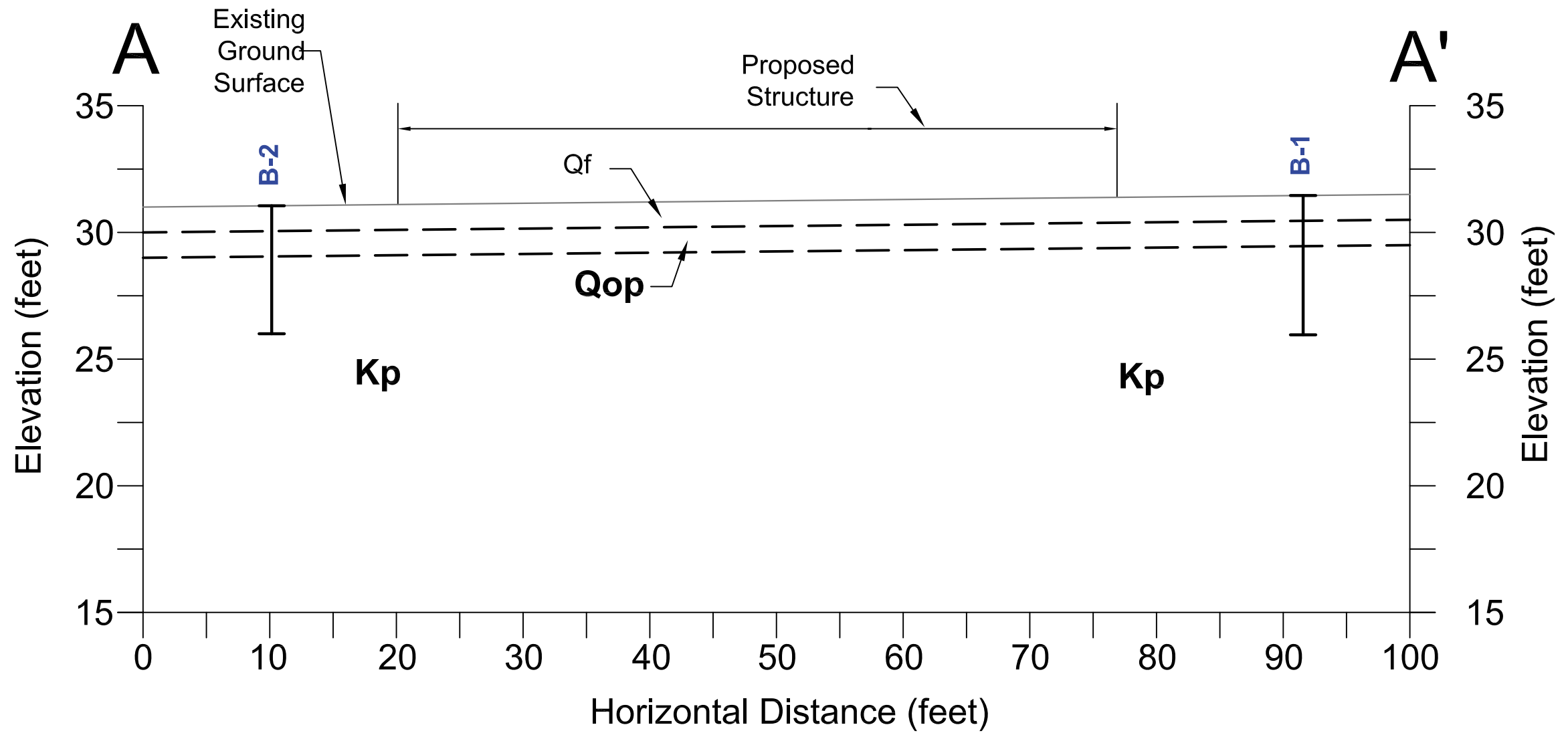


SCST, Inc.

GEOTECHNICAL MAP
EB Scripps Comfort Station &
Sewer Pump Station 33
San Diego, California

Date: September, 2016
By: EJM
Job No.: 160226P3.2-1

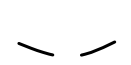
Figure:
2



SCST LEGEND:



Approximate Location of Boring



Approximate Location of Geologic Contact

Qf

Fill

Qop

Old Paralic Deposits

Kp

Point Loma Formation



SCST, Inc.

GEOLOGIC CROSS SECTION

EB Scripps Park Comfort Station & Sewer Pump Station 33
San Diego, California

Date: September, 2016

By: JCU

Job No.: 160226P3.2-1

Figure:

3

APPENDIX I FIELD INVESTIGATION

Our field investigation consisted of a visual reconnaissance of the site and drilling 2 borings on August 18, 2016 to depths between about 10 and 11 feet below the existing ground surface using a tripod-mounted drill rig equipped with a solid flight auger. Figure 2 shows the approximate locations of the borings. Our field investigation was performed under the observation of an SCST geologist who also logged the borings and obtained samples of the materials encountered.





Relatively undisturbed samples were obtained using a modified California (CAL) sampler, which is a ring-lined split tube sampler with a 3-inch outer diameter and 2½-inch inner diameter. Standard Penetration Tests (SPT) were performed using a 2-inch outer diameter and 1⅜-inch inner diameter split tube sampler. The CAL and SPT samplers were driven with a 140-pound weight dropping 30 inches. The number of blows needed to drive the samplers the final 12 inches of an 18-inch drive is noted on the boring logs as “Driving Resistance (blows/ft of drive).” SPT and CAL sampler refusal was encountered when 50 blows were applied during any one of the three 6-inch intervals, a total of 100 blows was applied, or there was no discernible sampler advancement during the application of 10 successive blows. The SPT penetration resistance was normalized to a safety hammer (cathead and rope) with a 60% energy transfer ratio in accordance with ASTM D6066. The normalized SPT penetration resistance is noted on the boring logs as “N₆₀.” Disturbed bulk samples were obtained from the SPT sampler and the drill cuttings.

The soils are classified in accordance with the Unified Soil Classification System as illustrated on Figure I-1. Logs of the borings are presented on Figures I-2 through I-3.



SUBSURFACE EXPLORATION LEGEND

UNIFIED SOIL CLASSIFICATION CHART

<u>SOIL DESCRIPTION</u>	<u>GROUP SYMBOL</u>	<u>TYPICAL NAMES</u>
<p>I. COARSE GRAINED, more than 50% of material is larger than No. 200 sieve size.</p>		
<p><u>GRAVELS</u> More than half of coarse fraction is larger than No. 4 sieve size but smaller than 3".</p>	CLEAN GRAVELS	GW Well graded gravels, gravel-sand mixtures, little or no fines
		GP Poorly graded gravels, gravel sand mixtures, little or no fines.
	GRAVELS WITH FINES (Appreciable amount of fines)	GM Silty gravels, poorly graded gravel-sand-silt mixtures.
		GC Clayey gravels, poorly graded gravel-sand, clay mixtures.
<p><u>SANDS</u> More than half of coarse fraction is smaller than No. 4 sieve size.</p>	CLEAN SANDS	SW Well graded sand, gravelly sands, little or no fines.
		SP Poorly graded sands, gravelly sands, little or no fines.
		SM Silty sands, poorly graded sand and silty mixtures.
		SC Clayey sands, poorly graded sand and clay mixtures.
<p>II. FINE GRAINED, more than 50% of material is smaller than No. 200 sieve size.</p>		
<p>SILTS AND CLAYS (Liquid Limit less than 50)</p>	ML	Inorganic silts and very fine sands, rock flour, sandy silt or clayey-silt-sand mixtures with slight plasticity.
	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
	OL	Organic silts and organic silty clays or low plasticity.
<p>SILTS AND CLAYS (Liquid Limit greater than 50)</p>	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
	CH	Inorganic clays of high plasticity, fat clays.
	OH	Organic clays of medium to high plasticity.
<p>III. HIGHLY ORGANIC SOILS</p>		PT Peat and other highly organic soils.
<u>FIELD SAMPLE SYMBOLS</u>		<u>LABORATORY TEST SYMBOLS</u>
<p> - Bulk Sample</p> <p>CAL - Modified California penetration test sampler</p> <p>CK - Undisturbed chunk sample</p> <p>MS - Maximum Size of Particle</p> <p> - Water seepage at time of excavation or as indicated</p> <p>SPT - Standard penetration test sampler</p> <p>ST - Shelby Tube</p> <p> - Water level at time of excavation or as indicated</p>		<p>AL - Atterberg Limits</p> <p>CON - Consolidation</p> <p>COR - Corrosivity Test</p> <p style="padding-left: 20px;">- Sulfate</p> <p style="padding-left: 20px;">- Chloride</p> <p style="padding-left: 20px;">- pH and Resistivity</p> <p>DS - Direct Shear</p> <p>EI - Expansion Index</p> <p>MAX - Maximum Density</p> <p>RV - R Value</p> <p>SA - Sieve Analysis</p> <p>UC - Unconfined Compression</p>
 <p>SOUTHERN CALIFORNIA SOIL & TESTING, INC.</p>	<p>EB Scripps Park Comfort Station La Jolla, California</p>	
	By: DAS	Date: September, 2016
	Job Number: 160226P3.2-1	Figure: I-1

LOG OF BORING B-1

Date Drilled: 8/18/2016

Equipment: Tri-Pod Mounted Solid-flight Auger

Elevation (ft): Estimated 34

Logged by: MN

Project Manager: WLV

Depth to Groundwater (ft): Not Encountered

DEPTH (ft)	USCS	SUMMARY OF SUBSURFACE CONDITIONS	SAMPLES		DRIVING RESISTANCE (blows/ft of drive)	N ₆₀	MOISTURE CONTENT (%)	DRY UNIT WEIGHT (pcf)	LABORATORY TESTS
			DRIVEN	BULK					
1	SM	FILL (Qf): SILTY SAND, dark brown, fine grained, moist, medium dense.							
2									
3	SC	OLD PARALIC DEPOSITS (Qop): CLAYEY SAND, brownish red to light brown, fine to medium grained, moist, medium dense.	SPT		16				
4									
5	SM	POINT LOMA FORMATION (Kp): SILTY SANDSTONE, light yellowish gray, fine to medium grained, moist, medium dense, intensely weathered.							
6			CAL		32				
7									
8		Difficult drilling		X					SA
9									
10			SPT		50/2"				
11	BORING TERMINATED AT 11 FEET.								
12									
13									
14									
15									
16									
17									
18									
19									
20									



SCST, Inc.

EB Scripps Park Comfort Station Park
San Diego, California

By:	JCU/RS	Date:	August, 2016
Job Number:	160226P3.2-1	Figure:	I-2

LOG OF BORING B-2

Date Drilled: 8/18/2016
 Equipment: Hand Tools
 Elevation (ft): Estimated 33

Logged by: MN/AKN
 Project Manager: WLB
 Depth to Groundwater (ft): Not Encountered

DEPTH (ft)	USCS	SUMMARY OF SUBSURFACE CONDITIONS	SAMPLES		DRIVING RESISTANCE (blows/ft of drive)	N ₆₀	MOISTURE CONTENT (%)	DRY UNIT WEIGHT (pcf)	LABORATORY TESTS
			DRIVEN	BULK					
1	SM	FILL (Qf): SILTY SAND, dark brown, fine grained, moist, medium dense.		X					EI COR
2									
3	SC	OLD PARALIC DEPOSITS (Qop): CLAYEY SAND, mottled dark brown and light brown, fine to medium grained, moist, medium dense.	CAL		31				
4	SM	POINT LOMA FORMATION (Kp): SILTY SANDSTONE, light yellowish gray, fine to medium grained, moist, medium dense, intensely weathered.							SA
5									
6			SPT		19				
7									
8									
9									
10		BORING TERMINATED AT 10 FEET.	SPT		50/4"				
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									



SCST, Inc.

EB Scripps Park Comfort Station
 San Diego, California

By:	JCU	Date:	September, 2016
Job Number:	160226P3.2-1	Figure:	I-3

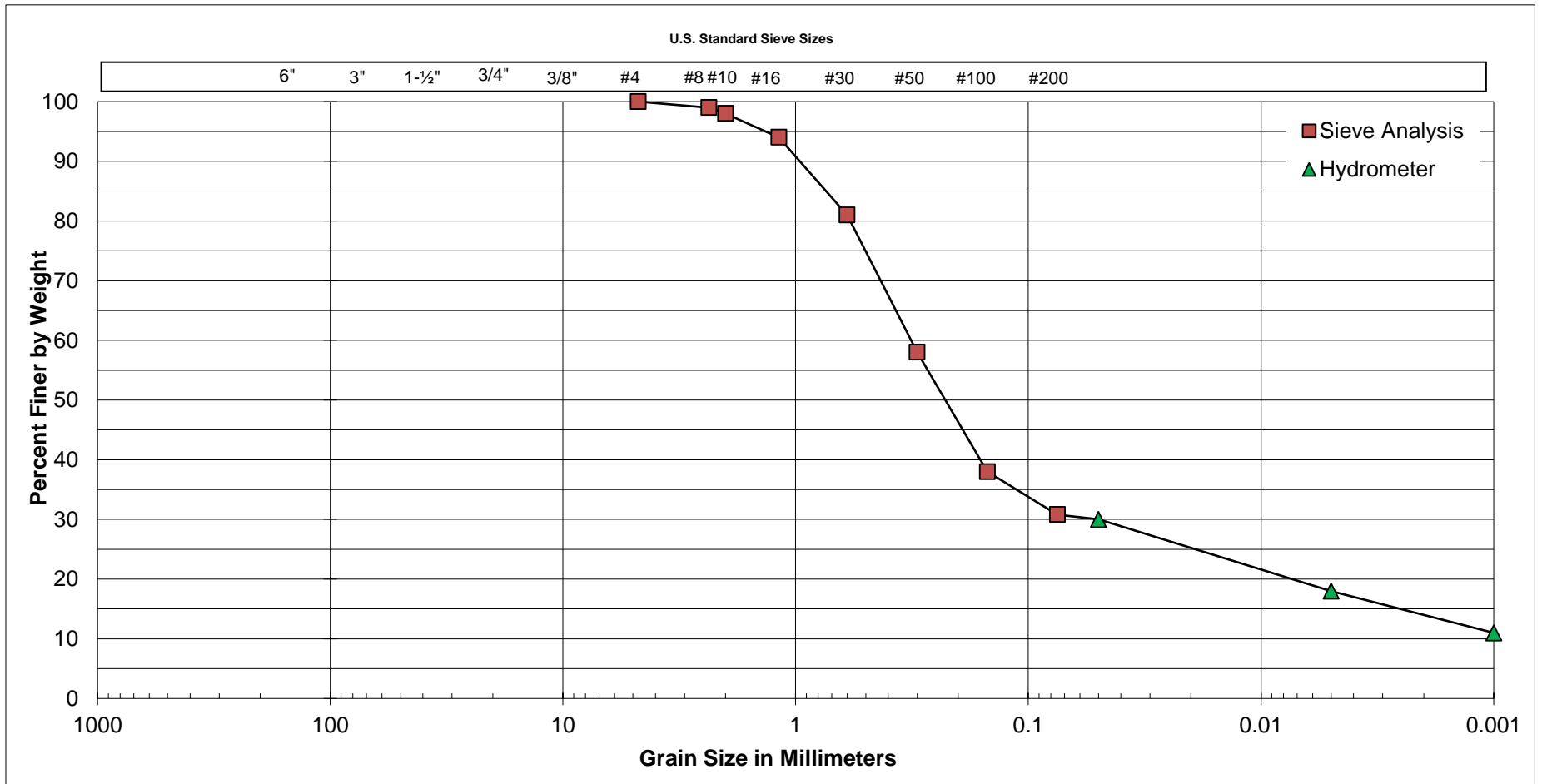
APPENDIX II LABORATORY TESTING

Laboratory tests were performed to provide geotechnical parameters for engineering analyses. The following tests were conducted:

- **GRAIN SIZE DISTRIBUTION:** The grain size distribution was determined on two samples in accordance with ASTM D422. Figure II-1 and II-2 present the test results.
- **EXPANSION INDEX:** Expansion index tests were performed on one sample in accordance with ASTM D 4829. Figure II-3 presents the test result.
- **CORROSIVITY:** Corrosivity tests were performed on one sample. The pH and minimum resistivity were determined in general accordance with California Test 643. The soluble sulfate content was determined in accordance with California Test 417. The total chloride ion content was determined in accordance with California Test 422. Figure II-3 presents the test results.

Soil samples not tested are now stored in our laboratory for future reference and analysis, if needed. Unless notified to the contrary, all samples will be disposed of 30 days from the date of this report.





Cobbles	Gravel		Sand			Silt or Clay
	Coarse	Fine	Coarse	Medium	Fine	

SAMPLE LOCATION
B1@7½-8½ ft

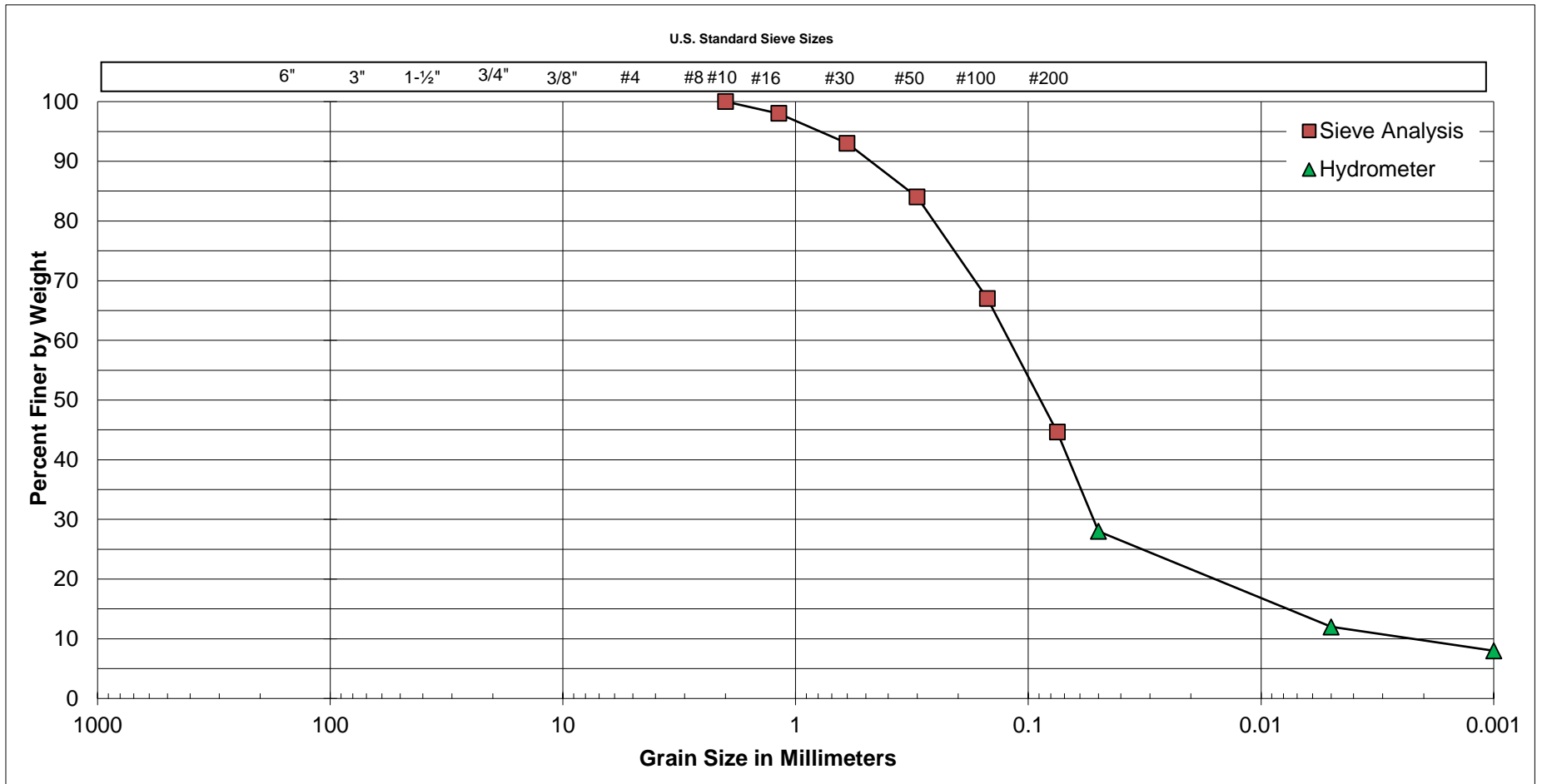
UNIFIED SOIL CLASSIFICATION:	SM
DESCRIPTION	SILTY SAND

ATTERBERG LIMITS	
LIQUID LIMIT	
PLASTIC LIMIT	
PLASTICITY INDEX	



EB Scripps Park Comfort Station
La Jolla, California

By:	SCST	Date:	September, 2016
Job Number:	160226p3.2-01	Figure:	II-1



Cobbles	Gravel		Sand			Silt or Clay
	Coarse	Fine	Coarse	Medium	Fine	

SAMPLE LOCATION
B2@5½-6½

UNIFIED SOIL CLASSIFICATION:	SM
DESCRIPTION	SILTY SAND

ATTERBERG LIMITS	
LIQUID LIMIT	
PLASTIC LIMIT	
PLASTICITY INDEX	



EB Scripps Park Comfort Station
La Jolla, California

By:	SCST	Date:	September, 2016
Job Number:	160226P3.2-1	Figure:	II-2

EXPANSION INDEX

ASTM D4829

SAMPLE	DESCRIPTION	EXPANSION INDEX
B-2 at 0' to 2 1/2'	CLAYEY SAND	6

CLASSIFICATION OF EXPANSIVE SOIL ¹

EXPANSION INDEX	POTENTIAL EXPANSION
1 - 20	Very Low
21 - 50	Low
51 - 90	Medium
91 - 130	High
Above 130	Very High

