

City of San Diego

CONTRACTOR'S NAME: WIER CONSTRUCTION CORP

ADDRESS: 16884 OLD SURVEY ROAD ESCONDIDO, CA 92025

TELEPHONE NO.: (760) 743-6776 FAX NO.: (760) 746-5224

CITY CONTACT: Taylor Cox, Contract Specialist, Email: TJCox@sandiego.gov

Phone No. (619) 533-3033

K. Nguyen / R. W. Bustamante / C. Catapia

BIDDING DOCUMENTS



FINAL



FOR

BONITA COVE WEST IMPROVEMENTS

BID NO.: K-20-1884-DBB-3

SAP NO. (WBS/IO/CC): B-18229, B-18230

CLIENT DEPARTMENT: 1714

COUNCIL DISTRICT: 2

PROJECT TYPE: BE

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

SEPTEMBER 16, 2019

CITY OF SAN DIEGO'S ELECTRONIC BIDDING SITE, PLANETBIDS

<http://www.sandiego.gov/cip/bidopps/index.shtml>

ENGINEER OF WORK

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



1) Registered Landscape Architect

August 12, 2019
Date

Seal:





2) For City Engineer

August 14, 2019
Date

Seal:



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REQUIRED DOCUMENTS SCHEDULE DURING BIDDING AND AWARDING

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

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

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

ITEM	WHEN DUE	FROM	DOCUMENT TO BE SUBMITTED
1.	At Time of Bid	ALL BIDDERS	Bid Bond (PDF)
2.	At Time of Bid	ALL BIDDERS	Contractors Certification of Pending Actions
3.	At Time of Bid	ALL BIDDERS	Mandatory Disclosure of Business Interests
4.	At Time of Bid	ALL BIDDERS	Names of the Principal individual owner(s) of the Bidding Firm
5.	Within 24 Hours of Bid opening	ALL BIDDERS	Bid Bond (Original)
6.	Within 3 working days of bid opening	ALL BIDDERS	SLBE Good Faith Effort Documentation
7.	Within 3 working days of bid opening with Good Faith Effort (GFE) documentation	ALL BIDDERS	Form AA60 – List of Work Made Available
8.	Within 3 working days of bid opening with Good Faith Effort (GFE) documentation	ALL BIDDERS	Proof of Valid DBE-MBE-WBE-DVBE Certification Status e.g., Certs.
9.	Within 10 working days of receipt by bidder of contract forms	APPARENT LOW BIDDER	Phased Funding Schedule Agreement
10.	Within 10 working days of receipt by bidder of contract forms	APPARENT LOW BIDDER	Pre-Award Schedule

ITEM	WHEN DUE	FROM	DOCUMENT TO BE SUBMITTED
11.	Within 10 working days of receipt by bidder of contract forms	APPARENT LOW BIDDER	If the Contractor is a Joint Venture: <ul style="list-style-type: none"> • Joint Venture Agreement • Joint Venture License
12.	Within 10 working days of receipt by bidder of contract forms	APPARENT LOW BIDDER	Contract Forms - Agreement
13.	Within 10 working days of receipt by bidder of contract forms	APPARENT LOW BIDDER	Contract Forms - Payment and Performance Bond
14.	Within 10 working days of receipt by bidder of contract forms	APPARENT LOW BIDDER	Certificates of Insurance and Endorsements

NOTICE INVITING BIDS

1. **SUMMARY OF WORK:** This is the City of San Diego's (City) solicitation process to acquire Construction services for **Bonita Cove West Improvements**. For additional information refer to Attachment A.
2. **FULL AND OPEN COMPETITION:** This solicitation is subject to full and open competition and may be bid by Contractors on the City's approved 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 **\$3,390,000**.
4. **BID DUE DATE AND TIME ARE: SEPTEMBER 16, 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**
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	8.5%
2. ELBE participation	10.8%
3. Total mandatory participation	19.3%
 - 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 a Universal Serial Bus (USB) Type-A, 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 alone.
- 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 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: Taylor Cox

OR:

TJCox@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: <http://www.sandiego.gov/cip/bidopps/index.shtml> 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 5-4, "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/	2018	PWPI010119-01
City of San Diego Standard Specifications for Public Works Construction ("The WHITEBOOK")* https://www.sandiego.gov/publicworks/edocref/greenbook	2018	PWPI010119 -02
City of San Diego Standard Drawings* https://www.sandiego.gov/publicworks/edocref/standarddraw	2018	PWPI010119 -03
Citywide Computer Aided Design and Drafting (CADD) Standards https://www.sandiego.gov/publicworks/edocref/drawings	2018	PWPI010119 -04
California Department of Transportation (CALTRANS) Standard Specifications – http://www.dot.ca.gov/des/oe/construction-contract-standards.html	2018	PWPI030119-05

Title	Edition	Document Number
CALTRANS Standard Plans http://www.dot.ca.gov/des/oe/construction-contract-standards.html	2018	PWPI030119-06
California Manual on Uniform Traffic Control Devices Revision 3 (CA MUTCD Rev 3) http://www.dot.ca.gov/trafficops/camutcd/	2014	PWPI030119-07
<p>NOTE: *Available online under Engineering Documents and References at: http://www.sandiego.gov/publicworks/edocref/index.shtml</p> <p>*Electronic updates to the Standard Drawings may also be found in the link above</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 – Section 3-2, “SELF-PERFORMANCE”, 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 4-6, “Trade Names” 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 3-2, "SELF-PERFORMANCE" 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 3-9, "TECHNICAL STUDIES AND SUBSURFACE DATA", 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:

Wier Construction Corp, a corporation, as principal, and
The Ohio Casualty 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 Three Hundred Thirty One Thousand Four Hundred Eighty Dollars and Zero
Cents (\$3,331,480.00)** for the faithful performance of the annexed contract, and in the sum of
**Three Million Three Hundred Thirty One Thousand Four Hundred Eighty Dollars and Zero Cents
(\$3,331,480.00)** 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.