1. ASTM - D4829


RESISTIVITY, pH, SOLUBLE CHLORIDE and SOLUBLE SULFATE

SAMPLE	RESISTIVITY (Ω -cm)	pH	CHLORIDE (%)	SULFATE (%)
B-2 at 0' to 2 1/2'	311	7.72	0.140	0.098

SULFATE EXPOSURE CLASSES²

Class	Severity	Water-Soluble Sulfate (SO ₄) in Soil, Percent by Mass
S0	Not applicable	SO ₄ < 0.10
S1	Moderate	0.10 ≤ SO ₄ < 0.20
S2	Severe	0.20 ≤ SO ₄ ≤ 2.00
S3	Very Severe	SO ₄ > 2.00

2. ACI 318, Table 4.2.1

 <p style="font-size: 1.2em; font-weight: bold;">SCST, INC.</p>	EB Scripps Park Comfort Station La Jolla, California		
	By: DAS	Date: September, 2016	
	Job Number: 160226P3.2-1	Figure: II-3	

**APPENDIX III
INFILTRATION RATE TESTING RESULTS**



Report of Falling Head Borehole Percolation Testing

Storm Water Infiltration

Project Name:	EB Scripps Comfort Station	Test Location Number:	I-1
Job Number:	160226P3.2-1		
Date Drilled:	8/18/2016	Tested By:	EM
Drilling Method:	Tripod Drill Rig	Date Tested:	8/19/2016
Drilled Depth:	4 feet	Presoak Time:	4 Hours
Solid Pipe Interval:	0-4 feet		
Solid Pipe Diameter:	2 Inches		
Hole Diameter:	6 inches		


Reading	Time	Interval (min)	Initial Level (in)	Final Level (in)	Change in Level (in)	Percolation Rate (min/in)
1	7:59	0:10	34.3	No Water	-	-
	8:09					
2	8:11	0:10	28.9	No Water	-	-
	8:21					
3	8:22	0:11	34.1	No Water	-	-
	8:33					
4	8:36	0:10	30.2	No Water	-	-
	8:46					
Uncorrected Percolation Rate:					-	min/in
					-	in/hr

Gravel Correction Factor:	2.37
---------------------------	------

Corrected Percolation Rate:	-	min/in
	-	in/hr

Estimated Infiltration Rate*:	Greater than 10 in/hr
--------------------------------------	------------------------------

* Infiltration rates estimated using the Prochet Method on borehole percolation data.

	<h3>SCST, Inc.</h3>	EB Scripps Comfort Station & Sewer Pump Station 33 La Jolla, California		
			By: EM	Date: September, 2016
			Job No: 160226P3.2-1	Figure: III-1

Report of Falling Head Borehole Percolation Testing

Storm Water Infiltration

Project Name:	EB Scripps Comfort Station	Test Location Number:	I-2
Job Number:	160226P3.2-1		
Date Drilled:	8/18/2016	Tested By:	EM
Drilling Method:	Tripod Drill Rig	Date Tested:	8/19/2016
Drilled Depth:	11 feet	Presoak Time:	4 Hours
Solid Pipe Interval:	0-11 feet		
Solid Pipe Diameter:	2 Inches		
Hole Diameter:	6 inches		


Reading	Time	Interval (min)	Initial Level (in)	Final Level (in)	Change in Level (in)	Percolation Rate (min/in)
1	7:56	0:10	124.8	No Water	-	-
	8:06					
2	8:08	0:10	119.8	No Water	-	-
	8:18					
3	8:20	0:10	111.0	No Water	-	-
	8:30					
4	8:32	0:10	113.5	No Water	-	-
	8:42					
					-	min/in
					-	in/hr

Gravel Correction Factor:	2.37
---------------------------	------

Corrected Percolation Rate:	-	min/in
	-	in/hr

Estimated Infiltration Rate*:	Greater than 10 in/hr
--------------------------------------	------------------------------

* Infiltration rates estimated using the Prochet Method on borehole percolation data.

 SCST, Inc.	EB Scripps Comfort Station & Sewer Pump Station 33 La Jolla, California	
	By: EM	Date: September, 2016
	Job No: 160226P3.2-1	Figure: III-2

**APPENDIX IV
APPENDIX C4-1**



Appendix C: Geotechnical and Groundwater Investigation Requirements

Worksheet C.4-1: Categorization of Infiltration Feasibility Condition

Categorization of Infiltration Feasibility Condition		Worksheet C.4-1	
<p><u>Part 1 - Full Infiltration Feasibility Screening Criteria</u></p> <p>Would infiltration of the full design volume be feasible from a physical perspective without any undesirable consequences that cannot be reasonably mitigated?</p>			
Criteria	Screening Question	Yes	No
1	<p>Is the estimated reliable infiltration rate below proposed facility locations greater than 0.5 inches per hour? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Provide basis:</p> <p>The tested infiltration rates exceeded 10 inches per hour. The tested material is believed to be generally representative of the material that will be encountered below the proposed BMP locations. The tested infiltration rates do support allowing infiltration greater than 0.5 inch per hour.</p> <p>Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.</p>			
2	<p>Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Provide basis:</p> <p>The tested infiltration rate at the site does support allowing infiltration greater than 0.5 inch per hour. Given the observed infiltration rates, current development of the adjacent area, and the distance to slopes, it is our opinion that on-site infiltration will not increase the risk of geotechnical hazards that cannot be mitigated to an acceptable level.</p> <p>Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.</p>			

Appendix C: Geotechnical and Groundwater Investigation Requirements

Worksheet C.4-1 Page 2 of 4			
Criteria	Screening Question	Yes	No
3	<p>Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of groundwater contamination (shallow water table, storm water pollutants or other factors) that cannot be mitigated to an acceptable level? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Provide basis:</p> <p>Without pre-treatment, infiltration of stormwater pollutants could migrate laterally and adversely affect down-gradient sites. SCST would recommend pre-treatment of stormwater runoff. In SCST's opinion, allowing infiltration of pre-treated stormwater runoff in any appreciable quantity does not pose a significant risk to the regional groundwater table.</p> <p>Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.</p>			
4	<p>Can infiltration greater than 0.5 inches per hour be allowed without causing potential water balance issues such as change of seasonality of ephemeral streams or increased discharge of contaminated groundwater to surface waters? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.</p>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Provide basis:</p> <p>The project design engineer is responsible for completing criterion 4.</p> <p>Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.</p>			
<p>Part 1 Result*</p>	<p>If all answers to rows 1 - 4 are “Yes” a full infiltration design is potentially feasible. The feasibility screening category is Full Infiltration</p> <p>If any answer from row 1-4 is “No”, infiltration may be possible to some extent but would not generally be feasible or desirable to achieve a “full infiltration” design. Proceed to Part 2</p>		

*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by [City Engineer] to substantiate findings.

APPENDIX I
ARCHAEOLOGICAL RESOURCES SURVEY



**Archaeological Resources Survey for
the Ellen Browning Scripps Park
Comfort Station Replacement/
Pump Station 33 Demolition Project,
San Diego, California
WBS# S-15035.02.02**

Prepared for

City of San Diego
Public Works – Engineering
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Prepared by

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RECON Number 8546

June 28, 2017

A handwritten signature in black ink that reads "Carmen Zepeda-Herman". The signature is written in a cursive, flowing style.

Carmen Zepeda-Herman, M.A. Project Archaeologist

NATIONAL ARCHAEOLOGICAL DATA BASE INFORMATION

Author: Carmen Zepeda-Herman, M.A., RPA

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Report Date: June 28, 2017

Report Title: Draft Archaeological Resources Survey for the Ellen Browning Scripps Park Comfort Station Replacement/
Pump Station 33 Demolition Project, San Diego,
California

Submitted to: City of San Diego
Public Works – Engineering
525 B Street, Suite 750, MS908A
San Diego, CA 92101
Contact: James Arnhart

Contract Number: RECON Number 8456

USGS Quadrangle Map: La Jolla, California

Acreage: 0.558 acre

Keywords: CA-SDI-14306/H, La Jolla bath house, lithic and shell
scatter, historic trash scatter

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CONFIDENTIAL ATTACHMENT (Not for Public Review)

1: Record Search Results

Acronyms

AMSL	above mean sea level
ADA	Americans with Disabilities Act
APE	Area of Potential Effect
APN	Assessor's Parcel Number
City	City of San Diego
CRHR	California Register of Historical Resources
GIS	Geographic Information System
NRHP	National Register of Historic Places
PRC	Public Resources Code
RPA	Register of Professional Archaeologists
SCIC	South Coastal Information Center

1.0 Management Summary

This report summarizes the results of the archaeological resources survey of the Ellen Browning Scripps Park Comfort Station Replacement/Pump Station 33 Demolition Project. The project is located near 1160 Coast Boulevard within the La Jolla Community Planning Area. The project proposes the removal and replacement of the existing comfort station with a newly designed comfort station per the community-approved conceptual plans, landscaping, and American with Disabilities Act improvements. The existing sewer pump station #33, servicing the existing comfort station, will be demolished and replaced with a new private pump station designed to serve the La Jolla Bridge Club facilities. The project encompasses approximately 0.558 acre.

The purpose of this study is to determine the potential effects of the project on significant cultural resources. As a result, a record search and archaeological resources survey were completed. The record search was requested from the California Historical Resources Information System, South Coastal Information Center at San Diego State University (SCIC) to determine if previously recorded prehistoric or historic cultural resources occur on the property. The files at the SCIC indicated that one prehistoric archaeological site, CA-SDI-14306/H, was recorded within the survey area. CA-SDI-14306/H was recorded in 1996 as a lithic and shell scatter with historic trash. The majority of the site was covered by grass. The site form indicates that prehistoric material may exist below the grass, and the survey report suggests that historic trash may exist near the comfort station and the La Jolla Bridge Club.

The on-foot survey was completed on June 21, 2017. No cultural resources were identified during the field survey. No cultural material was noted within the boundary of CA-SDI-14306/H. The majority of the Area of Potential Effect was covered by grass with exposed sediments in ornamental areas and places where grass had been worn away or otherwise died.

Because of the possibility of buried deposits below the existing comfort station, the existing pump station, and within the pipeline alignment, RECON recommends archaeological and Native American monitors during ground-disturbing activities.

2.0 Introduction

This report details background information, methods, and results of the cultural resources survey for the Ellen Browning Scripps Park Comfort Station Replacement/Pump Station 33 Demolition Project. The project is located near 1160 Coast Boulevard within the La Jolla Community Planning Area (Figure 1). It is found in unsectioned portion of Pueblo Lands of San Diego landgrant of the U.S. Geological Survey 7.5-minute topographic map, La Jolla quadrangle (Figure 2). The project area is encompassed within Assessor's Parcel Number (APN) 350-010-01 (Figure 3). For the archaeological survey, the area of potential

effect (APE) includes 0.558 acre (Figure 4). The project is currently in the conceptual design and preliminary environmental review phase (Figure 5).

The existing comfort station servicing Ellen Browning Scripps Park was built in 1967 and has aged and deteriorated. The project proposes the removal and replacement of the existing comfort station with a newly designed comfort station per the community-approved conceptual plans, landscaping, and American with Disabilities Act (ADA) improvements. The new, approximately 2,700-square-foot comfort station will be located in the same general location as the existing comfort station. The project also proposed approximately 2,000 square feet of landscaping and 1,000 square feet of new ADA compliant pathways (see Figure 5).

The existing comfort station servicing Ellen Browning Scripps Park also contains sewer pump station #33, which will be demolished and replaced with a new private pump station designed to serve the La Jolla Bridge Club facilities. The project would install a new pressure main (approximately 4 inches in diameter and 150 feet long) connecting the new pump station to a newly installed manhole and gravity line (approximately 6 inches in diameter and 102 feet long) connecting to the existing sewer system on Coast Boulevard (see Figure 5). Service to the La Jolla Bridge Club will be maintained at all times.

3.0 Physical and Cultural Setting

3.1 Natural Setting

The APE is within the community of La Jolla in the city of San Diego. The APE is located on La Jolla Point, a wave-cut marine terrace overlooking the La Jolla Cove. The APE is relatively flat and approximately 30 feet above mean sea level (AMSL). Mount Soledad is in the southeast. The Pacific Ocean is less than 40 meters away. The soils in the APE are classified as Urban land (Ur), which consist of built-up areas in the City. The soils have been altered by development such that their identification is not feasible (USDA 1973).

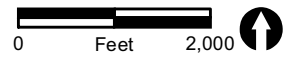
The APE is underlain by Point Loma Formation (Kp). Point Loma Formation rocks are described as 30-centimeter-thick graded beds of fine-grained dusky-yellow sandstones and olive-gray clay shales associated with sediments deposited into an alluvial submarine canyon/submarine fan complex that extended many miles offshore; remnants of the submarine fan facies outcrop as far west as the northern Channel Islands (Kennedy and Peterson 1975:15; Brown 2008:3; Abbott 1999:100).

Prior to European settlement, the marine terraces would have been covered with a coastal sage scrub community (Holland 1986). Currently, the project area is covered in grass and ornamental vegetation. A variety of usable resources would have been available to prehistoric populations in and around the project area. The coastal sage scrub and southern maritime chaparral communities contain many plants used by the ethnographic Kumeyaay population. Three plants in particular, manzanita (*Arctostaphylos* spp.), white sage (*Salvia apiana*), and blue elderberry (*Sambucus nigra* ssp. *caerulea* [*S. Mexicana*]), were used for a



***** Project Location

FIGURE 1
Regional Location




 Project Boundary

FIGURE 2

Project Location on USGS Map

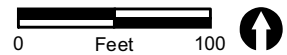


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 Project Boundary

FIGURE 3
Project Location on City 800' Map




 Project Boundary

FIGURE 4
Project Location on Aerial Photograph

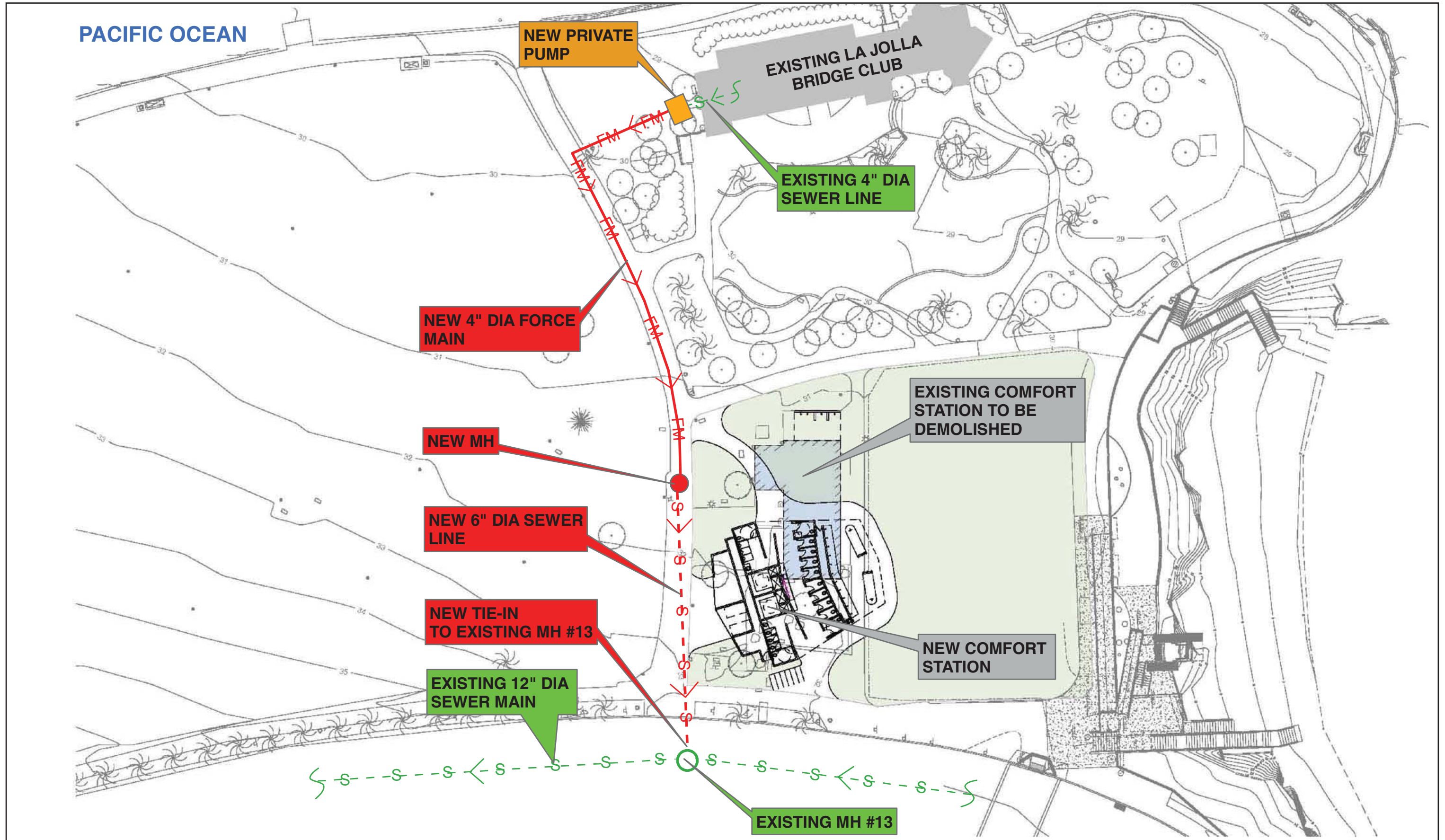


FIGURE 5
Conceptual Drawing

variety of purposes in prehistoric times. These plants served as sources of food and wood, and were used for medicinal and ceremonial purposes. Animals available on the marine terrace would include jackrabbit (*Lepus californicus*), brush rabbit (*Sylvilagus bachmani*), desert cottontail (*S. audubonii*), California ground squirrel (*Spermophilus beecheyi*), woodrat (*Neotoma* spp.), other small rodents, mule deer (*Odocoileus hemionus*), and various small birds and reptiles. The ocean offered a variety shellfish and fish.