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

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

Dated October 8, 2019

Approved as to Form

Wier Construction Corporation

Principal

By 

BRIAN WIER V.P.

Printed Name of Person Signing for Principal

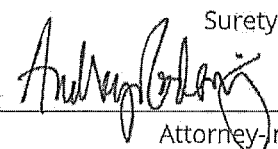
Mara W. Elliott, City Attorney

By 

Deputy City Attorney

The Ohio Casualty Insurance Company

Surety

By 

Attorney-in-fact
Audrey Rodriguez

Approved:

By 

Stephen Samara
Principal Contract Specialist
Public Works Contracts

1615 Murray Canyon Road, Suite 200

Local Address of Surety

San Diego, CA 92108

Local Address (City, State) of Surety

858-924-8078

Local Telephone No. of Surety

Premium \$ 30,337.00

Premium is for contract term and subject to adjustment based on final contract price.

Bond No. 39K000434

ALL- PURPOSE CERTIFICATE OF ACKNOWLEDGMENT

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 October 8, 2019 before me, B. Lafrenz, Notary Public
(Here insert name and title of the officer)

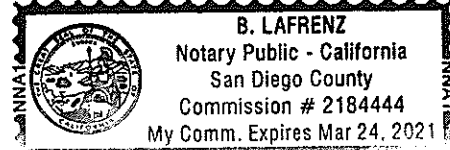
personally appeared Audrey Rodriguez,
 who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) 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.

B. Lafrenz
 Notary Public Signature

(Notary Public Seal)



ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date _____

CAPACITY CLAIMED BY THE SIGNER

Individual (s)

Corporate Officer

(Title)

Partner(s)

Attorney-in-Fact

Trustee(s)

Other _____

INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknowledgments from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he/she/they~~, is /are) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
 - ❖ Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
 - ❖ Indicate title or type of attached document, number of pages and date.
 - ❖ Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 5886694

American Fire and Casualty Company
The Ohio Casualty Insurance Company

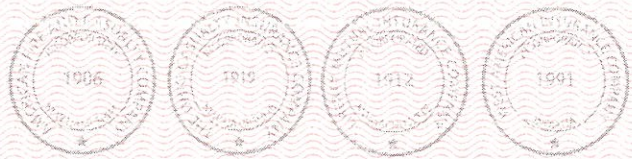
Liberty Mutual Insurance Company
West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Larry D Cogdill, Michael W Thomas, Brooke Lafrenz, Gladys Rogers, Audrey Rodriguez

all of the city of Del Mar, state of CA each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 19th day of December, 2012.



American Fire and Casualty Company
The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

By: Gregory W. Davenport
Gregory W. Davenport, Assistant Secretary

STATE OF WASHINGTON ss
COUNTY OF KING

On this 19th day of December, 2012, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Seattle, Washington, on the day and year first above written.



By: KD Riley
KD Riley, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes Gregory W. Davenport, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, David M. Carey, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 8th day of October, 2019.



By: David M. Carey
David M. Carey, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, bank deposit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

ATTACHMENTS

ATTACHMENT A
SCOPE OF WORK

SCOPE OF WORK

1. **SCOPE OF WORK:** To renovate an existing approximate half acre playground and provide ADA sidewalk upgrade, 20 foot high security light, site preparation for prefabricated comfort station including over excavation and recompaction and utilities (water, sewer, electrical). The improvements also include shade structure with picnic tables and drinking fountain(s).
 - 1.1. The Work shall be performed in accordance with:
 - 1.1.1. The Notice Inviting Bids and Plans numbered **41452-01-D** through **41452-39-D**, inclusive.
2. **LOCATION OF WORK:** The location of the Work is as follows:

See **Appendix E – Location Map**.
3. **CONTRACT TIME:** The Contract Time for completion of the Work, including the Plant Establishment Period, shall be **220 Working Days**.
 - 3.1. The Construction of this project shall be phased in accordance with 6-1.2.1, "Construction Phasing".

ATTACHMENT B
PHASED FUNDING PROVISIONS

PHASED FUNDING PROVISIONS

1. PRE-AWARD

1.1. Within 10 Working Days of the Notice of Intent to Award, the Contractor 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 7-3, "PAYMENT."

1.2. Contractor's failure to perform any of the following may result cancelling the 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** days of meeting with the City's Project Manager.

2. POST-AWARD

2.1. Do not start any construction activities for the next phase until the Notice to Proceed (NTP) has been issued by the City. The City will issue a separate NTP for each phase.

2.2. The City may issue the NTP for a subsequent phase before the completion of the preceding phase.

PHASED FUNDING SCHEDULE AGREEMENT

BID NUMBER: K-20-1884-DBB-3

CONTRACT OR TASK TITLE: Bonita Cove West Improvements

CONTRACTOR: Wier Construction Corp

Funding Phase	Phase Description	Phase Start	Phase Finish	Not-to-Exceed Amount
1	Manufacturer Deposit: Shade Structure, Comfort Station and Playground Equipments, Demolition and Mobilization	October, 2019	December, 2019	\$1,200,000
2	Construction of Bonita Cove West Improvements , Playground Sign, Permits, Bond, SWPPP, Mobilization and Field Orders	January, 2020	November, 2020	\$2,131,480
3				
Contract Total				\$3,331,480

Notes:

- 1) WHITEBOOK section 7-3.10, "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: Tony Perez
 Construction Manager

Signature: Tony Perez

Date: 10/1/19

PRINT NAME: KEVIN NGUYEN
 Project Manager

Signature: [Signature]

Date: 10/1/2019

CONTRACTOR

PRINT NAME: BRYAN WIEN

Title: VICER PRESIDENT

Signature: [Signature]

Date: 10/1/19

ATTACHMENT C
RESERVED

ATTACHMENT D
PREVAILING WAGE

PREVAILING WAGE

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 1.11 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 **2018 Edition** of the Standard Specifications for Public Works Construction (The "GREENBOOK").
2. The **2018 Edition** of the City of San Diego Standard Specifications for Public Works Construction (The "WHITEBOOK"), including the following:
 - a) General Provisions (A) for all Construction Contracts.

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

1-2 TERMS AND DEFINITIONS. To the "WHITEBOOK", items 43, 56, 69, and 102, DELETE in its entirety and SUBSTITUTE with the following:

43. **Field Order** - A Field Order is a written agreement by the Engineer to compensate you for Work items in accordance with 2-8, "EXTRA WORK" or 2-9, "CHANGED CONDITIONS". A Field Order does not change the Contract Price, Contract Time, or the scope intent of the Contract.
56. **Notice of Completion (NOC)** - A document recorded with the County of San Diego to signify that the Contract Work has been completed and accepted by the City.
69. **Punchlist** - A list of items of Work or corrections generated after a Walk-through that is conducted when you consider that the Work and Services are complete, and as verified by the Owner. The Punchlist may be completed in phases if defined in the Contract.
102. **Walk-through** - The procedure the City uses to evaluate the status of the Project or the phase of the Project and to generate a Punchlist prior to Acceptance.

To the "WHITEBOOK", item 54, "Normal Working Hours", ADD the following:

The **Normal Working Hours** are **7:00 AM to 5:00 PM**.

To the "WHITEBOOK", ADD the following:

108. **Substantial Completion** – When all Contract Work is deemed complete by the Contractor in writing, and as verified by the Owner. Substantial Completion may be completed in phases if defined in the Contract.

109. **Acceptance of Work** – When all of the Contract work is deemed officially complete, including all Punchlist items, by the Owner.
110. **Occupancy** – When the Owner deems a building is ready for use, the Owner will issue a certificate of Occupancy in writing.

SECTION 2 - SCOPE OF THE WORK

2-2 PERMITS, FEES, AND NOTICES. To the “WHITEBOOK”, ADD the following:

2. The City will obtain, at no cost to you, the following permits:
 - a) Coastal Development Permit

SECTION 3 – CONTROL OF THE WORK

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.

3-9 TECHNICAL STUDIES AND SUBSURFACE DATA. To the “WHITEBOOK”, ADD the following:

5. In preparation of the Contract Documents, the designer has relied upon the following reports of explorations and tests at the Work Site:
 - a) Geotechnical Investigation, dated April 20, 2019 and revised April 30, 2019 by Geocon Incorporated.

6. The reports listed above are available for review at the following link:

<https://filecloud.sandiego.gov/url/bonitacovewestcif>

3-10 SURVEYING. To the “GREENBOOK”, DELETE in its entirety and SUBSTITUTE with the following:

3-10 SURVEYING.

1. You shall locate and mark all features related to the building and site, including landscaping and hardscape, using industry standard contractor’s construction tools.
2. You shall preserve construction survey stakes, control points, and other survey related marks described in 3-10.1, “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.

3-10.1 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 400-2, "Permanent Survey Markers".
2. Notify the Resident Engineer in writing at least 2 Working Days prior to requesting survey services provided by the City.

3-10.2 Line and Grade.

1. The Work shall conform to the lines, elevations, and grades shown on the Plans. Three consecutive points set on the same slope shall be used together so that any variation from a straight grade can be detected. Any such variation shall be reported to the Engineer. In the absence of such report, you shall be responsible for any error in the grade of the Work.
2. Grades for underground conduits will be set at the surface of the ground. You shall transfer them to the bottom of the trench.

3-10.3 Payment.

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

3-13.1 Completion. To the "GREENBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. You shall submit a written assertion that the Work has been completed and is ready for Owner Acceptance. If, in the Engineer's judgment, the Work has been completed in accordance with the Contract Documents, the Engineer will set forth in writing the date the Work was completed. This will be the date that you are relieved from responsibility to protect and maintain the Work and to which liquidated damages will be computed.

3-13.1.1 Requirements Before Requesting a Walk-through. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

3-13.1.1 Requirements Before Requesting Substantial Completion.

1. The following items are required prior to requesting a Substantial Completion:
 - a) Remove temporary facilities from the Site.
 - b) Thoroughly cleaning the Site and removing all mark outs and construction staking.

- c) Provide completed and signed Red-lines in accordance with 3-7.3 "Redlines and Record Documents".
- d) Provide all material and equipment maintenance and operation instructions and/or manuals.
- e) Provide all tools which are permanent parts of the equipment installed in the Project.
- f) Provide and properly identify all keys for construction and all keys for permanent Work.
- g) Provide all final Special Inspection reports required by the applicable building Code.
- h) Provide all items specified to be supplied as extra stock. Wrap, seal, or place in a container all items as necessary to allow for storage by the City for future use. Verify the specified quantities.
- i) Ensure that all specified EOCP and certified wage rate documentations covering the Contract Time have been submitted.
- j) Provide the spare parts for the proposed irrigation system as specified in the Special Provisions.
- k) If the Work includes sewer and storm drain installations, the inspection shall include televising in accordance with 306-18, "VIDEO INSPECTION".
- l) If the Work includes a Plant Establishment Period, Work in accordance with 801-6, "MAINTENANCE AND PLANT ESTABLISHMENT" shall be completed prior to requesting Substantial Completion, unless approved otherwise by the Owner.
- m) Notify the Engineer to arrange a final inspection of permanent BMPs installed.

3-13.1.2 Walk-through and Punchlist Procedure. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. You shall notify the Engineer 15 Working Days in advance of date of anticipated Substantial Completion to allow time for Engineer to schedule a Walk-through. After you complete the requirements in 3-13.1.1, "Requirements Before Requesting Substantial Completion" and when you consider that the Work is Substantially Complete, you will notify the Engineer in writing that the Project is Substantially Complete. The Engineer will review your request and determine if the Project is ready for a Walk-through, by verifying whether you have completed all items as required by 3-13.1.1, "Requirements Before Requesting Substantial Completion". Within 7 Working Days, the City will either reject your request of a Walk-through in writing or schedule a Walk-through inspection. The Engineer shall facilitate the Walk-through.