3.2 Cultural Setting

3.2.1 Prehistory

The prehistoric cultural sequence in northern San Diego County is generally conceived as comprising three basic periods: (1) the Paleoindian Period, dated between about 11,500 and 8,500 years ago; (2) the Archaic Period, lasting from about 8,500 to 1,500 years ago (A.D. 500); and (3) the Late Prehistoric Period, lasting from about 1,500 years ago to historic contact (i.e., 500 to 1769) and represented by the Cuyamaca Complex.

3.2.1.1 Paleoindian Period

The Paleoindian Period in San Diego County is most closely associated with the San Dieguito Complex, as identified by Rogers (1938, 1939, and 1945). The San Dieguito assemblage consists of well-made scraper planes, choppers, scraping tools, crescentics, elongated bifacial knives, and leaf-shaped projectile points. The most thoroughly investigated San Dieguito component in San Diego County is found at CA-SDI-149 (the C.W. Harris site), located on a terrace overlooking the San Dieguito River. The San Dieguito Complex is thought to represent an early emphasis on hunting (Warren et al. 1993: III-33).

3.2.1.2 Archaic Period

The Archaic Period in coastal San Diego County is represented by the La Jolla Complex, a local manifestation of the widespread Millingstone Horizon. This period brings an apparent shift toward a more generalized economy and an increased emphasis on seed resources, small game, and shellfish. The local cultural manifestations of the Archaic Period are called the La Jollan Complex along the coast and the Pauma Complex inland. Pauma Complex sites lack the shell that dominates many La Jollan sites. Along with an economic focus on gathering plant resources, the settlement system appears to have been more sedentary than earlier periods. The La Jollan assemblage is dominated by rough, cobble-based choppers and scrapers, and slab and basin metates. Elko series projectile points appeared late in the period. Large deposits of marine shell at coastal sites demonstrate the importance of shellfish gathering to the coastal Archaic economy (True 1980).

3.2.1.3 Late Prehistoric Period

Near the coast and in the Peninsular Mountains beginning approximately 1,500 years ago, patterns began to emerge that suggest the ancestors of the ethnohistoric Kumeyaay

occupied the area. This period is characterized by higher population densities and elaborations in social, political, and technological systems. Economic systems diversify and intensify during this period, with the continued elaboration of trade networks, the use of shell-bead currency, cremation burial practices, and the appearance of more labor-intensive but effective technological innovations. The late prehistoric archaeology of the San Diego coast and foothills is characterized by the Cuyamaca Complex. It is primarily known from the work of D.L. True (1970) at Cuyamaca Rancho State Park. The Cuyamaca Complex is characterized by the presence of steatite arrowshaft straighteners, steatite pendants, steatite comales (heating stones), Tizon Brown Ware pottery, ceramic figurines reminiscent of Hohokam styles, ceramic “Yuman bow pipes,” ceramic rattles, miniature pottery various cobble-based tools (e.g., scrapers, choppers, hammerstones), bone awls, manos and metates, mortars and pestles, and Desert Side-Notched (more common) and Cottonwood Series projectile points (True 1970).

3.2.1.4 Ethnohistory

The Kumeyaay (also known as Kamia, Ipai, Tipai, and Diegueño) occupied the southern two-thirds of San Diego County. The Kumeyaay lived in semi-sedentary, politically autonomous villages or rancherías. A settlement system typically consisted of two or more seasonal villages with temporary camps radiating away from these central places (Cline 1984). Their economic system consisted of hunting and gathering, with a focus on small game, acorns, grass seeds, and other plant resources. The most basic social and economic unit was the patrilocal extended family. A wide range of tools was made of locally available and imported materials. A simple shoulder-height bow was used for hunting. Numerous other flaked-stone tools were made, including scrapers, choppers, flake-based cutting tools, and biface knives. Preferred stone types were locally available metavolcanics, cherts, and quartz. Obsidian was imported from the deserts to the north and east. Ground stone objects include mortars and pestles typically made of locally available fine-grained granite; both portable and bedrock types are known. The Kumeyaay made fine baskets, employing either coiled or twined construction. The Kumeyaay also made pottery, using the paddle-and-anvil technique. Most were a plain brown utility ware called Tizon Brownware, but some were decorated (May 1978; Spier 1923).

3.2.2 Historic Period

The Spanish Period in Alta California (1769–1821) represents a time of European exploration and settlement. Military and religious contingents established the San Diego Presidio and the San Diego Mission in 1769. The major land use during the Spanish Period was cattle grazing. The mission system used forced Native American labor and introduced horses, cattle, and other agricultural goods and implements. Native American culture in the coastal strip of California rapidly deteriorated despite the Native Americans’ repeated attempts at revolt against the Spanish invaders (Cook 1976). Disease, starvation, and a general institutional collapse caused emigration, birth rate declines, and high adult and infant mortality levels for the Native American groups in San Diego County (Shipek 1991). One of the hallmarks of the Spanish colonial scheme was the rancho system. In an attempt

to encourage settlement and development of the colonies, large land grants were made to well-connected individuals.

In 1821, Mexico declared its independence from Spain. During the Mexican period (1821–1848), the missions were secularized, opening vast tracts of former mission lands for private use and settlement. The numerous grants dramatically expanded the rancho system. The southern California economy became increasingly based on cattle ranching. The Mexican period ended when Mexico signed the Treaty of Guadalupe Hidalgo on February 2, 1848, concluding the Mexican–American War (1846–1848) (Rolle 1998). Just prior to signing the Treaty of Guadalupe–Hidalgo, gold was discovered in the northern California Sierra Nevada foothills. The news was published on March 15, 1848, and the California Gold Rush began. California became a state in 1850.

The great influx of Americans and Europeans, beginning with the Gold Rush, eliminated many remaining vestiges of Native American culture. The American homestead system encouraged settlement beyond the coastal plain into areas where Native Americans had retreated to avoid the worst of Spanish and Mexican influences (Carrico 1987; Cook 1976). By the late 1800s, San Diego County witnessed the gradual development of a number of outlying communities, many of which were established around previously defined ranchos and land grants. These communities were composed of an aggregate of people who lived on scattered farmsteads tied together through a common school district, church, post office, and country store (Hector and Van Wormer 1986; Pourade 1963).

The lands of La Jolla became incorporated as part of San Diego in 1850. Plots of land were first sold about 19 years later. A trolley line from downtown San Diego extended to La Jolla by the 1890s, aiding in the development of La Jolla. Cottages were constructed, and the La Jolla Park Hotel opened in 1893 to attract visitors to coastal resorts. Between 1900 and 1920, La Jolla Village became a tourist attraction, transitioning from its “Artist Colony” beginnings during the late 1800s. La Jolla Cove became a popular bathing spot for San Diegans by the mid-1890s. The La Jolla Bath House was built in 1906 to replace an earlier one that burned down. This second bath house was removed in 1925 due to unsanitary conditions (Hollins 2008). Photos of the cove show buildings scattered on the surrounding bluffs. Ellen Browning Scripps, a newspaper heiress and a philanthropist, moved to La Jolla in 1897, taking residence in a home on Prospect Street.

The Marine Biological Station was built in 1905 within City parkland at La Jolla Cove. This was the first building associated with Scripps Institute of Oceanography, then called the Marine Biological Association. In 1909–1910, the permanent laboratory was constructed north of the La Jolla Cove at the north end of La Jolla Shores, the present-day location of Scripps Institute of Oceanography, on a larger parcel of land with room for expansion (Raitt and Moulton 1967). After World War I, La Jolla expanded to about 4,000 people, and the area once known as Long Beach was reimagined by the Evans–Lee Corporation, who sought to transform the seasonal lagoon and fishing locale to a residential community (*Los Angeles Times*, 1 August 1926:88), but development was temporarily delayed by the Great Depression and the outbreak of World War II (La Jolla Historical Society 2009). La Jolla Beach and Yacht Club opened in 1927 and was bought in 1935 by

Frederick W. Kellogg, who changed its name to the La Jolla Beach and Tennis Club. It became an exclusive ocean-front resort that attracted out-of-town guests (La Jolla Beach and Tennis Club 2009). The University of California at San Diego was founded in 1959 and the Salk Institute of Biological Studies in 1960.

4.0 Previous Research

4.1 Record Search Background

A records search was requested from the California Historical Resources Information System South Coastal Information Center (SCIC) with a half-mile radius of the project site. This included previously recorded cultural resources, previous archaeological surveys and excavations, and historic maps and historic addresses. The National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR) for San Diego County, and the City's Historic Properties list were also reviewed.

The SCIC records search indicates that there have been four investigations within the project area (Confidential Attachment 1):

- Draft Preliminary Report: A Cultural Resource Survey for the Coast Boulevard Park Improvement Project, La Jolla, California (Smith and Burke 1994). The survey identified 7 prehistoric sites, of which 3 had been previously recorded.
- An Archaeological Survey and Evaluation of Cultural Resources for the Coast Boulevard Park Improvements (Smith and Pierson 1996). The survey identified 7 sites, of which test and significance excavations were conducted at 6. A testing and significance excavation was to be completed at the 7th site for Phase 2 of the project. This is CA-SDI-14306.
- Results of Archaeological Monitoring Conducted at the La Jolla Cove Clubhouse, 1160 Coast Boulevard, La Jolla, California (Alter 1999). The results were negative.
- Public Notice of Proposed Mitigated Negative Declaration – La Jolla Cove Clubhouse (City of San Diego 1999) indicated that there were significant impacts to resources.

Based on the SCIC records, a total of 38 historic sites, 11 prehistoric sites, 1 historic isolated artifact, 3 prehistoric isolated artifacts, 6 multi-component sites, and 1 unknown site (due to a missing site form) have been recorded within a one-mile radius of the project area (Table 1).

Table 1. Previously Recorded Resources within a Half Mile of the APE			
Primary #	Trinomial #	Site Type	Period
P-37-000001	CA-SDI-000001	Underwater site	Prehistoric
P-37-000039	CA-SDI-000039	Village	Prehistoric
P-37-012989	CA-SDI-012989	Lithic and shell scatter	Prehistoric
P-37-012990	CA-SDI-012990	Lithic and shell scatter, historic trash scatter	Multicomponent
P-37-012991	CA-SDI-012991	Lithic scatter, historic glass	Multicomponent
P-37-014666	CA-SDI-014279	Lithic and shell scatter	Prehistoric
P-37-014667	CA-SDI-014280	Lithic, groundstone, bone, and shell scatter	Prehistoric
P-37-014668	CA-SDI-014281	Lithic, groundstone, and shell scatter	Prehistoric
P-37-014669	CA-SDI-014282	Lithic, groundstone, bone, and shell scatter	Prehistoric
P-37-015163		Isolate – flake	Prehistoric
P-37-015244		Isolate – chopper	Prehistoric
P-37-015555*	CA-SDI-014306	Lithic and shell scatter, historic trash scatter	Multicomponent
P-37-016216	CA-SDI-018306	Shell scatter	Prehistoric
P-37-017063		House	Historic
P-37-017086		House	Historic
P-37-017175		House	Historic
P-37-018151		House	Historic
P-37-018152		House	Historic
P-37-018267		Store and tunnel	Historic
P-37-018273		House	Historic
P-37-018278		House	Historic
P-37-018329		House	Historic
P-37-018330		House	Historic
P-37-018367		House	Historic
P-37-018377		House	Historic
P-37-018421		House	Historic
P-37-018422		Structure	Historic
P-37-018951		House	Historic
P-37-019080		House	Historic
P-37-019111		House	Historic
P-37-019875		House	Historic
P-37-023770		Trail	Historic
P-37-023910		Missing form	
P-37-023911		Building	Historic
P-37-023912		Building	Historic
P-37-024509		Houses	Historic
P-37-024510		Houses	Historic
P-37-024511		Houses	Historic
P-37-024512		Houses	Historic
P-37-024553		Contractor sidewalk stamps	Historic
P-37-026102		House	Historic
P-37-026299		Hotel	Historic
P-37-026481	CA-SDI-017377	Underwater site/ground stone	Prehistoric
P-37-026843	CA-SDI-017550	Historic trash scatter	Historic
P-37-026879	CA-SDI-017580	Historic trash scatter	Historic

Table 1. Previously Recorded Resources within a Half Mile of the APE

Primary #	Trinomial #	Site Type	Period
P-37-028244		House	Historic
P-37-028413		House	Historic
P-37-028531		Women's Club	Historic
P-37-028534		Hotel	Historic
P-37-028574	CA-SDI-018384	Lithic scatter, historic trash	Multicomponent
P-37-028962		House	Historic
P-37-029701	CA-SDI-018996	Shell scatter	Prehistoric
P-37-030378	CA-SDI-019310	Lithic and shell scatter, historic trash scatter	Multicomponent
P-37-031490	CA-SDI-020014	Lithic and shell scatter, historic trash scatter	Multicomponent
P-37-033853		Isolate – mano	Prehistoric
P-37-035563		Commercial multi-story building	Historic
P-37-035579		Isolate – bottles	Historic
P-37-035604		House	Historic
P-37-035650		Houses	Historic
P-37-035969	CA-SDI-021910	Lithic, groundstone, bone, and shell scatter	Prehistoric
*within APE			

The 38 historic sites include 4 buildings, 1 set of contractor sidewalks stamps, 2 hotels, 26 houses, the Women’s Clubhouse, a trail, the Cave Store and tunnel, and two trash scatters. The 13 prehistoric sites include 2 lithic and shell scatters; 4 lithic, ground stone, bone, and shell scatters; 2 shell scatters; 2 underwater sites; and 1 village site. The multi-component sites include 4 lithic, shell, and historic trash scatters and 2 lithic and historic trash scatters. One of the prehistoric sites, CA-SDI-14306, is within the APE (see Confidential Attachment 1); this site is described below. There were 151 historic addresses within the half-mile radius; none is within the APE.

CA-SDI-14306/H was recorded by Brian F. Smith & Associates in 1996 as a lithic and shell scatter with historic trash. The SCIC Geographic Information System (GIS) data has the site located off the coast of Point La Jolla on which the Ellen Browning Scripps Park is located; however, the site form sketch map shows the site encompassing the entire park. Based on the site form, the site measured approximately 560 by 220 feet (11,487 square meters per the site form) with the majority of the site being covered by grass. Fill soils were also noted. Because of the limits on visibility, it was noted that the site may be larger. Shovel test pits were excavated and yielded one debitage, one flake, and one utilized flake. The artifact record sheets included in the site form list more than these three artifacts as being recovered; however, a comparison of the results of the table of recovered artifacts and the artifact record sheets from CA-SDI-14282 reveal that the wrong artifact sheets were included in the site form for CA-SDI-14306. The artifact record sheets match those of CA-SDI-14282 test unit excavations in the survey evaluation report discussed below (Raven-Jennings 1996a, 1996b).

CA-SDI-14306 was also discussed in *An Archaeological Survey and Evaluation of Cultural Resources for the Coast Boulevard Park Improvements* (Smith and Pierson 1996). This report indicates that the site was located within Phase 2 of the improvements and would be tested at a later date. The report summarized Phase 1 excavations at six archaeological sites and describes the site as containing four surface shell concentrations including *Ostrea*, *Mytilus*, *Pecten*, *Chione*, *Tagelus*, *Halitoides*, and *Pseudochama*. The historic trash was focused within 2,401 square meters near the former location of the La Jolla Bath House, built in 1906. The historic glass and pipe were noted around the shuffle board courts and public restrooms. The report authors suggest that there is a potential for historic deposits related to the use of the area around La Jolla Cove by beachgoers and patrons of the La Jolla Bath House if past grading for existing facilities was limited. Possible deposits include privies, trash dumps, and building foundations for the first structure, the Marine Biological Station, associated with Scripps Institution of Oceanography (Smith and Pierson 1996).

The Phase 2 excavation mentioned in the above report was not available at the SCIC. The site form for CA-SDI-14306 refers to it as “Summary of Preliminary Testing Results, with a Proposal for Additional Work to Evaluate Cultural Resources at the Coast Boulevard Improvements Project.” Based on the site form map, it appears that two shovel test pits were excavated within the prehistoric component of the site, at the south end of the site boundary, which is not within the current APE. The current APE appears to be the location where the historic trash was identified (Confidential Attachment 1).

5.0 Methods

The archaeological resources survey included both an archival search and an on-foot survey of the APE. As noted above, a records search with a half-mile radius buffer was requested from the SCIC in order to determine if previously recorded prehistoric or historic cultural resources occur on the APE. Historic aerial photographs were also checked in order to see past development within and near the project area.

The investigation consisted of an on-foot survey of the 0.558-acre APE. RECON archaeologist Richard Shultz conducted the field survey on June 21, 2017 in overcast conditions. The RECON archaeologist was accompanied by Native American monitor Gabe Kitchen of Red Tail Monitoring. The primary goal of this investigation was to systematically survey the project area (1) to determine if there are previously unrecorded cultural resources present, and if so, document the resources’ locations and what they consist of and (2) to update conditions of previously recorded cultural resources. The project area was inspected for evidence of archaeological materials such as flaked and ground stone tools or fragments, ceramics, milling features, and human remains. Intervals between field personnel were approximately 5 meters. Photographs were taken to document the environmental setting and general conditions.



PHOTOGRAPH 1
Comfort Station in Background with Patchy Visibility in Grass Area



PHOTOGRAPH 2
Excellent Visibility Surrounding the Comfort Station

6.0 Report of Findings

No cultural resources were identified during the field survey. No cultural material was noted within the boundary of CA-SDI-14306. The majority of the APE was covered by grass, concrete surfaces, or building footprint, with exposed sediments in ornamental areas and places where grass had been worn away or otherwise died. Visibility varied from excellent in the exposed areas to zero in the grass-covered area (Photograph 1). The bluff edge with the life guard tower, ramps and rails, and approaches to the beach below has been recently graded down to formational soils with little probability of buried cultural material. Based on a 2014 aerial photograph, the area northeast of the comfort station was used as staging yard for the construction of the life guard tower, ramps, and approaches to the beach. Historic aerial photographs show that this area had been graded and covered by grass since 1953 (Nationwide Environmental Title Research 2017). The area surrounding the comfort station appeared to be the least disturbed (Photograph 2). Surf-worn shells, likely collected by past visitors, were noted near the men's outdoor shower. These were not considered cultural material.

7.0 Management Recommendations

No cultural material was noted within the boundary of CA-SDI-14306. The existing comfort station was built in 1967 at a time when cultural resources mitigation measures would not have been required. Therefore, there is a possibility of buried deposits below this structure, the existing pump station, and within the pipeline alignment. RECON recommends archaeological and Native American monitors during ground-disturbing activities.

8.0 Certification and Project Personnel

This report was prepared in compliance with California Environmental Quality Act and with policies and procedures of the City of San Diego. RECON archaeologist Carmen Zepeda-Herman, M.A. served as principal investigator. Ms. Zepeda-Herman is a member of the Register of Professional Archaeologists and meets the Secretary of the Interior Standards for Archaeology and Historic Preservation. The individuals listed below participated in the field tasks or preparation of this report. Resumes for key personnel are on file with the City of San Diego. To the best of our knowledge, the statements and information contained in this report are accurate.



Principal Investigator

Carmen Zepeda-Herman, M.A.