2. The following documents shall be provided at the time of your Walk-through request: As-Built markup, Plans, specifications, technical data such as submittals and equipment manuals, draft final payment, warranties, material certifications, bonds, guarantees, maintenance service agreements, and maintenance and operating manuals.
3. Written warranties, except manufacturer's standard printed warranties, shall be on a letterhead addressed to you. Warranties shall be submitted in the format described in this section, modified as approved by the City, to suit the conditions pertaining to the warranty. Lack of submitting these items will delay start of Walk-through.
4. The Engineer will provide you with the Punchlist within 15 Working Days after the date of the Walk-through. The City shall not provide a preliminary Punchlist.
5. If the Engineer finds that the Project is not Substantially Complete as defined herein, the Engineer will terminate the Walk-through and notify you in writing.
6. If, at any time during the Engineer's evaluation of the corrective Work required by the Punchlist, the Engineer discovers that additional corrective Work is required, the Engineer may include that corrective Work in the Punchlist.
7. You shall remain solely responsible for the Project Site until the Project is completely operational, all Punchlist items have been corrected, and all operation and maintenance manuals have been accepted by the City.
8. The Engineer shall meet with you until all Punchlist items are corrected. You shall complete the Punchlist within 30 Working Days, and Working Days will continue to be counted until Acceptance of the Project.

3-13.2 Acceptance. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. You shall provide the completed, signed, and stamped DS-563 to the Engineer prior to Acceptance.
2. You shall deliver the final As-builts and final billing prior to Acceptance.
3. You shall assemble and deliver to the Engineer a Final Summary Report and Affidavit of Disposal prior to Acceptance.
4. Acceptance shall occur after all of the requirements contained in the Contract Documents have been fulfilled. If, in the Engineer's judgment, you have fully performed the Contract, the Engineer will recommend to the City Engineer that your performance of the Contract be accepted. You shall receive notification of Acceptance in writing from the Owner and counting of working days shall cease and Warranty begins.
5. Retention can be released 35 Calendar Days after NOC. Submit your request for retention to the Resident Engineer and they will mail to you a "Release of Claims" form which shall be completed and returned before the retention will be released.

3-13.3

Warranty. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. You shall warranty and repair all defective materials and workmanship for a period of 1 year. This call back warranty period shall start on the date the Work was accepted by the City unless the City has Beneficial Use or takes Occupancy of the project earlier (excluding water, sewer, and storm drain projects).
2. You shall warranty the Work free from all latent defects for 10 years and patent defects for a period of 4 years.
3. The warranty period for specific items covered under manufacturers' or suppliers' warranties shall commence on the date they are placed into service at the direction of the Engineer in writing.
4. All express warranties from Subcontractors, manufacturers', or Suppliers', of any tier, for the materials furnished and Work performed shall be assigned, in writing, to the City, and shall be delivered to the Engineer prior to the Acceptance of your performance of the Contract.
5. Replace or repair defective materials and workmanship in a manner satisfactory to the Engineer after notice to do so from the Engineer and within the time specified in the notice. If you fail to make such replacements or repairs within the time specified in the notice, the City may perform the replacement or repairs at your expense. If you fail to reimburse the City for the actual costs, your Surety shall be liable for the cost
6. Items that shall be warranted free from defective workmanship and materials for a period longer than 1 year are as follows:

Specified Item	Minimum Warranty Period
Detectable Warning Tile Construction	3 Years of Manufacturer's Warranty
All Work Under SECTION 500 - PIPELINE REHABILITATION	3 Years
Fiber Optic Interconnect Cables	2 Years
Luminaires*	10 Years of Manufacturer's Warranty
LED Signal Modules	3 Years of Manufacturer's Warranty
Field Devices Associated with 700-6.3, "Adaptive Control Note"	See 700-6.3.9, "Warranty"

* Provide documentation verifying that the induction luminaire models being offered for the Project are covered by the 10 year warranty.

7. You shall provide the City and property owner a copy of the manufacturer's warranty for private sewer pumps, including the alarm panel and all other accessories.
 - a) You shall involve the manufacturer in the installation and startup as needed to secure any extended warranty required.
 - b) Nothing in here is intended to limit any manufacturer's warranty which provides the City with greater warranty rights than set forth in this section or the Contract Documents.
 - c) The warranty shall include all components. The form of the warranty shall be approved by the Engineer in accordance with 3-13.3.2, "Warranty Format Requirements".
8. If, during the warranty period, any item of the Work is found to be Defective Work, you shall correct it promptly after receipt of written notice from the City to do so. The warranty period shall be extended with respect to portions of the Work corrected as part of the warranty requirements.

SECTION 4 - CONTROL OF MATERIALS

4-1.3.4 Specialty Inspection Paid for by the Contractor. To the "WHITEBOOK", ADD the following:

2. The specialty inspections required are listed as follows:
 - a) Third party certified inspector for Play area/components. See Technicals.

4-3.6 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.

4-6 TRADE NAMES. 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:

<http://www.sandiego.gov/publicworks/edocref/index.shtml>

SECTION 5 – LEGAL RELATIONS AND RESPONSIBILITIES

5-4 INSURANCE. To the "GREENBOOK", DELETE in its entirety and SUBSTITUTE with the following:

5-4 INSURANCE.

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

5-4.1 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.

5-4.2 Types of Insurance.

5-4.2.1 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

5-4.2.2 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.

5-4.2.5 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.

5-4.3 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.

5-4.3.1 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.

5-4.4 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.

5-4.5 Policy Endorsements.

5-4.5.1 Commercial General Liability Insurance.

5-4.5.1.1 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.

5-4.5.1.2 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.

5-4.5.1.3 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.

5-4.5.2 Commercial Automobile Liability Insurance.

5-4.5.2.1 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.

5-4.5.5 Builders Risk Endorsements.

5-4.5.5.1 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.

5-4.5.5.2 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.

5-4.6 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.

5-4.7 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.

5-4.8 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.

5-4.9 Excess Insurance. Policies providing excess coverage shall follow the form of the primary policy or policies e.g., all endorsements.

5-4.10 Architects and Engineers Professional Insurance (Errors and Omissions Insurance).

1. For Contracts with required engineering services (e.g., Design-Build, preparation of engineered Traffic Control Plans (TCP), and etc) by you, you shall keep or require all of your employees or Subcontractors, who provide professional engineering services under this contract, Professional Liability coverage with a limit of **\$1,000,000** per claim and **\$2,000,000** annual aggregate in full force and effect.
2. You shall ensure the following:
 - a) The policy retroactive date is on or before the date of commencement of the Project.
 - b) The policy will be maintained in force for a period of 3 years after completion of the Project or termination of this Contract, whichever occurs last. You agree that for the time period specified above, there will be no changes or endorsements to the policy that affect the specified coverage.
3. If professional engineering services are to be provided solely by the Subcontractor, you shall:
 - a) Certify this to the City in writing and
 - b) Agree in writing to require the Subcontractor to procure Professional Liability coverage in accordance with the requirements set forth above.

5-4.11 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.

5-4.11.1. 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.

5-4.11.2 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.

5-10.2.1 Public Notice by Contractor. To the "WHITEBOOK", item 3, DELETE in its entirety and SUBSTITUTE with the following:

3. Furnish and distribute public notices in the form of door hangers using the City's format to all occupants and/or property owners along streets:
- a) Where Work is to be performed at least Working 5 Working Days before starting construction or survey activities or impacting the community as approved by the Resident Engineer.
 - b) Within 5 Working Days of the completion of your construction activities where Work was performed, you shall distribute public notices in the form of door hangers, which outlines the anticipated dates of Asphalt Resurfacing or Slurry Seal.
 - c) 72 hours in advance of the scheduled resurfacing.

5-13 ELECTRONIC COMMUNICATION. To the "WHITEBOOK", ADD the following:

2. Virtual Project Manager shall be used on this Contract. For more information, refer to the VPM training videos at the location below:

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

SECTION 6 – PROSECUTION AND PROGRESS OF THE WORK

6-1.1 Construction Schedule. To the “WHITEBOOK”, item 1, subsection “s”, DELETE in its entirety and SUBSTITUTE with the following:

- s) Submit an updated cash flow forecast with every pay request (for each Project ID or WBS number provided in the Contract) 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.
 - i. Refer to the Sample City Invoice materials in **Appendix D – Sample City Invoice with Cash Flow Forecast** and use the format shown.
 - ii. See also the “Cash Flow Forecast Example” at the location below:
<https://www.sandiego.gov/publicworks/edocref>

To the “WHITEBOOK”, ADD the following:

3. The **90 Calendar Day** 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”.

6-1.2.1 Construction Phasing. To the “WHITEBOOK”, ADD the following:

3. The project shall be constructed in two phases as shown below. You shall not proceed to the next phase until the Resident Engineer approves the current phase.
 - a) **Phase 1:** Demolition, Manufacturer initial deposit for Prefabricated Comfort Station (State Coach Approved included), Playground Equipment and Shade Structure.
 - b) **Phase 2:** Construction of Bonita Cove West Improvements.

6-1.5.2 Excusable Non-Compensable Delays. To the “WHITEBOOK”, DELETE in its entirety and SUBSTITUTE with the following:

6-1.5.2 Excusable Non-Compensable and Concurrent Delays.

1. The City shall only issue an extension of time for Excusable Delays that meet the requirements of 6-4.2, “Extensions of Time” for the following circumstances:
 - a) Delays resulting from Force Majeure.
 - b) Delays caused by weather.
 - c) Delays caused by changes to County, State, or Federal law.
2. When a non-excusable delay is concurrent with an Excusable Delay, you shall not be entitled to an extension of Contract Time for the period the non-excusable delay is concurrent with the Excusable Delay.

3. When an Excusable Non-Compensable Delay is concurrent with an Excusable Compensable Delay, you shall be entitled to an extension of Contract Time, but shall not be entitled to compensation for the period the Excusable Non-Compensable Delay is concurrent with the Excusable Compensable Delay.

6-2.1 Moratoriums. To the "WHITEBOOK", ADD the following:

3. Do not Work in the areas where there is currently a moratorium issued by the City. The areas subject to moratorium are listed below:
 - a) Mission Bay areas from May 25, 2020 to September 8, 2020 (inclusive).

6-4.2 Extensions of Time. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. The Contract Time shall not be modified except by Change Order.
2. You shall notify the City in writing within **1 Working Day** after the occurrence and discovery of an event that impacts the Project Schedule.
 - a) If you believe this event requires a Change Order, you shall submit a **written Change Order request with a report to** the City that explains the request for Change Order within **5 Working Days**. The Change Order request must include supporting data, a general description of the discovery, the basis for extension, and the estimated length of extension. The City may grant an extension of time, in writing, for the Change Order request if you require more time to gather and analyze data.
3. The Engineer shall not grant an extension of Contract Time in accordance with 6-1.5, "Excusable Delays" unless you demonstrate, through an analysis of the critical path, the following:
 - a) The event causing the delay impacted the activities along the Project's critical path.
 - b) The increases in the time to perform all or part of the Project beyond the Contract Time arose from unforeseeable causes beyond your control and without your fault or negligence and that all project float has been used.
4. Any modifications to the Contract Time will be incorporated into the weekly document that the Engineer issues that stipulates the Contract Time. If you do not agree with this document, submit to the Engineer for review a written protest supporting your objections to the document within **30 Calendar Days** after receipt of the statement. Your failure to file a timely protest shall constitute your acceptance of the Engineer's weekly document.
 - a) Your protest will be considered a claim for time extension and shall be subject to 2-10.1, "Claims".

ADD:

6-6.1.1 Environmental Document.

1. The City of San Diego has prepared a **Final Environmental Impact Report** (Mission Bay Park Master Plan Final Impact Report No. 91-0898, SCH No. 93041010) as referenced in the Contract Appendix. You shall comply with all requirements of the **Final Environmental Impact Report** as set forth in the link in **Appendix A**.
2. Compliance with the City's environmental document shall be included in the Contract Price.