Field Archaeologist

Richard D. Shultz, M.A.

Native American Observer

Gabe Kitchen

GIS Specialist

Sean Bohac

Production Specialist

Eija Blocker

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CONFIDENTIAL ATTACHMENTS
(Not For Public Review)

APPENDIX J
COASTAL AND SITE DEVELOPMENT PERMIT



Aug 08, 2018 11:02 AM
OFFICIAL RECORDS
Ernest J. Dronenburg, Jr.,
SAN DIEGO COUNTY RECORDER
FEES: \$0.00 (SB2 Atkins: \$0.00)

PAGES: 18

**RECORDING REQUESTED
BY
CITY OF SAN DIEGO
DEVELOPMENT SERVICES
PERMIT INTAKE, MAIL
STATION 501**

**WHEN RECORDED MAIL
TO
CITY CLERK
MAIL STATION 2A**

INTERNAL ORDER NUMBER: S-15035.02.06 (Fund 200391) SPACE ABOVE THIS LINE FOR RECORDER'S USE

**COASTAL DEVELOPMENT PERMIT NO, 1975357
SITE DEVELOPMENT PERMIT NO. 2118249
EB SCRIPPS COMFORT STATION REPLACEMENT PROJECT NO. 553076
CITY COUNCIL**

This Coastal Development Permit No, 1975357 and Site Development Permit No. 2118249 (Permit) is granted by the City Council of the City of San Diego to City of San Diego Public Works, Owner/Permittee, pursuant to San Diego Municipal Code (SDMC) section 126.0708 and 126.0504. The property is located near 1160 Coast Boulevard above La Jolla Cove within OP-1-1 (Open Space-Park) and Coastal (Appealable) Overlay zone, within the La Jolla Community Planning area.

Subject to the terms and conditions set forth in this Permit, permission is granted to City of San Diego Public Works, Owner/Permittee to remove and replace an existing comfort and pump station originally built in 1967, within the same general location. The new 2,700 square foot comfort station includes new Americans with Disabilities Act (ADA) restrooms, toilet rooms, open shower facilities, 1,000 square feet of miscellaneous ADA improvements, and 2,000 square feet of ornamental landscaping. Additional work includes new paving, sidewalks, pathway, and sidewalk repairs. The existing comfort station contains a sewer pump station #33 which will also be demolished. A new private sewer lift pump will be built to service the La Jolla Bridge Club, identified by size, dimension, quantity, type, and location on the approved exhibits [Exhibit "A"] dated, July 17, 2018, on file in the Development Services Department.

The project shall include:

- a. Demolition of existing comfort and pump station;
- b. Construction of a new approximately 2,700 square foot comfort station;
- c. New private sewer lift pump and associated vault;
- d. Approximately 2,000 square feet of ornamental landscaping;

ORIGINAL

- e. Approximately 7,883 square feet of new ADA paving, sidewalks, pathway, and sidewalk repairs “in kind”; and
- f. Public accessory improvements as determined by the Development Services Department to be consistent with the land use and development standards for this site in accordance with the adopted community plan, the California Environmental Quality Act (CEQA) and the CEQA Guidelines, the City Engineer’s requirements, zoning regulations, conditions of this Permit, and any other applicable regulations of the SDMC.

STANDARD REQUIREMENTS:

1. This Permit must be utilized within 6 years (72) months after the date on which all rights of appeal have expired. If this permit is not utilized in accordance with Chapter 12, Article 6, Division 1 of the SDMC within the 72-month period, this permit shall be void unless an Extension of Time has been granted. Any such Extension of Time must meet all SDMC requirements and applicable guidelines in effect at the time the extension is considered by the appropriate decision maker. This permit must be utilized by July 17, 2024.
2. This Coastal Development Permit shall become effective on the eleventh working day following receipt by the California Coastal Commission of the Notice of Final Action, or following all appeals.
3. No permit for the construction, occupancy, or operation of any facility or improvement described herein shall be granted, nor shall any activity authorized by this Permit be conducted on the premises until:
 - a. The Owner/Permittee signs and returns the Permit to the Development Services Department; and
 - b. The Permit is recorded in the Office of the San Diego County Recorder.
4. While this Permit is in effect, the subject property shall be used only for the purposes and under the terms and conditions set forth in this Permit unless otherwise authorized by the appropriate City decision maker.
5. This Permit is a covenant running with the subject property and all of the requirements and conditions of this Permit and related documents shall be binding upon the Owner/Permittee and any successor(s) in interest.
6. The continued use of this Permit shall be subject to the regulations of this and any other applicable governmental agency.
7. Issuance of this Permit by the City of San Diego does not authorize the Owner/Permittee for this Permit to violate any Federal, State or City laws, ordinances, regulations or policies

including, but not limited to, the Endangered Species Act of 1973 (ESA) and any amendments thereto (16 U.S.C. § 1531 et seq.).

8. The Owner/Permittee shall secure all necessary building permits. The Owner/Permittee is informed that to secure these permits, substantial building modifications and site improvements may be required to comply with applicable building, fire, mechanical, and plumbing codes, and State and Federal disability access laws.

9. Construction plans shall be in substantial conformity to Exhibit "A." Changes, modifications, or alterations to the construction plans are prohibited unless appropriate application(s) or amendment(s) to this Permit have been granted.

10. All of the conditions contained in this Permit have been considered and were determined necessary to make the findings required for approval of this Permit. The Permit holder is required to comply with each and every condition in order to maintain the entitlements that are granted by this Permit.

ENVIRONMENTAL/MITIGATION REQUIREMENTS:

11. Mitigation requirements in the Mitigation, Monitoring, and Reporting Program (MMRP) shall apply to this Permit. These MMRP conditions are hereby incorporated into this Permit by reference.

12. The mitigation measures specified in the MMRP and outlined in Mitigated Negative Declaration No. 553076 shall be noted on the construction plans and specifications under the heading ENVIRONMENTAL MITIGATION REQUIREMENTS.

13. The Owner/Permittee shall comply with the MMRP, as specified in Mitigated Negative Declaration No. 553076, to the satisfaction of the Development Services Department and the City Engineer. Prior to the issuance of the "Notice to Proceed" with construction, all conditions of the MMRP shall be adhered to, to the satisfaction of the City Engineer. All mitigation measures described in the MMRP shall be implemented for the following issue areas:
Archaeological and Paleontological monitoring.

PLANNING/HISTORIC:

14. Building Construction plans shall be reviewed by Development Services Plan Historic Staff for consistency with the Exhibit A and the U.S. Secretary of the Interior's Standards.

PUBLIC UTILITIES DEPARTMENT REQUIREMENTS:

15. Prior to the issuance of any Building Construction Permit, any existing sewer lateral proposed to be reused must be inspected by a California licensed plumbing contractor using closed-circuit television to verify (to the satisfaction of the City Engineer) that the lateral is in good condition, free of all debris, properly connected to a public sewer main, and in all other

ways suitable for reuse. If it is not, the Owner/Permittee is required to effect the repair or replacement of that service lateral in a manner satisfactory to the City Engineer.

16. Prior to the issuance of any Building Construction Permit, if it is determined that any existing water service line is either not adequate or not necessary to serve the proposed project, the Owner/Permittee is required to kill that service at the main.

INFORMATION ONLY:

- The issuance of this discretionary permit alone does not allow the immediate commencement or continued operation of the proposed use on site. Any operation allowed by this discretionary permit may only begin or recommence after all conditions listed on this permit are fully completed and all required ministerial permits have been issued and received final inspection.

APPROVED by the City Council of the City of San Diego on JUL 17 2018 and approved Resolution No. 311894.

Costal Development Permit No. 1975357
Site Development Permit No. 2118249
Date of Approval: JUL 17 2018

AUTHENTICATED BY THE CITY OF SAN DIEGO DEVELOPMENT SERVICES
DEPARTMENT




Helene M. Deisher
Development Project Manager

**NOTE: Notary acknowledgment
must be attached per Civil Code
section 1189 et seq.**

The undersigned Owner/Permittee, by execution hereof, agrees to each and every condition of this Permit and promises to perform each and every obligation of Owner/Permittee hereunder.

City of San Diego Public Works Department
Owner/Permittee

By 
NAME Elizabeth Schrott-Nichols
TITLE Associate Engineer Civil

**NOTE: Notary acknowledgments
must be attached per Civil Code
section 1189 et seq.**

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

CIVIL CODE § 1189

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of San Diego }

On July 25, 2018
Date

before me, Rose Marie White Notary Public
Here Insert Name and Title of the Officer

personally appeared _____

Elizabeth Schroth Nichols
Name(s) of Signer(s)
Helene Dunsen

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



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

WITNESS my hand and official seal.

Signature Rose Marie White

Signature of Notary Public

Place Notary Seal and/or Stamp Above

OPTIONAL

Completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____

Signer's Name: _____

Corporate Officer – Title(s): _____

Corporate Officer – Title(s): _____

Partner – Limited General

Partner – Limited General

Individual Attorney in Fact

Individual Attorney in Fact

Trustee Guardian of Conservator

Trustee Guardian of Conservator

Other: _____

Other: _____

Signer is Representing: _____

Signer is Representing: _____

RESOLUTION NUMBER R- 311894

DATE OF FINAL PASSAGE JUL 17 2018

ITEM # 338B
7/17/18

A RESOLUTION OF THE COUNCIL OF THE CITY OF SAN DIEGO APPROVING COASTAL DEVELOPMENT PERMIT NO. 1975357 AND SITE DEVELOPMENT PERMIT NO. 2118249 FOR EB SCRIPPS COMFORT STATION REPLACEMENT – PROJECT NO. 553076.

WHEREAS, City of San Diego Public Works, Owner/Permittee, filed an application with the City of San Diego for a Coastal Development Permit and a Site Development Permit to remove and replace an existing comfort and pump station originally built in 1967, within the same general location. The project site is a designated Historic Resources Board Site (No. 915). The new 2,700 square foot comfort station includes new Americans with Disabilities Act (ADA) restrooms, toilet rooms, open shower facilities, 1,000 square feet of miscellaneous ADA improvements, and 2,000 square feet of ornamental landscaping. Additional work includes new paving, sidewalks, pathway, and sidewalk repairs. The existing comfort station contains sewer pump station No. 33, which will also be demolished. A new private sewer lift pump will be built to service the La Jolla Bridge Club known as the EB Scripps Comfort Station Replacement project, located within Elizabeth Browning Scripps Park (EB Scripps Park) near 1160 Coast Boulevard, in the La Jolla Community Plan area, in the OP-1-1 (Open Space Park) zone; and

WHEREAS, under Charter section 280(a)(2) this resolution is not subject to veto by the Mayor because this matter requires the City Council to act as a quasi-judicial body and where a public hearing was required by law implicating due process rights of individuals affected by the decision and where the Council was required by law to consider evidence at the hearing and to make legal findings based on the evidence presented; and

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WHEREAS, the matter was set for public hearing on July 17, 2018, testimony having been heard, evidence having been submitted, and the City Council having fully considered the matter and being fully advised concerning the same; NOW, THEREFORE,

BE IT RESOLVED, by the Council of the City of San Diego, that it adopts the following findings with respect to Coastal Development Permit No. 1975357 and Site Development Permit No. 2118249:

A. COASTAL DEVELOPMENT PERMIT- SAN DIEGO MUNICIPAL CODE (SDMC) SECTION 126.0708(a)

1. The proposed coastal development will not encroach upon any existing physical accessway that is legally used by the public or any proposed public accessway identified in a Local Coastal Program land use plan; and the proposed coastal development will enhance and protect public views to and along the ocean and other scenic coastal areas as specified in the Local Coastal Program land use plan. The La Jolla Community Plan and Local Coastal Program designates one coastal access point, via a ramp to Boomer Beach, within EB Scripps Park. The project consists of replacement of an existing comfort station at substantially the same location and the same height within EB Scripps Park and will not impact this access point. Additionally, the project will not significantly impact the visual access points described for the park within the La Jolla Community Plan and Local Coastal Program.

Therefore, construction of the project will not encroach upon any existing physical accessway that is legally used by the public or any proposed public accessway identified in a Local Coastal Program land use plan. Since the proposed coastal development will demolish an existing older structure and build a new structure in the same approximate location it would enhance the visual character and protect public views to, and along the ocean and other scenic coastal areas as specified in the Local Coastal Program land use plan.

2. The proposed coastal development will not adversely affect environmentally sensitive lands. The project proposes to remove an existing comfort station and pump station (No. 33) and construct a new comfort station of the same approximate size and in the same general location on City-owned land near 1160 Coast Boulevard. The new 2,700 square foot comfort station will include Americans with Disabilities Act (ADA) compliant restrooms, toilet rooms and open shower facilities. Additionally, new ADA compliant pathways from Coast Boulevard to the comfort station and to the ocean walkway will also be repaired/constructed as part of the improvements.

The site is located within EB Scripps Park, approximately 130 feet northwest of the edge of La Jolla Cove and north of Coast Boulevard in the La Jolla Community Planning area. Coastal bluffs are located more than 100 feet away from the project site on the north, east, and west. The project site is surrounded by hardscape walkways and landscape lawns, shrubs and large trees and is relatively flat.

The site has been developed and used for a comfort station and pump station for well over fifty years. The project does not propose a substantially different use than the existing use. The improvements will remain in the same general location and the project will maintain the same approximate footprint.

The project is within archaeological and paleontological environmentally sensitive lands (proximity to coastal bluffs) and the site is designated as Historic Resource Board Site (No. 915). Archaeological and paleontological monitoring will be required for ground-disturbing activities during project construction pursuant to Mitigated Negative Declaration No. 553076. Additionally, the project is consistent with the City's Historic Resource Regulations (SDMC Chapter 14, Article 3, Division 2) and the U.S. Secretary of the Interior's Standards.

The site is currently developed and the new construction will follow the new storm water requirements. The improvements are over 100 feet away from the coastal bluffs resource and will not impact the coastal bluffs.

Therefore, with implementation of the mitigation measures identified in Mitigated Negative Declaration No. 553076, conformance with the current storm water regulations, Land Development Code, and building codes, the project will result in minimum disturbance to environmentally sensitive lands and the site is physically suitable for the design and siting of proposed improvements.

3. The proposed coastal development is in conformity with the certified Local Coastal Program land use plan and complies with all regulations of the certified Implementation Program. The project proposes to remove an existing comfort station and pump station (No. 33) and construct a new comfort station of the same approximate size and in the same general location on City-owned land near 1160 Coast Boulevard. The new 2,700 square foot comfort station will include Americans with Disabilities Act (ADA) compliant restrooms, toilet rooms and open shower facilities. Additionally, new ADA compliant pathways from Coast Boulevard to the comfort station and to the ocean walkway will also be constructed as part of the improvements. The project site is located within a park, and is designated as Open Space in the La Jolla Community Plan and is within the OP-1-1 (Open Space-Park) zone.

The project site is designated Historic Resources Board Site (No. 915) and the proposed development was found to be consistent with the City's Historic Resource Regulations (SDMC Chapter 14, Article 3, Division 2) and the U.S. Secretary of the Interior's Standards by City Historic staff. This is also consistent with the Heritage Resources Element of the La Jolla Local Coastal Program. The project also directly supports the goals of the Community Facilities Element of the La Jolla Local Coastal Program, which recommends preservation and expansion of recreational opportunities throughout the community. Further, the project has been reviewed by City staff to ensure that it complies with all regulations of the certified Implementation Plan.

4. For every Coastal Development Permit issued for any coastal development between the nearest public road and the sea or the shoreline of any body of water located within the Coastal Overlay Zone the coastal development is in conformity with the public access and public recreation policies of Chapter 3 of the California Coastal Act. The project

is located between the nearest public road and the Pacific Ocean and proposes to remove an existing comfort station and pump station (No. 33) and construct a new comfort station of the same approximate size and in the same general location on City-owned land near 1160 Coast Boulevard. The new 2,700 square foot comfort station will include Americans with Disabilities Act (ADA) compliant restrooms, toilet rooms and open shower facilities. Additionally, new ADA compliant pathways from Coast Boulevard to the comfort station and to the ocean walkway will also be repaired/constructed as part of the improvements.

Since the project consists of replacement of an existing comfort station at substantially the same location as the existing comfort station within EB Scripps Park; it will not interfere with public coastal access. In fact, the project proposes ADA improvements which will improve access in and around the park to all park guests. The project supports continued public use of EB Scripps Park and facilitates public recreation along the coast by providing facilities. Therefore, the coastal development is in conformity with the public access and public recreation policies of Chapter 3 of the California Coastal Act.

**B. SITE DEVELOPMENT PERMIT – SAN DIEGO MUNICIPAL CODE (SDMC)
SECTION 126.0504**

(a) Findings for all Site Development Permits

1. The proposed development will not adversely affect the applicable land use plan. The project proposes to remove an existing comfort station and pump station (#33) and construct a new comfort station of the same approximate size and in the same general location on City-owned land near 1160 Coast Boulevard above La Jolla Cove within the La Jolla Community Planning area. The project site is located within a park, and is designated as Open Space in the La Jolla Community Plan and is within the OP-1-1 (Open Space-Park) zone. The new 2,700 square foot comfort station will include Americans with Disabilities Act (ADA) compliant restrooms, toilet rooms and open shower facilities. The project also proposes approximately 2,000 square feet of new ornamental landscaping. A new private sewer lift pump station will be constructed serving the adjacent La Jolla Bridge Club with a force main connecting to a new manhole adjacent to the new comfort station.

The project is on a site which was designated as a historic resource due to the designation of the La Jolla Adult Recreation Center Club, which is listed as Historic Resources Board Site No. 915. The new comfort station's features will remain consistent with the U.S. Secretary of the Interior's Standards. The proposed improvements meet several of the La Jolla Community Plan's goals such as the goal of enhancing park areas and providing adequate public facilities. The proposed project is consistent with the General Plan, Community Plan land use and zoning designations, and will serve visitors to the EB Scripps Park. Therefore, the proposed project is consistent with existing uses and will not adversely affect implementation of the applicable land use plan.

2. The proposed development will not be detrimental to the public health, safety, and welfare. The project proposes to remove an existing comfort station and pump station (#33) and construct a new comfort station of the same approximate size and in the same general location on City-owned land near 1160 Coast Boulevard. The new 2,700 square foot

comfort station will include Americans with Disabilities Act (ADA) compliant restrooms, toilet rooms and open shower facilities. Additionally, new ADA compliant pathways from Coast Boulevard to the comfort station and to the ocean walkway will also be repaired/constructed as part of the improvements.

The project has been designed in conformance with all applicable City, state, and federal codes, policies, and regulations whose primary focus is the protection of the public health, safety, and welfare. Further, the proposed improved amenities including the ADA improvements provided by the project will support continued use of the EB Scripps Park. Thus, the project will not be detrimental to public health, safety, or welfare.

3. The proposed development will comply with the regulations of the Land Development Code including any allowable deviations pursuant to the Land Development Code. The project proposes to remove an existing comfort station, pump station (No. 33), and will construct a new comfort station of the same approximate size and in the same general location on City-owned land near 1160 Coast Boulevard.

The existing building was constructed in 1967 to replace a previously existing station and does not appear to be associated with anyone of significance and the facility to be replaced is not architecturally significant. The project site is designated historic due to the La Jolla Adult Recreation Center Club, which is listed as Historic Resources Board Site No. 915. The design and siting of the new comfort station is consistent with the City's Historic Resource Regulations (SDMC Chapter 14, Article 3, Division 2) and the U.S. Secretary of the Interior's Standards.

The issuance of the Coastal and Site Development Permit along with compliance with Mitigated Negative Declaration No. 553076, including the project-specific measures identified in the Mitigation Monitoring and Reporting Program, will ensure that the project complies with all provisions and regulations set forth in the City's Land Development Code. No deviations to the City's Land Development Code are proposed.

(b) Supplemental Findings--Environmentally Sensitive Lands

1. The site is physically suitable for the design and siting of the proposed development and the development will result in minimum disturbance to environmentally sensitive lands. The project proposes to remove an existing comfort station and pump station (No. 33) and construct a new comfort station of the same approximate size and in the same general location on City-owned land near 1160 Coast Boulevard. The new 2,700 square foot comfort station will include Americans with Disabilities Act (ADA) compliant restrooms, toilet rooms and open shower facilities. Additionally, new ADA compliant pathways from Coast Boulevard to the comfort station and to the ocean walkway will also be repaired/constructed as part of the improvements.

The site is located within EB Scripps Park, approximately 130 feet northwest of the edge of La Jolla Cove and north of Coast Boulevard in the La Jolla Community Planning area. Coastal bluffs are located more than 100 feet away from the project site on the north, east, and west. The

project site is surrounded by hardscape walkways and landscape lawns, shrubs and large trees and is relatively flat.

The site has been developed and used for a comfort station and pump station for well over fifty years. The project does not propose a substantially different use than the existing use. The improvements will remain in the same general location and the project will maintain the same approximate footprint.

The project is within archaeological and paleontological environmentally sensitive lands (proximity to coastal bluffs) and the site is designated as Historic Resource Board Site (No. 915). Archaeological and paleontological monitoring will be required for ground-disturbing activities during project construction pursuant to Mitigated Negative Declaration No. 553076. Additionally, the project is consistent with the City's Historic Resource Regulations (SDMC Chapter 14, Article 3, Division 2) and the U.S. Secretary of the Interior's Standards.

The site is currently developed and the new construction will follow the new storm water requirements. The improvements are over 100 feet away from the coastal bluffs resource and therefore will not impact the coastal bluffs.

Therefore, with implementation of the mitigation measures identified in Mitigated Negative Declaration No. 553076, conformance with the current storm water regulations, Land Development Code, and building codes, the project will result in minimum disturbance to environmentally sensitive lands and the site is physically suitable for the design and siting of proposed improvements.

2. The proposed development will minimize the alteration of natural land forms and will not result in undue risk from geologic and erosional forces, flood hazards, or fire hazards. The project proposes to remove an existing comfort station and pump station (No. 33) and construct a new comfort station of the same approximate size and in the same general location on City-owned land near 1160 Coast Boulevard. The new 2,700 square foot comfort station will include Americans with Disabilities Act (ADA) compliant restrooms, toilet rooms and open shower facilities. Additionally, new ADA compliant pathways from Coast Boulevard to the comfort station and to the ocean walkway will also be repaired/constructed as part of the improvements.

Since the site is currently developed with a comfort station and within a developed park, the construction of a new comfort station will not require major alteration of natural landforms. Remedial earthwork will be performed to prepare the site for planned improvements to ensure that the project will not be at risk from geologic hazards. The project is not located on a coastal bluff, and will not be subject to erosional forces. Additionally, the project is not within the 100-year floodplain. The project has been designed in accordance with all applicable building codes and is compliant with earthquake- and fire-safety standards. Therefore, the project will not result in undue risk from geologic or erosional forces, or flood or fire hazards.

3. The proposed development will be sited and designed to prevent adverse impacts on any adjacent environmentally sensitive lands. The project proposes to remove an existing comfort station and pump station (No. 33) and construct a new comfort station of the same approximate size and in the same general location. The improvements are over 100 feet away from the coastal bluffs resource and therefore will not impact the coastal bluffs. Additionally, the new construction will conform to the current storm water regulations, Land Development Code, and building codes. Implementation of best management practices, such as sediment and erosion control, fugitive dust suppression, trash control, and spill prevention, will prevent significant indirect effects on the coast.

The project is within an archaeologically and paleontologically sensitive area; however, excavation will be limited to areas needed for project construction and excavation will be monitored as outlined in Mitigated Negative Declaration No. 553076. Therefore, the proposed development is sited and designed to prevent adverse impacts to any adjacent environmentally sensitive lands.

4. The proposed development will be consistent with the City of San Diego's Multiple Species Conservation Program (MSCP) Subarea Plan. The Multiple Species Conservation Program (MSCP) is a long-term regional plan established to protect special-status species and habitats throughout San Diego County by specifically delineating a Multi-Habitat Planning Area (MHPA) consisting of lands that have been determined to provide the necessary habitat quantity, quality, and connectivity to support the future biodiversity of the County.

The project is not located within or adjacent to the MHPA and will not impact any MSCP designated species. The project is within an existing developed park and will be consistent with the City's MSCP Subarea Plan.

5. The proposed development will not contribute to the erosion of public beaches or adversely impact local shoreline sand supply. The project is located within a coastal park and will minimally increase the amount of impervious surfaces at the site. The site has been designed in accordance with all City standards to minimize runoff and will incorporate best management practices to ensure that construction and operation of the project will not contribute to the erosion of public beaches. The project will serve visitors to the coastal EB Scripps Park and is not located on the coastal sand. Therefore, as proposed the development will not contribute to the erosion of public beaches or adversely impact local shoreline sand supply.

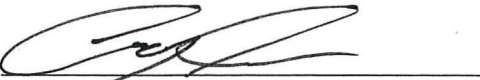
6. The nature and extent of mitigation required as a condition of the permit is reasonably related to, and calculated to alleviate, negative impacts created by the proposed development. The project proposes to remove an existing comfort station and pump station (No. 33) and construct a new comfort station of the same approximate size and in the same general location. A new private sewer lift pump station will be constructed serving the adjacent La Jolla Bridge Club with a force main connecting to a new manhole adjacent to the new comfort station. The work will be conducted within an already developed area, however, there is potential for both archaeological and paleontological discovery. Therefore, both archaeological and paleontological monitoring will be required for all ground disturbing activities during project construction to minimize potentially significant impacts to less than significant pursuant to

Mitigated Negative Declaration No. 553076. Therefore, the nature and extent of mitigation required as a condition of the permit is reasonably related to, and calculated to alleviate, negative impacts created by the proposed development.

The above findings are supported by the minutes, maps and exhibits, all of which are incorporated herein by this reference.

BE IT FURTHER RESOLVED, that Coastal Development Permit No. 1975357 and Site Development Permit No. 2118249 are granted to the City of San Diego Public Works Department, Owner/Permittee, under the terms and conditions set forth in the attached permit which is made a part of this resolution.

APPROVED: MARA W. ELLIOTT, City Attorney

By 
Casey C. Shaw
Deputy City Attorney

CS:als
06/08/2018
Or.Dept:DSD
Doc. No.: 1765998

Attachment: Coastal Development Permit and Site Development Permit

Passed by the Council of The City of San Diego on JUL 17 2018, by the following vote:

Councilmembers	Yeas	Nays	Not Present	Recused
Barbara Bry	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lorie Zapf	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chris Ward	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Myrtle Cole	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mark Kersey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chris Cate	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scott Sherman	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
David Alvarez	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Georgette Gomez	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Date of final passage JUL 17 2018.

(Please note: When a resolution is approved by the Mayor, the date of final passage is the date the approved resolution was returned to the Office of the City Clerk.)

AUTHENTICATED BY:

KEVIN L. FAULCONER
Mayor of The City of San Diego, California.

ELIZABETH S. MALAND
City Clerk of The City of San Diego, California.

(Seal)

By *Stacy Ruedy*, Deputy

Office of the City Clerk, San Diego, California
Resolution Number R- 311894

ORIGINAL

Passed by the Council of The City of San Diego on July 17, 2018, by the following vote:

YEAS: BRY, ZAPF, WARD, COLE, KERSEY, CATE, SHERMAN,
ALVAREZ, GÓMEZ.

NAYS: NONE.

NOT PRESENT: NONE.

RECUSED: NONE.

AUTHENTICATED BY:

KEVIN L. FAULCONER

Mayor of The City of San Diego, California

ELIZABETH S. MALAND

City Clerk of The City of San Diego, California

(Seal)

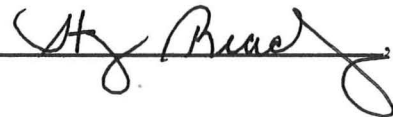
By: Stacy D. Ready, Deputy

I HEREBY CERTIFY that the above and foregoing is a full, true and correct copy of
RESOLUTION NO. R-311894, approved on July 17, 2018. The date of final
passage is July 17, 2018.

ELIZABETH S. MALAND

City Clerk of the City of San Diego, California

(Seal)

By: , Deputy

ORIGINAL

City of San Diego

MEMORANDUM

533-4000

DATE: July 18, 2018
TO: Angela Nazareno (for Helene Deisher)
FROM: City Clerk/Stacy Ready
SUBJECT: Obtaining Signatures of Permittee

EB SCRIPPS COMFORT STATION REPLACEMENT – PROJECT NO. 553076, COASTAL DEVELOPMENT PERMIT NO. 1975357/SITE DEVELOPMENT PERMIT NO. 2118249, granted to CITY OF SAN DIEGO PUBLIC WORKS, OWNER/PERMITTEE was approved by the City Council on July 17, 2018, by Resolution No. R-311894. The City Attorney has prepared the necessary papers.

We are forwarding the original permit to your office. A certified copy of the resolution is attached. Please obtain the signature(s) of the permittee(s). These signatures must be properly notarized.

To ensure that a copy of the Original Permit becomes part of the City Clerk’s Official Records, when preparing the original permit for recordation with the County Recorder, please verify that there is a notation on the upper left-hand corner stating “after recording, please return the permit to the Office of the City Clerk, MS 2A.”

Please deliver a conformed copy of the permit, with the recording stamp, to the Office of the City Clerk, Hearings Section Supervisor, as soon as possible.

A Photocopy of the recorded permit will be sent to your department for your distribution.

R. White

ELIZABETH S. MALAND
City Clerk

By: STACY READY, Deputy

Enclosure (1)
Rev. 10/05
[LXH]FORMS
permit transmittal

ORIGINAL

CALIFORNIA COASTAL COMMISSION

SAN DIEGO COAST DISTRICT OFFICE
7575 METROPOLITAN DRIVE, SUITE 103
SAN DIEGO, CALIFORNIA 92108-4402
(619) 767-2370 FAX (619) 767-2384

WWW.COASTAL.CA.GOV

**NOTIFICATION OF APPEAL PERIOD**

July 24, 2018

To: Helene Deisher
Development Services Department
1222 First Ave MS 301
San Diego, CA 92101

From: Alexander Llerandi

Re: Application No. 6-LJS-18-0789

Please be advised that on July 23, 2018, our office received notice of local action on the coastal development permit described below:

Local Permit #: 1975357

Applicant(s): City of San Diego Public Works Dept., Attn: Elizabeth Schroth-Nichols

Description: Remove and replace existing comfort station and pump station originally built in 1967 with new 2,700 sq. ft. comfort station containing restrooms, showers, and related landscaping, along with new sewer lift pump.

Location: 1160 Coast Blvd, San Diego, CA 92037

Unless an appeal is filed with the Coastal Commission, the action will become final at the end of the Commission appeal period. The appeal period will end at 5:00 PM on August 06, 2018.

Our office will notify you if an appeal is filed.

If you have any questions, please contact me at the address and telephone number shown above.

cc: City of San Diego Public Works Dept., Attn: Elizabeth Schroth-Nichols

ORIGINAL



State of California - Department of Fish and Wildlife
2018 ENVIRONMENTAL FILING FEE CASH RECEIPT
 DFW 753.5a (Rev. 12/15/15) Previously DFG 753.5a

180150

RECEIPT NUMBER: 37-2018- 0660
STATE CLEARINGHOUSE NUMBER (If applicable) ----

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY.

LEAD AGENCY CITY OF SAN DIEGO	LEAD AGENCY EMAIL ----	DATE 7/20/2018
COUNTY/STATE AGENCY OF FILING San Diego County	DOCUMENT NUMBER *20180150*	
PROJECT TITLE EB SCRIPPS COMFORT STATION CDP/SDP		

PROJECT APPLICANT NAME CITY OF SAN DIEGO PUBLIC WORKS	PROJECT APPLICANT EMAIL ----	PHONE NUMBER 619-533-6649
PROJECT APPLICANT ADDRESS 600 B STREET #800	CITY SAN DIEGO	STATE CA
		ZIP CODE 92101

PROJECT APPLICANT (Check appropriate box)

- Local Public Agency
 School District
 Other Special District
 State Agency
 Private Entity

CHECK APPLICABLE FEES:

- | | | | |
|---|------------|----|------------|
| <input type="checkbox"/> Environmental Impact Report (EIR) | \$3,168.00 | \$ | _____ |
| <input checked="" type="checkbox"/> Mitigated/Negative Declaration (MND)(ND) | \$2,280.75 | \$ | \$2,280.75 |
| <input type="checkbox"/> Certified Regulatory Program document (CRP) | \$1,077.00 | \$ | _____ |
|
 | | | |
| <input type="checkbox"/> Exempt from fee | | | |
| <input type="checkbox"/> Notice of Exemption (attach) | | | |
| <input type="checkbox"/> CDFW No Effect Determination (attach) | | | |
| <input type="checkbox"/> Fee previously paid (attach previously issued cash receipt copy) | | | |
| <hr/> | | | |
| <input type="checkbox"/> Water Right Application or Petition Fee (State Water Resources Control Board only) | \$850.00 | \$ | _____ |
| <input checked="" type="checkbox"/> County documentary handling fee | | \$ | \$50.00 |
| <input type="checkbox"/> Other | | \$ | _____ |

PAYMENT METHOD:

- Cash
 Credit
 Check
 Other 0001655171
 TOTAL RECEIVED
 \$ _____ \$2,330.75

SIGNATURE X	AGENCY OF FILING PRINTED NAME AND TITLE San Diego County CARLOS TERAN , Deputy
-----------------------	---



ORIGINAL - PROJECT APPLICANT

COPY - CDFWASB

COPY - LEAD AGENCY

COPY - COUNTY CLERK

DFW 753.5a (Rev. 20151215)

ORIGINAL

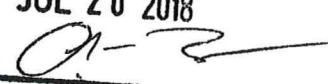
NOTICE OF DETERMINATION

TO: Recorder/County Clerk
P.O. Box 1750, MS A33
1600 Pacific Hwy, Room 260
San Diego, CA 92101-2422

1 8 0 1 5 0

FROM: City of San Diego
Development Services Department
1222 First Avenue, MS 501
San Diego, CA, 92101

Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, CA 95814

FILED
Ernest J. Dronenburg, Jr. Recorder County Clerk
JUL 20 2018
BY 
DEPUTY

PROJECT NUMBER: 553076/S-15035.02.06

STATE CLEARINGHOUSE NUMBER: N/A

PROJECT TITLE: EB SCRIPPS COMFORT STATION CDP/SDP

PROJECT LOCATION: The project is located in Elizabeth Browning Scripps Park near 1160 Coast Blvd., above La Jolla Cove, within the La Jolla Community Planning Area in the City of San Diego, La Jolla, CA 92037. The project site is located within City Council District 1.

PROJECT DESCRIPTION: A COASTAL DEVELOPMENT PERMIT and SITE DEVELOPMENT PERMIT (CIP-5) for the EB Scripps Comfort Station Replacement & Sewer Pump Station 33 demolition project. The existing comfort station servicing EB Scripps Park was built in 1967 and has aged and deteriorated. The project scope includes the removal and replacement of the existing comfort station in accordance with the community approved conceptual plans.

The new, approximately 2,700 square-foot (SF) comfort station, will include Americans with Disabilities Act (ADA) compliant new restrooms, toilet rooms and open shower facilities, and will be located in the same general location as the existing comfort station. The project also proposes approximately 2,000 SF of ornamental landscaping, and new, ADA compliant pathways from Coast Boulevard to the comfort station and the ocean walkway beyond.

The existing comfort station, servicing EB Scripps Park, contains a sewer pump station #33 for the La Jolla Bridge Club which the Public Utilities Department (PUD) will demolish, as well as surrounding concrete walkways and existing landscaping. A new private sewer lift pump station will be constructed serving the adjacent La Jolla Bridge Club with a force main connecting to a new manhole adjacent to the new comfort station. The new comfort station sewer will tie into the new manhole, gravity feeding to the existing Coast Boulevard sewer main. The site is not included on any Government Code listing of hazardous waste sites.

PROJECT APPLICANT: City of San Diego Public Works Department, 600 B Street #800, San Diego, CA 92101. Contact: Elizabeth Schroth-Nichols, 619-533-6649.

This is to advise that, on JUL-17, 2018 the City of San Diego City Council approved the above described project and made the following determinations: R-311893

1. The project in its approved form ___ will, will not, have a significant effect on the environment.
2. ___ An Environmental Impact Report was prepared for this project and certified pursuant to the provisions of CEQA.
 A Mitigated Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
___ An Addendum to Negative Declaration / Mitigated Negative Declaration / Environmental Impact Report No. ___ was prepared for this project pursuant to the provisions of CEQA.

Record of project approval may be examined at the address above.

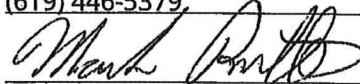
ORIGINAL

3. Mitigation measures X were, were not, made a condition of the approval of the project; and a mitigation, monitoring and reporting program X was, was not, adopted for the project.
4. (EIR only) Findings were, were not, made pursuant to CEQA Guidelines Section 15091.
5. (EIR only) A Statement of Overriding Considerations was, was not, adopted for this project.

It is hereby certified that the final environmental report, including comments and responses, is available to the general public at the office of the Development Services Department, 1222 First Avenue, San Diego, CA 92101.

Analyst: Mark Brunette

Telephone: (619) 446-5379

Filed by: 

Signature

Senior Planner


Title

FILED IN THE OFFICE OF THE COUNTY CLERK

San Diego County on JUL 20 2018

Posted JUL 20 2018 Removed

Returned to agency on

Deputy 

ORIGINAL



San Diego County



Transaction #: 3249082
Receipt #: 2018323161

Ernest J. Dronenburg, Jr.
Assessor/Recorder/County Clerk
1600 Pacific Highway Suite 260
P. O. Box 121750, San Diego, CA 92112-1750
Tel. (619) 237-0502 Fax (619) 557-4155
www.sdarcc.com

Cashier Date: 07/20/2018
Cashier Location: SD

Print Date: 07/20/2018 10:03 am

Payment Summary

Total Fees:	\$2,330.75
Total Payments:	\$2,330.75
Balance:	\$0.00

Payment	
CHECK PAYMENT	\$2,330.75
Total Payments	\$2,330.75
Miscellaneous Item	
FISH & WILDLIFE FEES	
Fees: Fish & Wildlife County Administrative Fee	\$50.00
Fees: Fish & Wildlife Mitigated/Negative Declaration	\$2,280.75
Total Fees Due:	\$2,330.75
Grand Total - All Documents:	\$2,330.75

THE BACK OF THIS CHECK CONTAINS A SECURITY MARK - DO NOT ACCEPT WITHOUT HOLDING AT AN ANGLE TO VERIFY SECURITY MARK

THE CITY OF SAN DIEGO
AMERICA'S FINEST CITY

BANK OF AMERICA
NORTHBROOK, ILLINOIS
COMMERCIAL DISBURSEMENT ACCOUNT

WARRANT CHECK NO. 0001655171

GENERAL
70-2326
719

07/09/2018

AMOUNT
\$ 2,330.75

PAY ** TWO THOUSAND THREE HUNDRED THIRTY AND 75/100 DOLLARS **

TO THE ORDER OF COUNTY OF SAN DIEGO

VOID AFTER 180 DAYS
PAYMENT WARRANTED BY

[Signature]
Chief Financial Officer

[Signature]
City Treasurer

⑈0001655171⑈ ⑆071923284⑆ 7765201321⑈

ORIGINAL

ATTACHMENT F
RESERVED

ATTACHMENT G
CONTRACT AGREEMENT

CONTRACT 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 **EB Scripps Park Comfort Station**; Bid No. **K-19-1767-DBB-3**; in the amount of **THREE MILLION TWO HUNDRED SEVENTEEN THOUSAND SIX HUNDRED FORTY SIX DOLLARS AND TWELVE CENTS (\$3,217,646.12)**, which is comprised of the Base Bid.