6-6.4 Written Notice and Report. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. Your failure to notify the Resident Engineer within **1 Working Day** OR provide a Change Order request within **5 Working Days** after the event, in accordance with 6-4.2, "Extensions of Time", will be considered grounds for refusal by the City to consider such request if your failure to notify prejudices the City in responding to the event.

SECTION 7 – MEASUREMENT AND PAYMENT

7-3.1 General. To the "WHITEBOOK" ADD the following:

3. The Lump Sum Bid item for "**Demolition**" shall include, but shall not be limited to all payment for the demolition of the existing comfort station, existing playground area, and concrete walkways as specified in the Plans and other Contract Documents.
4. The Allowance Bid item for "**Manufacturer Deposit: Shade Structure, Comfort Station, and Playground Equipment**" shall include payment for manufacturer deposits for equipment installations. This shall include the deposits for: shade structure, prefabricated comfort station, and play area structures and safety surfacing.
5. The Lump Sum Bid item for "**Construction of Bonita Cove West Improvements**" shall include payment for the construction and installation of: shade structure, play area structures and safety surfacing, site furnishings, security lighting, meter connections, drinking fountain, paving, sidewalk, planting, re-establishment of irrigation systems impacted by proposed new improvements, drainage system and other utilities, prefabricated comfort station and other park amenities as specified in the Plans, Contract Documents, and Technicals.
6. The Allowance Bid item for "**Construction and Installation of the Playground Signage**" shall include the deposit, construction and installation for: Playground Signage as specified in detail(s) on plan.

7-3.2 Partial and Final Payment. To the “GREENBOOK”, paragraph (3), DELETE in its entirety and SUBSTITUTE with the following:

Upon commencement of the Work, an escrow account shall be established in a financial institution chosen by you and approved by the City. Documentation for an escrow payment shall have an escrow agreement signed by you, the City, and the escrow agent. From each progress payment, no less than 5% will be deducted and deposited by the City into the escrow account. Upon completion of the Contract, the City will notify the Escrow agent in writing to release the funds to you. Only the designated representative of the City shall sign the request for the release of Escrow funds.

7-3.9 Field Orders. To the “WHITEBOOK”, DELETE in its entirety and SUBSTITUTE with the following:

1. If the cumulative total of Field Order items of Work does not exceed the “Field Orders” Bid Item, the City shall pay those Field Orders as shown below:

**TABLE 7-3.9
FIELD ORDER LIMITS**

Contract Price	Maximum Field Order Work Amount
Less than \$100,001	\$2,500
\$100,001 to \$1,000,000	\$5,000
\$1,000,001 to \$5,000,000	\$10,000
\$5,000,001 to \$15,000,000	\$20,000
\$15,000,001 to \$30,000,000	\$40,000
Greater than \$30,000,000	\$50,000

2. Field Order items of Work for contracts greater than \$15,000,000 will require additional approvals from the City prior to its approval by the Resident Engineer.
3. The City will issue a Field Order only after the City’s acceptance of the cost of the field order amount.
4. Field Orders shall not be used to add scope or to include extensions of time related to changes in work.
5. If in the event there is a change related to the critical path on the project which necessitates an extension of time and the change amount is within the Field Order limits shown on Table 7-3.9, then a Field Order can be issued to compensate you for the approved costs. Any extensions of time associated with the change shall be included in a subsequent Change Order and no

additional compensation shall be granted as part of the change order for the extension of time.

6. The unused portions of Field Orders Bid item shall revert to the City upon Acceptance.

7-3.11 Compensation Adjustments for Price Index Fluctuations. To the "WHITEBOOK" ADD the following:

5. This Contract is not subject to the provisions of The "WHITEBOOK" for Compensation Adjustments for Price Index Fluctuations for paving asphalt.

SECTION 209 – PRESSURE PIPE

209-1.1.1 General. 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.
3. Refer to AWWA C900-16 for all references to AWWA C905.

SECTION 302 – ROADWAY SURFACING

302-4.5 Scheduling, Public Convenience and Traffic Control. To the "GREENBOOK", paragraphs (1) and (2), DELETE in its entirety and SUBSTITUTE with the following:

1. In addition to the requirements of Part 6, you shall comply with the following:
 - a) At least 5 Working Days prior to commencing the Work, you shall submit your proposed Schedule to the Engineer for approval.
 - b) Based upon the approved schedule, you shall notify residents and businesses of the Work and post temporary "No Parking" signs 72 hours in advance.
 - c) Requests for changes in the approved Schedule shall be submitted to the Engineer for approval at least 3 Working Days before the street is scheduled to be sealed.

SECTION 402 – UTILITIES

402-2 PROTECTION. To the "WHITEBOOK", item 2, ADD the following:

- g) Refer to **Appendix G - Advanced Metering Infrastructure (AMI) Device Protection** for more information on the protection of AMI devices.

402-6 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).

**SECTION 601- TEMPORARY TRAFFIC CONTROL FOR CONSTRUCTION
AND MAINTENANCE WORK ZONES**

601-2.1.4 **Traffic Control for Resurfacing and Slurry Sealing.** To the “WHITEBOOK”, item 3, subsection “d”, DELETE in its entirety and SUBSTITUTE with the following:

- d) Place “NO PARKING - TOW-AWAY ZONE” signs 72 hours in advance of the scheduled slurry sealing. Reschedule street block segments which are not completed by the last posted Working Day. If a Work delay of 48 hours or more occurs from the originally scheduled Work date, remove the “NO PARKING - TOW-AWAY ZONE” signs for a minimum of 24 hours, then reset and re-post for the appropriate Work date.

601-3.5.1 **General.** To the “WHITEBOOK”, item 3, DELETE in its entirety and SUBSTITUTE with the following:

- 3. Temporary “No Parking” and “No Stopping” signs shall be installed 72 hours before enforcement. Temporary “No Parking” and “No Stopping” signs shall be installed and removed as specified in the Special Provisions. Signs shall indicate specific days, dates, and times of restrictions. If violations occur, call Police Dispatch 619-531-2000 to enforce the Tow-Away notice.