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 Instruction to Bidders and the Supplementary Special Provisions (SSP).
 - (d) Phased Funding Schedule Agreement
 - (e) That certain documents entitled **EB Scripps Park Comfort Station**, on file in the office of the Public Works Department as Document No. **S-15035**, 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 **EB Scripps Park Comfort Station**, Bid Number, **K-19-1767-DBB-3** San Diego, California.
3. For such performances, the City shall pay to Contractor the amounts set forth at the times and in the manner and with such additions or deductions as are provided for in this contract, and 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.


CONTRACT AGREEMENT (continued)

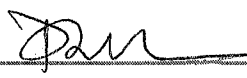
IN WITNESS WHEREOF, this Agreement is signed by the City of San Diego, acting by and through its Mayor or designee, pursuant to Municipal Code 522.3102 authorizing such execution.

THE CITY OF SAN DIEGO

APPROVED AS TO FORM

Mara W. Elliott, City Attorney

By 

By 

Print Name: Claudia Abarca
Deputy Director
Public Works Department

Print Name: Bonny Hsu
Deputy City Attorney

Date: _____

Date: 5/22/19

CONTRACTOR

By 

Print Name: Mark Atefi

Title: President

Date: 2/10/2019

City of San Diego License No.: 2010000550

State Contractor's License No.: 858038

DEPARTMENT OF INDUSTRIAL RELATIONS (DIR) REGISTRATION NUMBER: 1000003093

CERTIFICATIONS AND FORMS

The Bidder, by submitting its electronic bid or proposal, agrees to and certifies under penalty of perjury under the laws of the State of California, that the certifications, forms and affidavits submitted as part of this submission are true and correct.

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.

**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

County of San Diego

The bidder, being first duly sworn, deposes and says that he or she is authorized by 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.

CONTRACTOR CERTIFICATION

DRUG-FREE WORKPLACE

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 the WHITEBOOK, Section 7-13.3, "Drug-Free Workplace", of the project specifications, and that;

This company_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.

CONTRACTOR CERTIFICATION

AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANCE CERTIFICATION

I hereby certify that I am familiar with the requirements of San Diego City Council Policy No. 100-4 regarding the Americans With Disabilities Act (ADA) outlined in the WHITEBOOK, Section 7-13.2, "Americans With Disabilities Act", of the project specifications, and that:

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

CONTRACTOR CERTIFICATION

CONTRACTOR STANDARDS – PLEDGE OF COMPLIANCE

I declare under penalty of perjury that I am authorized to make this certification on behalf of the company submitting this bid/proposal, that as Contractor, I am familiar with the requirements of City of San Diego Municipal Code § 22.3004 regarding Contractor Standards as outlined in the WHITEBOOK, Section 7-13.4, ("Contractor Standards"), of the project specifications, and that Contractor has complied with those requirements.

I further certify that each of the Contractor's subcontractors has completed a Pledge of Compliance attesting under penalty of perjury of having complied with City of San Diego Municipal Code § 22.3004.

CONTRACTOR CERTIFICATION

EQUAL BENEFITS ORDINANCE CERTIFICATION

I declare under penalty of perjury that I am familiar with the requirements of and in compliance with the City of San Diego Municipal Code § 22.4300 regarding Equal Benefits Ordinance.

CONTRACTOR CERTIFICATION

EQUAL PAY ORDINANCE CERTIFICATION

Contractor shall comply with the Equal Pay Ordinance (EPO) codified in the San Diego Municipal Code (SDMC) at section 22.4801 through 22.4809, unless compliance is not required based on an exception listed in SDMC section 22.4804.

Contractor shall require all of its subcontractors to certify compliance with the EPO in their written subcontracts.

Contractor must post a notice informing its employees of their rights under the EPO in the workplace or job site.

By signing this Contract with the City of San Diego, Contractor acknowledges the EPO requirements and pledges ongoing compliance with the requirements of SDMC Division 48, section 22.4801 et seq., throughout the duration of this Contract.

AFFIDAVIT OF DISPOSAL

(To be submitted upon completion of Construction pursuant to the contracts Certificate of Completion)

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

EB Scripps Park Comfort Station
(Project Title or Task)

as particularly described in said contract and identified as Bid No. **K-19-1767-DBB-3**; SAP No. (WBS/IO/CC) **S-15035**; 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 _____, _____.

By: _____
Contractor

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

LIST OF SUBCONTRACTORS

***** PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY *** TO BE SUBMITTED IN ELECTRONIC FORMAT ONLY *** SEE INSTRUCTIONS TO BIDDERS FOR FURTHER INFORMATION**

In accordance with the requirements of the "Subletting and Subcontracting Fair Practices Act", Section 4100, of the California Public Contract Code (PCC), the Bidder is to list below the name, address and license number of each Subcontractor who will perform work, labor, render services or specially fabricate and install a portion [type] of the work or improvement, in an amount of or in excess of 0.5% of the Contractor's total Bid. Failure to comply with this requirement may result in the Bid being rejected as non-responsive. The Contractor is to list only one Subcontractor for each portion of the Work. The Bidder's attention is directed to the Special Provisions - General; Paragraph 2-3 Subcontracts, which stipulates the percentage of the Work to be performed with the Bidder's own forces. The Bidder is to also list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, SDB, WoSB, HUBZone, and SDVOSB Subcontractors for which the Bidders are seeking recognition towards achieving any mandatory, voluntary, or both subcontracting participation percentages.

NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	DIR Registration Number	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB [Ⓞ]	WHERE CERTIFIED [Ⓜ]	CHECK IF JOINT VENTURE PARTNERSHIP
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____								
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____								

- Ⓛ 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 | | |
- Ⓜ 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 | | |
| 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

***** PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY *** TO BE SUBMITTED IN ELECTRONIC FORMAT ONLY *** SEE INSTRUCTIONS TO BIDDERS FOR FURTHER INFORMATION**

NAME, ADDRESS AND TELEPHONE NUMBER OF VENDOR/SUPPLIER	MATERIALS OR SUPPLIES	DIR Registration Number	DOLLAR VALUE OF MATERIAL OR SUPPLIES	SUPPLIER (Yes/No)	MANUFACTURER (Yes/No)	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB ^①	WHERE CERTIFIED ^②
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							

- 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 | | |
| 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.

ELECTRONICALLY SUBMITTED FORMS

THE FOLLOWING FORMS MUST BE SUBMITTED IN PDF FORMAT WITH BID SUBMISSION

The following forms are to be completed by the bidder and submitted (uploaded) electronically with the bid in PlanetBids.

- A. BID BOND – See Instructions to Bidders, Bidders Guarantee of Good Faith (Bid Security) for further instructions**
- B. CONTRACTOR’S CERTIFICATION OF PENDING ACTIONS**
- C. MANDATORY DISCLOSURE OF BUSINESS INTERESTS FORM**
- D. SUBCONTRACTOR LISTING (OTHER THAN FIRST TIER)**

Bids will not be accepted until ALL the above-named forms are submitted as part of the bid submittal

BID BOND

**See Instructions to Bidders, Bidder Guarantee of Good Faith
(Bid Security)**

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

Bid No. K-19-1767-DBB-3; EB Scripps Park Comfort Station

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 8th day of January, 20 19

Atlas Development Corporation (SEAL)
(Principal)

Great American Insurance Company (SEAL)
(Surety)

By: [Signature]
(Signature)

By: [Signature]
(Signature)
Tara Bacon, Attorney-in-Fact

(SEAL AND NOTARIAL ACKNOWLEDGEMENT OF SURETY)

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT
CIVIL CODE § 1189

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.


State of California
County of San Diego)

On January 8, 2019 before me, Maria Hallmark, Notary Public
(insert name and title of the officer)

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

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

WITNESS my hand and official seal.

Signature 

(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 SIX

No. 0 15079

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	ALL OF	ALL
GEOFFREY SHELTON	SAN DIEGO,	\$100,000,000.00
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 15TH day of AUGUST 2017

Attest

GREAT AMERICAN INSURANCE COMPANY



My L C. B.
Assistant Secretary

David C. Kitchin
Divisional Senior Vice President

STATE OF OHIO, COUNTY OF HAMILTON - ss:

DAVID C. KITCHIN (877-377-2405)

On this 15TH day of AUGUST, 2017, 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.



Susan A. Kohorst
Notary Public, State of Ohio
My Commission Expires 05-18-2020

Susan A Kohorst

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 Divisional 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 _____ day of _____

JAN 0 8 2019



My L C. B.
Assistant Secretary

CONTRACTOR'S CERTIFICATION OF PENDING ACTIONS

As part of its bid or proposal (Non-Price Proposal in the case of Design-Build contracts), the Bidder shall provide to the City a list of all instances within the past 10 years where a complaint was filed or pending against the Bidder in a legal or administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers, and a description of the status or resolution of that complaint, including any remedial action taken.

CHECK ONE BOX ONLY.

- The undersigned certifies that within the past 10 years the Bidder has NOT been the subject of a complaint or pending action in a legal administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers.
- The undersigned certifies that within the past 10 years the Bidder has been the subject of a complaint or pending action in a legal administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers. A description of the status or resolution of that complaint, including any remedial action taken and the applicable dates is as follows:

DATE OF CLAIM	LOCATION	DESCRIPTION OF CLAIM	LITIGATION (Y/N)	STATUS	RESOLUTION/REMEDIAL ACTION TAKEN

Contractor Name: Atlas Development Corporation

Certified By Mark Atefi Title President
Name

M Atefi Date 1/24/19
Signature

USE ADDITIONAL FORMS AS NECESSARY

Mandatory Disclosure of Business Interests Form

BIDDER/PROPOSER INFORMATION

Atlas Development Corporation
 Legal Name DBA
991C Lomas Santa Fe Dr #115, Solana Beach, CA 92075
 Street Address City State Zip
Mark Atefi, President (619) 200-0902 (858) 935-9166
 Contact Person, Title Phone Fax

Provide the name, identity, and precise nature of the interest* of all persons who are directly or indirectly involved** in this proposed transaction (SDMC § 21.0103).

* The precise nature of the interest includes:

- the percentage ownership interest in a party to the transaction,
- the percentage ownership interest in any firm, corporation, or partnership that will receive funds from the transaction,
- the value of any financial interest in the transaction,
- any contingent interest in the transaction and the value of such interest should the contingency be satisfied, and
- any philanthropic, scientific, artistic, or property interest in the transaction.

** Directly or indirectly involved means pursuing the transaction by:

- communicating or negotiating with City officers or employees,
- submitting or preparing applications, bids, proposals or other documents for purposes of contracting with the City, or
- directing or supervising the actions of persons engaged in the above activity,

<u>Zohreh Sadatrafiei</u>	<u>Vice President</u>
Name	Title/Position
<u>Del Mar, CA</u>	<u>Harmonium, Inc.</u>
City and State of Residence	Employer (if different than Bidder/Proposer)
<u>50% owner in bidder company</u>	
Interest in the transaction	
<u>Mark Atefi</u>	<u>President</u>
Name	Title/Position
<u>Del Mar, CA</u>	<u>—</u>
City and State of Residence	Employer (if different than Bidder/Proposer)
<u>50% owner in bidder company</u>	
Interest in the transaction	

* Use Additional Pages if Necessary *

Under penalty of perjury under the laws of the State of California, I certify that I am responsible for the completeness and accuracy of the responses contained herein, and that all information provided is true, full and complete to the best of my knowledge and belief. I agree to provide written notice to the Mayor or Designee within five (5) business days if, at any time, I learn that any portion of this Mandatory Disclosure of Business Interests Form requires an updated response. Failure to timely provide the Purchasing Agent with written notice is grounds for Contract termination.

Mark Atefi M Atefi 1,24/19
 Print Name, Title Signature Date

Failure to sign and submit this form with the bid/proposal shall make the bid/proposal non-responsive. In the case of an informal solicitation, the contract will not be awarded unless a signed and completed Mandatory Disclosure of Business Interests Form is submitted.

SUBCONTRACTOR LISTING
(OTHER THAN FIRST TIER)


Pursuant to California Senate Bill 96 and in accordance with the requirements of Labor Code sections 1771.1 and 1725.5, by submitting a bid or proposal to the City, Contractor is certifying that he or she has verified that all subcontractors used on this public work project are registered with the California Department of Industrial Relations (DIR). **The Bidder is to list below the name, address, license number, DIR registration number of any (known tiered subcontractor) - who will perform work, labor, render services or specially fabricate and install a portion [type] of the work or improvement pursuant to the contract. If none are known at this time, mark the table below with non-applicable (N/A).**

NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	DIR REGISTRATION NUMBER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK
Name: <u>Leslie Skylights, Inc.</u> Address: <u>1601 Ord Way</u> City: <u>Oceanside,</u> State: <u>CA</u> Zip: <u>92056</u> Phone: <u>760-758-2080</u> Email: <u>Larry@leslieskylights.net</u>	<u>Constructor</u>	<u>1000023795</u>	<u>829132</u>	<u>Skylights</u>
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____				
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____				
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____				

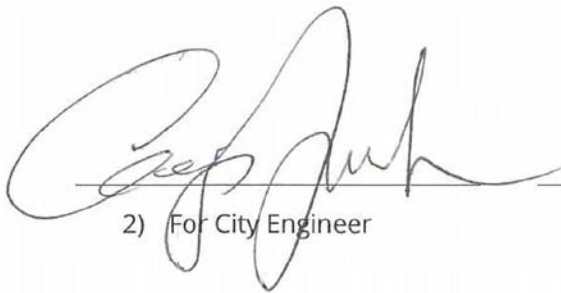
**** USE ADDITIONAL FORMS AS NECESSARY ****

ENGINEER OF WORK

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


_____ 1-14-19
1) Registered Architect Date




_____ 1-14-19
2) For City Engineer Date



A. CHANGES TO CONTRACT DOCUMENTS

The following changes to the Contract Documents are hereby made effective as though originally issued with the bid package. Bidders are reminded that all previous requirements to this solicitation remain in full force and effect.

THE SUBMITTAL DATE FOR THIS PROJECT HAS BEEN **EXTENDED AS STATED ON THE COVER PAGE.**

B. BIDDER'S QUESTIONS

- Q1. Could the city please verify the current location for the AT&T Telephone Utility Point of Connection mentioned in Keynote 3 of E1.1.
- A1. Please see C1.3 keynote 24 for correct location of AT&T Telephone Utility Point of Connection.
- Q2. Please verify location of mirrors in the plan, elevation do not show it but G1.2 calls out mirrors.
- A2. There are no mirrors on the project. The typical mounting elevations are a standard detail that included mirrors just in case.
- Q3. There is a note at C1/A4.2 indicating that the columns are stainless steel but the specifications states that the columns have to be hot-dip galvanized. Could you please confirm whether or not the structural steel columns have to be stainless steel?
- A3. All structural steel, including HSS columns, plates, anchor rods, and bolts shall be stainless steel (not hot-dip galvanized) conforming to the "Structural Stainless Steel" notes on sheet s0.1, and shall be type 316 HSS columns shall conform to ASTM A554 and A1016, Type 316. For stainless steel, delete hot-dip galvanizing.
- Q4. The spec for Structural Steel is calling for AISC certified plant and AISC certified erector. There's not enough steel in this project to warrant an AISC plant and AISC erector. Please waive the requirement for AISC certified fabricator and erector on this project.
- A4. 05 12 00 1.8A – The requirement for an AISC certified plant and erector may be waived. Fabrication must be performed by a City of San Diego approved shop.

- Q5. Spec section 033511 2.06.B calls for preformed plastic form liners but the basis of design is calling for "Stamps". Stamps are not made for vertical cast in place walls. The stamps are made to overlap each other to create a "Seamless" pattern. In a Cast-in-Place wall you will see the seams of each stamp. Please clarify the intent is to use a horizontal stamp in a vertical application and that the seams between each stamp will show.
- A5. These are form liners, not stamps. The Concrete Finishes (03 35 11) and Finish Schedule (09 00 00) sections of the Technical specifications have been edited to reflect this. See Section C, Supplementary Special Provisions, Sub-items 1 and 3 on pages 4 and 5 of this addendum for further detail.
- Q6. The paint spec 09 96 00 indicates to paint the stainless steel columns but stainless steel is a finished product not to be painted. All the details call out columns per plan. One wall section (C1/A4.2) calls out stainless steel. A note on S0.1 states all stainless steel is to be uncoated unless otherwise indicated and the spec indicates it gets coated. Please clarify are the steel columns all stainless steel. If the columns are stainless steel, please clarify they don't get paint or any coatings.
- A6. The Columns and structural steel are to be Stainless Steel. The specification for 099600 is for High Performance coatings (not typical painting). The finish schedule identifies the specified "Coroflon" coating which is for coating stainless steel to be applied to the columns and misc. metals. The salt air environment is too corrosive for typical finishes.

C. SUPPLEMENTARY SPECIAL PROVISIONS

1. To Technicals, Section 03 35 11, Concrete Finishes, pages 81 through 84, **DELETE** in its entirety and **SUBSTITUTE** with pages 6 through 9 of this addendum.
2. To Technicals, Section 05 12 00, Structural Steel Framing, pages 89 through 96, **DELETE** in its entirety and **SUBSTITUTE** with pages 10 through 16 of this addendum.

3. To Technicals, Section 09 00 00, Finish Schedule, pages 172 through 173, **DELETE** in its entirety and **SUBSTITUTE** with pages 17 through 18 of this addendum.

D. PLANS

1. To Drawing Sheet Numbers 39742-31-D, 39742-51-D, 39742-53-D, 39742-54-D, 39742-57-D, 39742-58-D, 39742-59-D, 39742-61-D, and 39742-62-D, **DELETE** in their entirety and **REPLACE** with pages 19 through 27 of this addendum.

James Nagelvoort, Director
Public Works Department

Dated: *January 14, 2019*
San Diego, California

JN/JB/cc

SECTION 03 35 11

CONCRETE FINISHES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface treatments for concrete.
- B. Concrete texture form liners.

1.02 RELATED REQUIREMENTS

- A. Section 03 30 00 Cast-in-Place Concrete: Finishing of concrete surface to tolerance; floating, troweling, and similar operations; curing.
- B. Section 03 30 00 Cast-in-Place Concrete: Curing compounds that also function as sealers.
- C. Section 09 91 13 "Painting" for Graffiti Coating at concrete walls.
- D. "City of San Diego White Book" and "Supplementary Special Provisions to City of San Diego White Book" for all sidewalks, paving, drives, and curbs.

1.03 SUBMITTALS

- A. Product Data: Manufacturer's published data on each finishing product, including information on compatibility of different products and limitations.
- B. *Manufacturer's Certification*: Provide document signed by manufacturer or manufacturer's representative certifying that the materials to be installed comply with the requirements of this specification.

1.04 MOCK-UP

- A. See Section 03 30 00 Cast-In-Place Concrete for mock up schedule.
- B. Each finish and repair type is to be demonstrated on mock up.

PART 2 PRODUCTS

2.01 CONCRETE FINISH APPLICATIONS

- A. Unless otherwise indicated, all concrete floors / walls are to be finished using the following:
- C. Penetrating Clear Sealer

2.02 DENSIFIERS AND HARDENERS

- A. Liquid Densifier/Hardener: Penetrating chemical compound that reacts with concrete, filling the pores and dustproofing; for application to concrete after set.
 - 1. Composition: Lithium silicate.
 - 2. Products:

- a. W.R. Meadows, Inc; Liqui-Hard Ultra: www.wrmeadows.com/sle.
- b. Substitutions: Or Approved Equal.

2.03 CONCRETE WALL SEALERS

- A. Penetrating Surface Sealer: Transparent, non-yellowing, water- or solvent-based coating.
 - 1. Composition: Silicate.
 - 2. Products:
 - a. Sika; SikaGuard 701W
 - b. W.R. Meadows, Inc; Intraguard
 - c. Aquaseal ME12 for vertical applications
 - c. Substitutions: Or Approved Equal.

2.04 DECORATIVE TOP SURFACE FLOOR SLABS

- A. Public area concrete floor – Integrally colored concrete with top-surface retarder on poured-in-place flatwork: walkable, decorative texture, with an exposed light aggregate finish.
 - 1. Composition: Water based retarder.
 - 2. Retarder Products:
 - a. Grace Top-Cast Top Surface Retarder by GCP Applied Technologies
 - b. Substitutions: Or Approved Equal.
 - 3. Color to match exterior paving - See Landscaping Construction Documents for additional information.
- B. Storage rooms, plumbing and trash rooms – Trowel finish per section 03 30 00

2.05 FORM WORK WITH LINERS - GENERAL

- A. Provide concrete form liners, accessories, shoring, and bracing as required to accomplish cast-in-place concrete work.
- B. Concrete form liners to be full height, and full length / width of walls / building breaks.
- C. Design and construct to provide resultant concrete that conforms to design with respect to shape, lines, and dimensions.

2.06 REMOVABLE PREFABRICATED FORMS

- A. Smooth Plywood Formed, See section 03 30 00 3.8.B
 - 1. Concrete finish Texture 1: Smooth formed
 - 2. Concrete finish Texture 4: Smooth formed (polished with exposed light aggregate finish).
 - 3. Concrete finish Texture 5: Smooth formed (polished with exposed medium aggregate finish).
- B. Preformed Plastic Form liners: Thermoplastic polystyrene form liner, tight fitting, stiffened to support weight of concrete without deflection detrimental to tolerances and appearance of finished surfaces.
 - 1. Concrete Finish Texture 2: Board Formed, vertical running wood pattern with narrow "fin" joints 4" oc.
 - a. Basis of design: US Formliners 2/97 "Kongo".
 - 2. Concrete Finish Texture 3: Sea Shell Texture, Light sand texture with Sea Shell impressions.
 - a. Basis of design: Proline "Seamless Coquina Stone with Sea Shells".

2.07 FORMWORK ACCESSORIES

- A. Form Release Agent: Capable of releasing forms from hardened concrete without staining or discoloring concrete or forming bugholes and other surface defects, compatible with concrete and form materials, and not requiring removal for satisfactory bonding of coatings to be applied.

PART 3 EXECUTION:

THIS SECTION IS SUPPLEMENTAL TO SECTION 03 30 00 FOR SPECIAL FINISH CONCRETE

3.01 ERECTION - FORMWORK

- A. Arrange and assemble form liners patterns to permit dismantling and stripping. Do not damage concrete during stripping. Permit removal of remaining principal shores.
- B. Align joints and make watertight. Keep form joints to a minimum.
- C. Coordinate this section with other sections of work that require attachment of components to formwork.
- D. No horizontal seam joints in form liner.

3.02 APPLICATION - FORM RELEASE AGENT

- A. Apply form release agent on formwork in accordance with manufacturer's recommendations.

3.03 FORM REMOVAL

- A. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads.
- B. See Section 03 33 00 Cast-In-Place Concrete.

3.04 EXAMINATION

- A. Verify that wall surfaces are acceptable to receive the work of this section.
- B. Verify that flaws in concrete have been patched and joints filled with methods and materials suitable for further finishes.
- B. See Section 03 33 00 Cast-In-Place Concrete.

3.03 GENERAL

- A. Apply materials in accordance with manufacturer's instructions.

3.04 COATING APPLICATION

- A. Verify that surface is free of previous coatings, sealers, curing compounds, water repellents, laitance, efflorescence, fats, oils, grease, wax, soluble salts, residues from cleaning agents, and other impediments to adhesion.
- B. Protect adjacent non-coated areas from drips, overflow, and overspray; immediately remove excess material.

- C. Apply coatings in accordance with manufacturer's instructions, matching approved mock-ups for color, special effects, sealing and workmanship.

3.05 CONCRETE POLISHING

- A. Execute using materials, equipment, and procedures specified by manufacturer, using manufacturer approved installer.
 - 1. Final Polished Sheen: Satin finish; other sheens are included as comparison to illustrate required sheen; final sheen is before addition of any sealer or coating, regardless of whether that is also specified or not.
 - 2. Satin Finish: Reflecting images from side lighting.
- B. Protect finished surface as required and as recommended by manufacturer of polishing system.

3.06 CONCRETE FINISH SCHEDULE

- A. Refer to Construction Documents for additional information, including indication of finish locations.
 - 1. Concrete Finish Type 1: Storage, Plumbing, and Trash Room interior walls and Benches
 - a. Integrally color concrete
 - b. Waterproof additive
 - c. Plywood formed
 - d. See Section 03 30 00 3.8.B.
 - 2. Concrete Finish Type 2: Typical upper exterior wall
 - a. Integrally colored concrete
 - b. Waterproof additive
 - c. Sealer
 - d. Form liner – concrete finish texture #2: vertical board form
 - 3. Concrete Finish Type 3: Typical lower exterior wall
 - a. Integrally colored concrete
 - b. Waterproof additive
 - c. Sealer
 - d. Form liner – concrete finish texture #3: sandblast finish with seashell form.
 - 4. Concrete Finish Type 4: Exterior Upper Shower and Interior Showers
 - a. Integrally colored concrete
 - b. Waterproof additive
 - c. Densifier/hardener
 - d. Grind and polish to exposed light aggregate
 - e. Satin finish with sealer
 - 5. Concrete Finish type 5: Exterior Lower Shower
 - a. Integrally colored concrete
 - b. Waterproof additive
 - c. Densifier / hardener
 - d. Grind and polish to exposed medium aggregate
 - e. Densified satin finish with sealer
- B. All walls exposed to public view to receive graffiti coating. See Section 09 91 13.

END OF SECTION

SECTION 05 12 00
STRUCTURAL STEEL FRAMING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Structural steel.
 - 2. Grout.
- B. Related Requirements:
 - 1. Section 055000 "Metal Fabrications" for miscellaneous steel fabrications and other steel items not defined as structural steel.

1.3 DEFINITIONS

- A. Structural Steel: Elements of the structural frame indicated on Drawings and as described in AISC 303, "Code of Standard Practice for Steel Buildings and Bridges."
- B. Seismic-Load-Resisting System: Elements of structural-steel frame designated as "SLRS" or along grid lines designated as "SLRS" on Drawings, including columns, beams, and braces and their connections.
- C. Demand Critical Welds: Those welds, the failure of which would result in significant degradation of the strength and stiffness of the Seismic-Load-Resisting System and which are indicated as "Demand Critical" or "Seismic Critical" on Drawings.

1.4 COORDINATION

- A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.
- B. Coordinate installation of anchorage items to be embedded in or attached to other construction without delaying the Work. Provide setting diagrams, sheet metal templates, instructions, and directions for installation.

Addendum 'A'

1.5 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.6 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Sustainable Design Submittals:
- C. Shop Drawings: Show fabrication of structural-steel components.
 - 1. Include details of cuts, connections, splices, camber, holes, and other pertinent data.
 - 2. Include embedment Drawings.
 - 3. Indicate welds by standard AWS symbols, distinguishing between shop and field welds, and show size, length, and type of each weld. Show backing bars that are to be removed and supplemental fillet welds where backing bars are to remain.
 - 4. Indicate type, size, and length of bolts, distinguishing between shop and field bolts. Identify pretensioned and slip-critical, high-strength bolted connections.
 - 5. Identify members and connections of the Seismic-Load-Resisting System.
 - 6. Identify demand critical welds.
- D. Welding Procedure Specifications (WPSs) and Procedure Qualification Records (PQRs): Provide according to AWS D1.1, "Structural Welding Code – Steel" or AWS D1.6, "Structural Welding Code – Stainless Steel," for each welded joint qualified by testing, including the following:
 - 1. Power source (constant current or constant voltage).
 - 2. Electrode manufacturer and trade name, for demand critical welds.
- E. Delegated-Design Submittal: For structural-steel connections indicated to comply with design loads, include analysis data.

1.7 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For testing agency.
- B. Welding certificates.
- C. Paint Compatibility Certificates: From manufacturers of topcoats applied over shop primers, certifying that shop primers are compatible with topcoats.
- D. Mill test reports for structural steel, including chemical and physical properties.
- E. Product Test Reports: For the following:
 - 1. Bolts, nuts, and washers including mechanical properties and chemical analysis.
 - 2. Shop primers.
 - 3. Nonshrink grout.
- F. Survey of existing conditions.

Addendum 'A'

- G. Source quality-control reports.
- H. Field quality-control and special inspection reports.

1.8 QUALITY ASSURANCE

- A. Fabricator Qualifications: An approved fabricator, as defined by City of San Diego Development Services Department Technical Bulletin BLDG-17-6.
- B. Shop-Painting Applicators: Qualified according to AISC's Sophisticated Paint Endorsement P3 or to SSPC-QP 3, "Standard Procedure for Evaluating Qualifications of Shop Painting Applicators."
- C. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1, "Structural Welding Code – Steel" or AWS D1.6, "Structural Welding Code – Stainless Steel."
- D. Comply with applicable provisions of the following specifications and documents:
 - 1. AISC 303.
 - 2. AISC 341 and AISC 341s1.
 - 3. AISC 360.
 - 4. RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Store materials to permit easy access for inspection and identification. Keep steel members off ground and spaced by using pallets, dunnage, or other supports and spacers. Protect steel members and packaged materials from corrosion and deterioration.
 - 1. Do not store materials on structure in a manner that might cause distortion, damage, or overload to members or supporting structures. Repair or replace damaged materials or structures as directed.
- B. Store fasteners in a protected place in sealed containers with manufacturer's labels intact.
 - 1. Fasteners may be repackaged provided Owner's testing and inspecting agency observes repackaging and seals containers.
 - 2. Clean and relubricate bolts and nuts that become dry or rusty before use.
 - 3. Comply with manufacturers' written recommendations for cleaning and lubricating fasteners and for retesting fasteners after lubrication.

PART 2 - PRODUCTS

2.1 STRUCTURAL STEEL MATERIALS

- A. Stainless Steel Structural-Steel Shapes, Plates, and Bars: ASTM A 276 or ASTM A 1069, Type 316.

Addendum 'A'

- B. Stainless Steel Hollow Structural Sections: ASTM A 554 and ASTM A1016, Type 316.
- C. Welding Electrodes: Comply with AWS requirements.

2.2 BOLTS, CONNECTORS, AND ANCHORS

- A. Bolts and Threaded Rods: ASTM A 193, Grade BM.
 - 1. Nuts: ASTM A 194 , Grade B8M.
 - 2. Washers: Stainless Steel Type 316.

2.3 GROUT

- A. Metallic, Shrinkage-Resistant Grout: ASTM C 1107/C 1107M, factory-packaged, metallic aggregate grout, mixed with water to consistency suitable for application and a 30-minute working time.
- B. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107/C 1107M, factory-packaged, nonmetallic aggregate grout, noncorrosive and nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

2.4 FABRICATION

- A. Structural Steel: Fabricate and assemble in shop to greatest extent possible. Fabricate according to AISC 303, "Code of Standard Practice for Steel Buildings and Bridges," and to AISC 360.
 - 1. Camber structural-steel members where indicated.
 - 2. Fabricate beams with rolling camber up.
 - 3. Identify high-strength structural steel according to ASTM A 6/A 6M and maintain markings until structural steel has been erected.
 - 4. Mark and match-mark materials for field assembly.
 - 5. Complete structural-steel assemblies, including welding of units, before starting shop-priming operations.
- B. Thermal Cutting: Perform thermal cutting by machine to greatest extent possible.
 - 1. Plane thermally cut edges to be welded to comply with requirements in AWS D1.1 or AWS D1.6.
- C. Bolt Holes: Cut, drill, mechanically thermal cut, or punch standard bolt holes perpendicular to metal surfaces.
- D. Finishing: Accurately finish ends of columns and other members transmitting bearing loads.
- E. Welded Door Frames: Build up welded door frames attached to structural-steel frame. Weld exposed joints continuously and grind smooth. Plug-weld fixed steel bar stops to frames. Secure removable stops to frames with countersunk machine screws, uniformly spaced not more than 10 inches (250 mm) o.c. unless otherwise indicated.

Addendum 'A'

- F. Holes: Provide holes required for securing other work to structural steel and for other work to pass through steel members.
 - 1. Cut, drill, or punch holes perpendicular to steel surfaces. Do not thermally cut bolt holes or enlarge holes by burning.
 - 2. Baseplate Holes: Cut, drill, mechanically thermal cut, or punch holes perpendicular to steel surfaces.
 - 3. Weld threaded nuts to framing and other specialty items indicated to receive other work.

2.5 SHOP CONNECTIONS

- A. Weld Connections: Comply with AWS D1.1 or AWS D1.6 for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.
 - 1. Assemble and weld built-up sections by methods that maintain true alignment of axes without exceeding tolerances in AISC 303 for mill material.

2.6 SOURCE QUALITY CONTROL

- A. Welded Connections: Visually inspect shop-welded connections according to AWS D1.1 or AWS D1.6 and the following inspection procedures, at testing agency's option:
 - 1. Liquid Penetrant Inspection: ASTM E 165.
 - 2. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration are not accepted.
 - 3. Ultrasonic Inspection: ASTM E 164.
 - 4. Radiographic Inspection: ASTM E 94.
- B. Prepare test and inspection reports.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify, with certified steel erector present, elevations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments for compliance with requirements.
 - 1. Prepare a certified survey of existing conditions. Include bearing surfaces, anchor rods, bearing plates, and other embedments showing dimensions, locations, angles, and elevations.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

Addendum 'A'

3.2 PREPARATION

- A. Provide temporary shores, guys, braces, and other supports during erection to keep structural steel secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural steel, connections, and bracing are in place unless otherwise indicated.
 - 1. Do not remove temporary shoring supporting composite deck construction until cast-in-place concrete has attained its design compressive strength.

3.3 ERECTION

- A. Set structural steel accurately in locations and to elevations indicated and according to AISC 303 and AISC 360.
- B. Baseplates Bearing Plates and Leveling Plates: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.
 - 1. Set plates for structural members on wedges, shims, or setting nuts as required.
 - 2. Weld plate washers to top of baseplate.
 - 3. Snug-tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.
 - 4. Promptly pack grout solidly between bearing surfaces and plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.
- C. Maintain erection tolerances of structural steel within AISC 303, "Code of Standard Practice for Steel Buildings and Bridges."
- D. Align and adjust various members that form part of complete frame or structure before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that are in permanent contact with members. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.
 - 1. Level and plumb individual members of structure.
- E. Splice members only where indicated.
- F. Do not use thermal cutting during erection.
- G. Do not enlarge unfair holes in members by burning or using drift pins. Ream holes that must be enlarged to admit bolts.

3.4 FIELD CONNECTIONS

- A. Weld Connections: Comply with AWS D1.1 or D1.6 for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.

Addedum 'A'

1. Comply with AISC 303 and AISC 360 for bearing, alignment, adequacy of temporary connections, and removal of paint on surfaces adjacent to field welds.
2. Remove backing bars or runoff tabs where indicated, back gouge, and grind steel smooth.
3. Assemble and weld built-up sections by methods that maintain true alignment of axes without exceeding tolerances in AISC 303, "Code of Standard Practice for Steel Buildings and Bridges," for mill material.

3.5 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- B. Welded Connections: Visually inspect field welds according to AWS D1.1 or D1.6.

END OF SECTION 05 12 00

Addendum 'A'

PROJECT: EB Scripps Park Comfort Station
PROJECT NO.: 14010.60
DATE: January 25, 2018

Addendum 'A'

FINISH SCHEDULE

EB Scripps Park Comfort Station

EXTERIOR

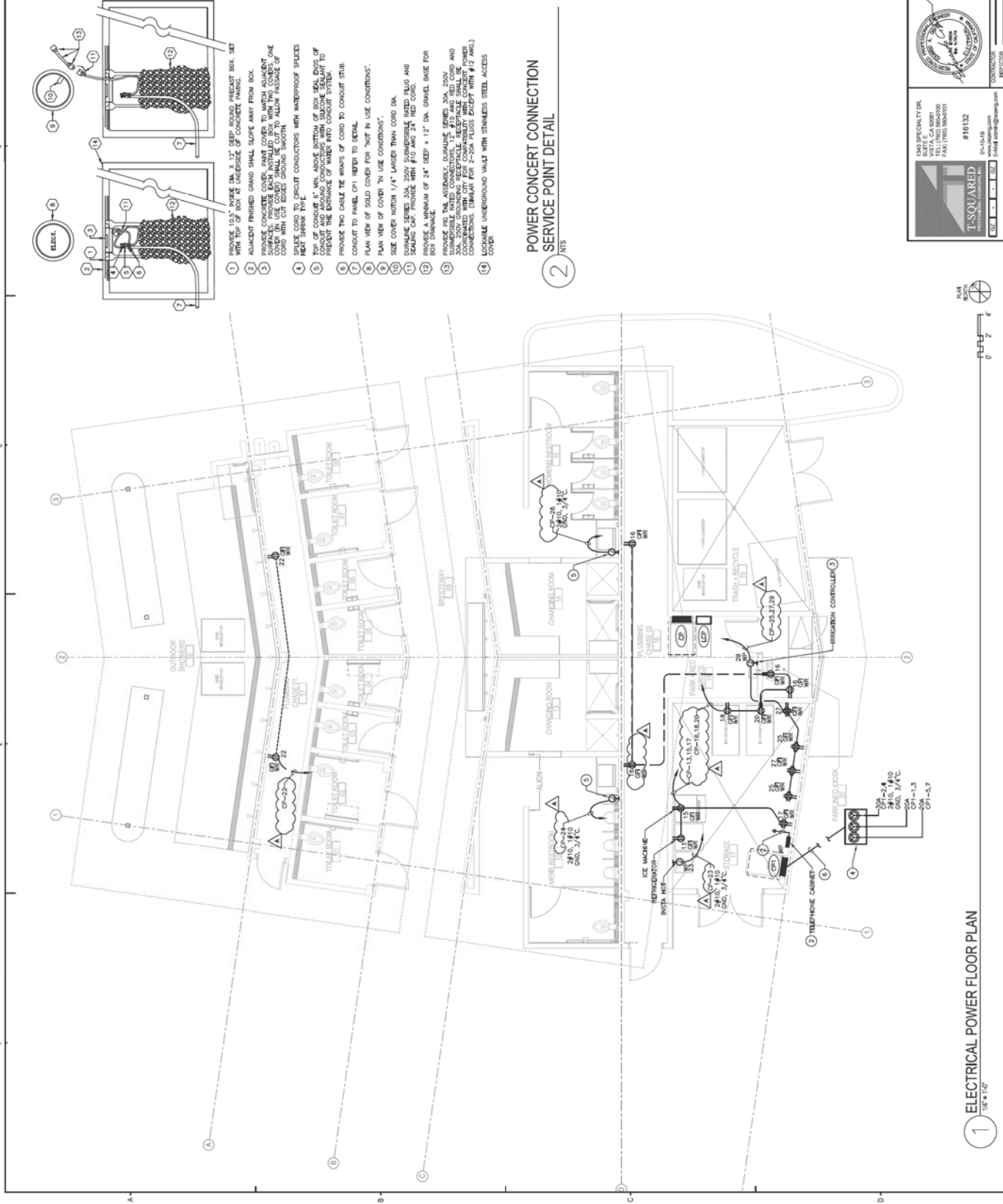
C1	Concrete Paving + Floors	Integral Color Concrete Davis Colors: San Diego Buff, 5237 Finish 6: Medium Broom Finish Top Coat: Grace Top Cast #5
C2	Concrete Walls	Integral Color Concrete Solomon Colors: Desert Tan Finish 1: Smooth Plywood Formed Finish 2: Board Formed, Vertical US Formliners: Kongo Finish 3: Sea Shell Texture Proline, Seamless Coquina Stone with Sea Shells Finish 4: Smooth with Light Aggregate Smooth Plywood Formed, Polished Finish 5: Smooth with Medium Aggregate Smooth Plywood Formed, Polished
CB	Natural Cobble Stone	Per Landscape Drawings
CP	Cement Plaster	Omega Products International Color: Floral White, 420 Finish: Santa Barbara
FG	Fiberglass (Doors + Frames)	Chem-Pruf Door Co. Barn Doors: Wood Grain Finish, Cut the Mustard, SW 6384 Toilet Room Doors: Matte Finish, Cut the Mustard, SW 6384 Service Doors: Matte Finish, Cocoa Whip, SW 9084
P1	Paint (Columns)	PPG, Corafon Coating System Color: Champagne Bronze, SRI 40 Finish: Satin
P2	Paint (Misc. Metal)	PPG, Corafon Coating System Color: Champagne Bronze, SRI 40 Finish: Satin