SECTION 800 – MATERIALS

800-1.1.2 **Class “A” Topsoil.** To the “WHITEBOOK”, item 4, subsection “e”, DELETE in its entirety and SUBSTITUTE with the following:

- I. The test results shall provide the following information:
 - i. Date of Testing
 - ii. Project Name
 - iii. The Contractor’s Name
 - iv. Source of Material and Supplier’s Name
 - v. Estimate of Quantity Needed in Cubic Yards
 - vi. Soil Gradation
 - vii. Fertility
 - viii. Heavy Metals
 - ix. Soil Permeability in Inches per Hour
 - x. Toxic Elements
 - xi. Chloride Content
 - xii. pH
 - xiii. EcE (electrical conductivity)
 - xiv. SAR (Sodium Absorption Ratio)

- xv. Organic Content by Dry Weight
- xvi. Carbon : Nitrogen Ratio
- xvii. Water-soluble Nutrient Levels
- xviii. Recommendations for adding amendments, chemical corrections, or both.

To the "WHITEBOOK", item 5, DELETE in its entirety and SUBSTITUTE with the following:

5. The topsoil shall conform to the following agricultural suitability requirements:

pH	6.0 – 7.5
E_{Ce} (electrical conductivity)	0.0 – 3.0
SAR (Sodium Absorption Ratio)	0.0 – 5.0
Chloride Content	Less than 150 ppm
Boron Content	Less than 1 ppm
Organic Content	3% to 6% by dry weight
Carbon : Nitrogen Ratio	20:1 maximum
Sandy Loam Gradation Limit*	Gravel over 2mm: Less than 10% by weight Sand: 75% to 85% Sand finer than 100 mesh (0.15 mm): Less than 15% Sand finer than 60 mesh (0.25 mm): Less than 40% Sand larger than 32 mesh (0.5 mm): Minimum 15% Silt: 20% maximum Clay: 15% maximum
Permeability Rate**	2 inches to 5 inches per hour at 80% compaction

* Per USDA Classification Scheme.

** Tested in accordance with USDA Handbook Number 60, method 34b or other approved method.

800-1.2.5 Mulch. To the "WHITEBOOK", item 3, subsection "g", ADD the following:

Type 7 Mulch shall be 4 inches maximum in size and 3 inches thick per Plans.

SECTION 1001 – CONSTRUCTION BEST MANAGEMENT PRACTICES (BMPs)

1001-2.10 BMP Inspection, Maintenance, and Repair. To the “WHITEBOOK”, ADD the following:

5. Maintenance activities shall be documented by the QSP or QSD in the Construction BMP Maintenance Log for projects subject to SWPPP requirements. See **Appendix H - SWPPP Construction BMP Maintenance Log**.

1001-3.7 Payment. To the “WHITEBOOK”, item 3, subsection “g”, DELETE in its entirety and SUBSTITUTE with the following:

- g) BMP Inspection, Maintenance, Repair, and Construction BMP Maintenance Log.
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TECHNICALS

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SECTION 11 68 13
PLAYGROUND EQUIPMENT

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Materials, labor and equipment for complete installation of play equipment as shown on the Plans.

1.02 RELATED SECTIONS

- A. 32 18 16 PLAYGROUND PROTECTIVE SURFACING

1.03 QUALITY ASSURANCE

- A. Licensing: Contractor's license for play equipment installers shall be either "A".
- B. Contractor and/or installer required to have current CPSI (Certified Playground Safety Inspector) certified to install of play equipment and resilient surfacing to recognized safety and workmanship standards.
- C. Contractor shall provide materials, install play equipment, and construct playground areas in accordance with the following standards and guidelines. In case of conflict, the most restrictive-and highest quality standards and guidelines shall apply to the work.
 - 1. "Standard Consumer Safety Performance Specification for Playground Equipment for Public Use," ASTM F1487-98, published by the American Society for Testing and Materials (ASTM).
 - 2. "Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment," ASTM F1292-99.
 - 3. "Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment," ASTM F1951-99.
 - 4. U.S. Consumer Products Safety Commission, Handbook for Public Playground Safety, published by the Consumer Product Safety Commission (CPSC), latest edition.
 - 5. "Americans with Disabilities Act" Accessibility Guidelines (ADAAG).
 - 6. All products shall bear the certification seal of the International Play Equipment Manufacturers Association (IPEMA).

7. All designs shall meet or exceed the Americans with Disabilities Act (ADA) "Final Accessibility Guidelines for Play Areas" regulations as published on October 18, 2000.
8. All manufacturers must be ISO 9001 certified.

D. References and Standards

- CPSC: Consumer Product Safety Commission
- IPEMA: International Playground Equipment Manufacturers Association
- ADA: Americans with Disabilities Act
- ISO: International Organization for Standardization

- E. Installation of play equipment and resilient surfacing shall be in full conformance with California Administrative Code Title 24 disabled access requirements.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Play area equipment and materials shall be ordered and delivered to the job site, and protected from construction operations and vandalism throughout the construction of the project.
- B. Damaged, vandalized or broken equipment and materials shall be cause for rejection as determined by the City's representative.

1.05 GUARANTEES AND WARRANTIES

- A. Contractor shall provide manufacturers' written certification that play equipment have been installed in accordance with manufacturers' recommendations and Contract Documents.
- B. Contractor shall provide the City with manufacturers' written warranties for accessible play equipment.
- C. The equipment manufacturer shall warrant material and workmanship against defects, from the date of shipment, for the period of time as follows.
- a) Kompan - Corocord Loops Structure, Frame:
 - 15-year warranty with service agreementNote: The service agreement shall include agreement to inspect posts for corrosion every 6 months. If there are simple scratches on the posts, the scratches shall be diagnosed and repaired.
 - b) Kompan - Corocord Loop Structure, Ropes:
 - 10-year warranty
 - c) Kompan Play Structures and Components:
 - 10-year on "S" clamps
 - 5-year warranty unless specified below.