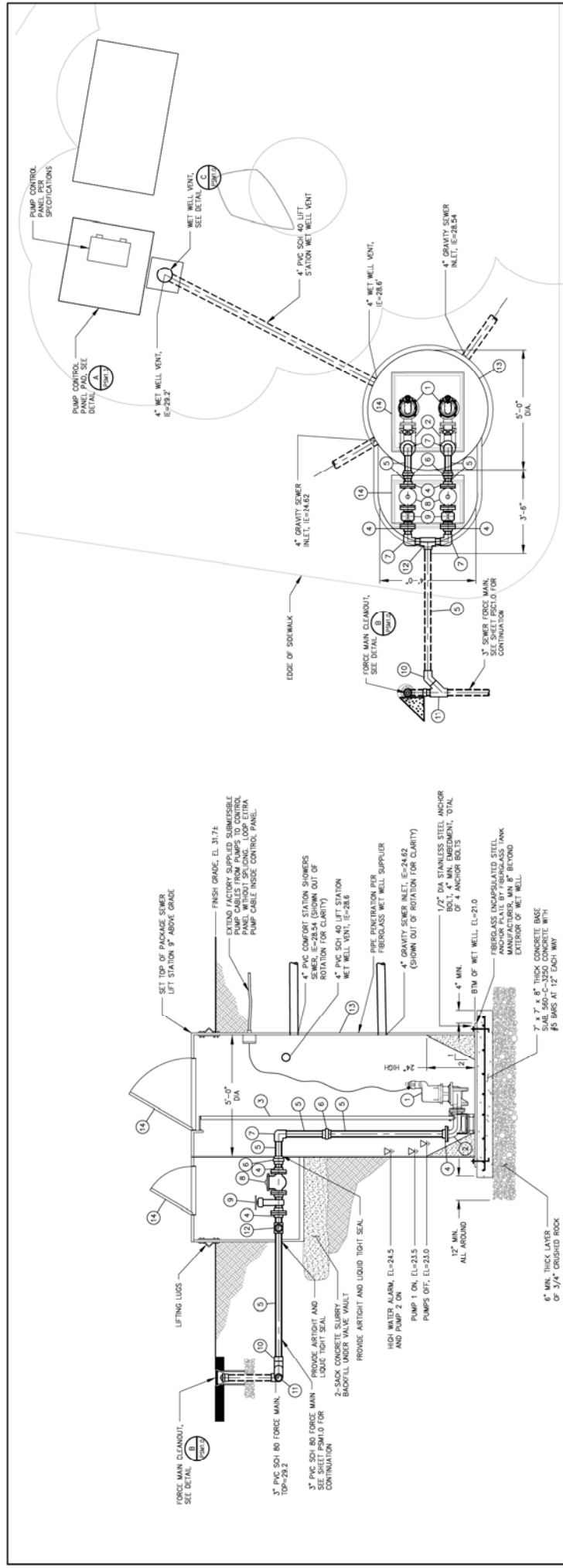
PC	PreCast Concrete Trough Sink	DC Custom Concrete Color: San Diego Buff, 5237 Finish: Satin
TSP1	Translucent Panel Skylight Frame	Moxie Air Board UV, 3/4" Color: Satin Opal (top) and Light Blue (bottom) Edge: Ext 4 Finish Edge – Silicon Leslie Skylights PPG, Corafon Coating System Color: Champagne Bronze, SRI 40 Finish: Satin
W1	Wood (Trellis)	Alaskan Yellow Cedar Sherwin Williams SuperDeck Exterior WB Semi Solid Stain Bamboo, SW 3565SS

INTERIOR

SS	Solid Surface Desk	Silestone Color: Blanco Maple, 14 Finish: Matte, Eased Edges
TP	Toilet Partitions (HDPE)	Scranton Products, Hiny Hider Color: Sandcastle Texture: Orange Peel
TSP2	Translucent Panel Changing Room Partition Frame	Moxie Air Board UV, 3/4" Color: Satin Opal (both sides) Edge: Ext 4 Finish Edge – Silicon Leslie Skylights PPG, Corafon Coating System Color: Champagne Bronze, SRI 40 Finish: Satin

<p>GENERAL NOTES</p> <p>A. CONTRACTOR SHALL VERIFY SERVICE CONNECTIONS AND COORDINATE WITH ALL OTHER TRADES. IN CASE OF DISCREPANCY, CONTRACTOR SHALL NOTIFY ARCHITECT AND ENGINEER IMMEDIATELY TO START THE WORK.</p> <p>B. CONTRACTOR SHALL VERIFY EXACT QUANTITIES, LOCATIONS AND REPORTS OF ALL OUTLETS WITH TENANT AND ARCHITECT PRIOR TO START OF WORK.</p>	
<p>KEYNOTES</p> <p>(1) NOTE NOT USED</p> <p>(2) PROVIDE NEMA 3R ENCLAVING FOR TELEPHONE EQUIPMENT AND #10 CU. GND. IN 3/4" TO 1" HWT SERVICE GROUND.</p> <p>(3) PROVIDE 1/2" MIN. THICK CONCRETE UNDERSTANDING VALT FOR POWER CONCRET CONNECTION WITH STAINLESS STEEL ACCESS COVERS. SEE DETAIL ON THIS SHEET FOR CONNECTION TO UNDERGROUND VALT.</p> <p>(4) AIR HAND ORDER: +44". REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION.</p> <p>(5) (1) 2#10, #10 GND. IN 1" AND (2) 2#12, #12 GND. IN 1"</p>	
<p>LEGEND</p>	
<p>E2.2</p> <p>PLANS FOR THE CONSTRUCTION OF EB SCRIPPS PARK COMFORT STATION ELECTRICAL POWER FLOOR PLAN</p>	
<p>CITY OF SAN DIEGO, CALIFORNIA PROJECT NO. 15035 SHEET 03 OF 03 SHEETS</p> <p>DATE: 2/26/2018 PROJECT NUMBER: 15035 DATE: 2/26/2018</p> <p>DESIGNER: T-SOULARED CHECKED: T-SOULARED DATE: 2/26/2018</p> <p>DATE STARTED: 03-10-18 DATE COMPLETED: 03-10-18</p> <p>CONTRACTOR: T-SOULARED PROJECT: EB SCRIPPS PARK COMFORT STATION</p> <p>WBS: 15035 T-SOULARED PROJECT NUMBER: 15035 TAMARA MILLER PROJECT ENGINEER 250-1883 250-1883 250-1883 250-1883</p> <p>39742-53-D</p>	





WET WELL AND VALVE VAULT PLAN
SCALE: 1/2" = 1'-0"

WET WELL AND VALVE VAULT SECTION
SCALE: 1/2" = 1'-0"

PSM1.1

PLANS FOR THE CONSTRUCTION OF
EB SCRIPPS PARK COMFORT STATION
SEWER PUMP STATION 33 IN LA JOLLA COVE
MECHANICAL PLAN AND SECTION

CITY OF SAN DIEGO, CALIFORNIA	NO. 555035
PROJECT NO. 17-12-13	DATE 12/10/2019
DESIGNED BY: GEORGE FREHNA	CHECKED BY: GEORGE FREHNA
DATE: 06/29/2018	DATE: 12/02/2018
PROJECT NO. 17-12-13	PROJECT NO. 17-12-13
DESIGNED BY: GEORGE FREHNA	CHECKED BY: GEORGE FREHNA
DATE: 06/29/2018	DATE: 12/02/2018
PROJECT NO. 17-12-13	PROJECT NO. 17-12-13
DESIGNED BY: GEORGE FREHNA	CHECKED BY: GEORGE FREHNA
DATE: 06/29/2018	DATE: 12/02/2018
PROJECT NO. 17-12-13	PROJECT NO. 17-12-13
DESIGNED BY: GEORGE FREHNA	CHECKED BY: GEORGE FREHNA
DATE: 06/29/2018	DATE: 12/02/2018

ADDENDUM A

Page 1 of 27

CONTRACTOR: MODIFIED PUMP POWER

INSPECTOR: [Signature]

DATE STARTED: [Blank]

DATE COMPLETED: 09/24/2019

DEXTER WILSON ENGINEERS, INC.
CONSULTING ENGINEERS

2234 FARADAY AVENUE
SAN DIEGO, CA 92108
TEL: 619-594-4222

SCALE: 1/2"

- MATERIAL LIST**
1. SUBMERSIBLE NON-CLOG VERTICAL TYPE SEWAGE PUMP CAPABLE OF DELIVERING 60 GPM AT 28 FEET TOTAL DYNAMIC HEAD. PUMPS SHALL BE DRIVEN BY MAXIMUM 2 HORSEPOWER, 27.50 AMP, 208 VOLTS, THREE PHASE MOTOR. SEE SEWAGE PUMP MANUFACTURER SPECIFICATIONS.
 2. 3" DIP 90-DEG FLANGED BASE ELBOW, TUSON BONDED EPOXY UNID AND COATED
 3. STAINLESS STEEL GUIDE RAIL SYSTEM PER SPECIFICATIONS
 4. 3" PVC FLANGE ONE PIECE, SOLVENT WELDED
 5. 3" PVC SOI 80 PIPE WITH SOLVENT WELDED JOINTS (FORCE MAIN)
 6. 3" PVC SOI 80 UNION, SOLVENT WELDED
 7. 3" PVC SOI 80 90-DEG ELBOW, SOLVENT WELDED
 8. 3" SWING CHECK VALVE, SURGE BUSTER TYPE, FLANGED (SEE SPECIFICATIONS)
 9. 3" PVC GATE VALVE, FLANGED
 10. 3" PVC SOI 80 45-DEG ELBOW, SOLVENT WELDED
 11. 3" PVC SOI 80 WYE, SOLVENT WELDED
 12. 3" PVC SOI 80 TEE, SOLVENT WELDED
 13. FIBERGLASS WET WELL AND VALVE VAULT PER SPECIFICATIONS
 14. WET WELL AND VALVE VAULT ACCESS HATCHES PER SPECIFICATIONS

Table with project details: CITY OF SAN DIEGO, CALIFORNIA, PLANS FOR THE CONSTRUCTION OF EB SCRIPPS PARK COMFORT STATION SEWER PUMP STATION 33 IN LA JOLLA COVE, SPECIFICATIONS 2.



Table with project details: PROJECT NO. 13-10-2018, DATE 12/02/2018, DRAWING NO. 13-10-2018-01, CONTRACTOR DEXTER WILSON ENGINEERING, INC.

1. THE AUTODIALER SHALL MONITOR A MINIMUM OF FOUR (4) DIGITAL INPUTS. THE AUTODIALER SHALL BE PROGRAMMED TO CALL THE OPERATOR (10) DURING THE PUMP SERVICE. THE AUTODIALER SHALL BE PROGRAMMED BY THE CONTRACTOR AT THE DIRECTION OF THE OWNER TO SEND FOUR (4) DISTINCT ALARMS.

1. THE AUTODIALER SHALL BE INCORPORATED INTO THE PUMP CONTROL PANEL. THE AUTODIALER MOUNTING SHALL BE DONE TO PROVIDE CLEAR UNOBSTRUCTED FRONT ACCESS TO THE AUTODIALER WITH THE PUMP CONTROL PANEL ENCLOSURE DOOR OPEN.

1. THE AUTODIALER SUBMITTAL INFORMATION AS PART OF THE PUMP STATION CONTROL PACKAGE SUBMITTAL.

1. FIELD TESTS SHALL BE PERFORMED BY THE CONTRACTOR UNDER THE INSTRUCTION OF THE PUMP MANUFACTURER'S FIELD SERVICE REPRESENTATIVE.

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1. PROVIDE A LOCKABLE EXPANDED METAL ENCLOSURE FOR THE MET WELL VENT FILTER. ENCLOSURE SHALL BE FABRICATED OF 1-1/2 #10 FLATTENED EXPANDED METAL, STAINLESS STEEL, WITH STAINLESS STEEL FRAME.

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THREE PHASE DUPLEX CONTROL PANEL

STAINLESS STEEL PIPE RAIL MOUNTING SYSTEM (CONT.)

3" SUBMERSIBLE RECESSED IMPELLER SEWAGE PUMPS (CONT.)

1. THE MOTOR CONTROL PANEL SHALL BE ASSEMBLED AND TESTED BY A CONTROLS SYSTEM MANUFACTURER (S&M) OF APPROVED QUALITY MEETING THE STANDARDS OF UL 508A FOR INDUSTRIAL MOTOR CONTROLS. THE S&M SHALL BE RESPONSIBLE FOR THE DESIGN AND TESTING OF THE CONTROL PANEL. THE S&M SHALL BE RESPONSIBLE FOR THE DESIGN AND TESTING OF THE CONTROL PANEL. THE S&M SHALL BE RESPONSIBLE FOR THE DESIGN AND TESTING OF THE CONTROL PANEL.

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EXPANDED METAL ENCLOSURE

STAINLESS STEEL PIPE RAIL MOUNTING SYSTEM

SEWAGE PUMP CHECK VALVE

1. PROVIDE A LOCKABLE EXPANDED METAL ENCLOSURE FOR THE MET WELL VENT FILTER. ENCLOSURE SHALL BE FABRICATED OF 1-1/2 #10 FLATTENED EXPANDED METAL, STAINLESS STEEL, WITH STAINLESS STEEL FRAME.

1. THE STAINLESS STEEL PIPE RAIL SYSTEM SHALL INCLUDE A DISCHARGE BASE ELBOW, HYDRAULIC SEALING FLANGE, GUIDE RAIL CONNECTOR, AND PIPING. ANGLIARY EQUIPMENT ASSEMBLED WITH THE PUMPS ARE A FLOAT MOUNTING BRACKET, LIFTING CABLE, AND LEVEL CONTROL FLOATS.

1. THE CHECK VALVE SHALL BE CONSTRUCTED OF ASTM A304 GRADE 80-80-10 DOUBLE END ROLL FORMED STAINLESS STEEL. THE CHECK VALVE SHALL BE CONSTRUCTED OF ASTM A304 GRADE 80-80-10 DOUBLE END ROLL FORMED STAINLESS STEEL.

Bid Results

Bidder Details

Vendor Name Atlas Development
Address 991C Lomas Santa fe Dr #115
 Solana Beach, CA 92075
 United States
Respondee Mark Atefi
Respondee Title President
Phone 619-200-0902 Ext.
Email bids@atlas-corp.net
Vendor Type ELBE,PQUAL,CADIR,Local
License # 858038
CADIR 1000003093

Bid Detail

Bid Format Electronic
Submitted January 24, 2019 1:51:20 PM (Pacific)
Delivery Method
Bid Responsive
Bid Status Submitted
Confirmation # 164945
Ranking 0

Respondee Comment

DIR # 1000003093
 ELBE # 11AD0234

Buyer Comment

Attachments

File Title	File Name	File Type
Atlas - Scripps Park Cert of Pending Actions	Atlas - Scripps Park Cert of Pending Actions.pdf	Contractor's Certification of Pending Actions
Atlas - Disclosure of Business Interests	Atlas - Disclosure of Business Interests.pdf	Mandatory Disclosure of Business Interests Form
Atlas - Tier Subs List	Atlas - Tier Subs.pdf	Subcontractor Listing (Other Than First Tier)
Atlas - Scripps Park Bid Bond	Atlas - Scripps Park Bid Bond.pdf	Bid Bond

Line Items

Type	Item Code	UOM	Qty	Unit Price	Line Total	Comment
	Main Bid					
1	Bonds (Payment and Performance)					
	524126	LS	1	\$63,244.66	\$63,244.66	
2	Construction of EB Scripps Park Comfort Station					
	238390	LS	1	\$2,829,791.58	\$2,829,791.58	
3	Public Sewer Pump Station					
	237110	LS	1	\$141,340.42	\$141,340.42	

Bid Results

Type	Item Code	UOM	Qty	Unit Price	Line Total	Comment
4	Inspection Paid For By the Contractor (EOC Type I)					
	238390	AL	1	\$20,000.00	\$20,000.00	
5	Building Permit (EOC Type I), Demo Permit & Deferred Permit					
	236220	AL	1	\$15,000.00	\$15,000.00	
6	WPCP Development					
	541330	LS	1	\$1,273.34	\$1,273.34	
7	WPCP Implementation					
	237990	LS	1	\$12,733.37	\$12,733.37	
8	Exclusive Community Liaison Services					
	541820	LS	1	\$12,733.37	\$12,733.37	
9	Mobilization and Demobilization					
	238390	LS	1	\$96,529.38	\$96,529.38	
10	Field Orders (EOC Type II)					
		AL	1	\$20,000.00	\$20,000.00	
11	Traffic Control (EOC Type I)					
	237310	AL	1	\$5,000.00	\$5,000.00	
Subtotal					\$3,217,646.12	
Total					\$3,217,646.12	

Subcontractors

Name & Address	Description	License Num	CADIR	Amount	Type
HR Plumbing, Inc 4751 Oceanside Blvd Suite C Oceanside, CA 92056 United States	Plumbing	970044	1000002886	\$340,900.00	CADIR,CAU,MALE,S LBE
Onyx Building Group Inc 555 Raleigh Ave El Cajon, CA 92020 United States	Cement Plastering	957645	1000004799	\$55,894.00	
Ace Electric, Inc. PO Box 601071 San Diego, CA 92160 United States	Electrical	835109	1000001519	\$196,430.00	PQUAL
GT Door, Inc. 10728 Prospect Ave Suite E Santee, CA 92071 United States	Doors & Hardware	889122	1000000648	\$69,385.00	HUBZ,CADIR
San Diego Steel Solutions 579 Enterprise St Escondido, CA 92029 United States	Structural Steel	932783	1000009468	\$75,700.00	LAT,FEM,SLBE,DBE, MBE,CADIR,SDB,W BE
ARCHIBALD SHEET METAL, INC. 12424 LAKESHORE DRIVE LAKESIDE, CA 92040 United States	Sheet Metal, Roofing, Skylights	896379	1000007015	\$284,950.00	