- d) Kompan Spring and ball bearing components and rope and net Components:
 - o 2.5-year warranty
 - e) Kompan EPDM rubber membrane and movable metal and plastic parts:
 - o 1-year warranty
 - f) Landscape Structures (LSI) Play Structures and Components:
 - o 10-year warranty unless specified below.
 - g) LSI Cool Topper
 - o 8-year warranty for fabric against failure from significant fading, deterioration, breakdown, mildew, outdoor heat, cold or discoloration.
 - h) LSI Components including CableCore products, swing seats and hangers, grills, all rocking equipment, PVC belting material, Seesaws.
 - o 3-year limited warranty against failure due to corrosion/natural deterioration or manufacturing defects.
- D. The Contractor shall guarantee installation workmanship for a period of one year from the date of Substantial Completion of the Project. The Contractor shall be responsible for coordinating manufacturer material warranty items with the manufacturer/distributor and for the installation of replacement material(s) at no additional cost to the owner.
- E. Provide copy of contractor's installation warranty on company letterhead. Start date of warranty period to be date entire project is accepted by the City of San Diego, as determined by the resident engineer.

1.06 SUBMITTALS

- A. Contractor shall provide the following materials for review and acceptance by the City's representative.
1. Play equipment Product Data: The Contractor shall submit within ten (10) calendar days after receipt of Notice to Proceed, five (5) complete sets of the material and equipment submittals, including:
 - a. Play Equipment Manufacturer and Manufacturer's Representative's name(s) and address(s)
 - b. Plan view drawings with model numbers; descriptive labels (including component names,) deck heights, and notations of compliance with CPSC, ASTM F1487-98 and ADA.
 - c. Detailed component list with model numbers and catalog descriptions
 - d. Color Chart
 - e. Written material specifications for all components
 - f. IPEMA certification certificate from the IPEMA Website
 - g. Copy of Manufacturer Warranty in Certificate format
 - h. Copy of Manufacturer's ISO 9001 Certification
 2. Approval of the submittals shall be the Contractor's authorization to order the required material and equipment. There will be no deviation from the approved submittals without the written authorization of the Owner's representative.

1.07 STAKING

- A. Contractor shall provide staking and layout at the site for placement of play equipment. Safety zones shall be evaluated and accepted by the City's and manufacturer's representatives prior to play equipment installation.

1.08 SAFETY

- A. Contractor shall provide for the complete protection and closure of play areas during and after installation, throughout the maintenance period until final acceptance, and at no additional cost to the City. Any injury, claim or vandalism arising from the insufficient closure and protection of the play areas shall be responsibility of the Contractor.

1.09 AVAILABILITY AND ORDERING OF SPECIFIED ITEMS

- A. Availability: Verify prior to bidding that all specified items, including but not limited to play equipment, accessible resilient surfacing, structures, and park furnishings will be available in time for installation during orderly and timely progress of the work.

In the event specified item or items will not be available, notify the City prior to receipt of bids.
- B. Ordering: Specified items shall be ordered within 10 days of receipt of the "Notice To Proceed." Provide written evidence of timely ordering of specified items to the Resident Engineer.

PART 2-PRODUCTS

2.01 PLAY EQUIPMENT. Equipment shall be in accordance with Construction Plans and the following specifications, or approved substitution.

- A. Play equipment by Kompan shall be as specified on the plans, and shall include the following components:
 - Anemone Corocord Play Structure. Structure shall be as shown on the plans and shall include the following components:
 - i. 1 Waved Membrane;
 - ii. 41 Liana Ropes and 2 guy ropes with collectively 197 Small UFOs (black) and 35 small EPDM Discs;
 - iii. 3 Hammock Swings;
 - iv. 37 EPDM stones.
 - Carousel Swing for ages 2-5
 - Multi-Spinner
 - Rope Hammocks (typical of 2)
- B. Play equipment by LSI shall be as specified on the plans, and shall include the following components:
 - PlayBooster Age 2-5, Quote No: 1136349-01-04:
 - i. Steppers 18"Height, Direct bury (DB)

- ii. Stepper 16" Deck w/1 Handhold
- iii. Deck Link w/Barriers Steel end panels 3 Steps
- iv. Loop Ladder 48"Dk DB
Hillscape wide top 48" deck climber. Color blue
- v. Square Tenderdeck
- vi. Transfer Step w/2 Handloops, Direct bury (DB)
- vii. Marble Panel Above Deck
- viii. Optigear Panel Above Deck
- ix. Table Panel, DB
- x. Grab Bar
- xi. 100"Alum Post DB (typical of 2)
- xii. 116" Alum Post DB (typical of 2)
- xiii. 124"Alum Post DB (typical of 8)
- xiv. 249"Steel Post (60" Bury) (typical of 2) for Cool Topper
- xv. 92"Alum Post DB (typical of 2)
Double Swirl Slide, 48"Dk DB
- xvi. Roller Slibe 40" DB
- xvii. CoolToppers Single Post Pyramid Roof DB (typical of 2)
- xviii. Custom RAL color on all metal posts

- We-Saw DB
- Curva Spinner DB Only (typical of 5)
- Oodle Swing DB Only
- 4-Bay Arch Swing:
 - i. Belt Seat ProGuard Chains for 8' Beam Height
 - ii. 5" Arch Swing Frame Additional Bay 8' Beam Height Only
 - iii. Friendship Swing
- Welcome Sign Ages 2-5 years DB
- Welcome Sign Ages 5-12 years DB

2.02 MANUFACTURER: The layout shown in the plan view is based upon equipment and measurements from KOMPAN and Landscape Structures Inc (LSI). Acceptable manufacturers for each component are as indicated on the plan or approved equal.

Manufacture:

1) KOMPAN

Contact: Daryl L. Brady, (619) 944-8771, DarBra@Kompan.com

2) Landscape Structures Inc./Coast Recreation

Contact: Gregg Rogers, (949) 633-1180, groggers@coastrecreation.net

2.03 SUBSTITUTIONS: Playground equipment and modular units submitted for consideration shall be equivalent in design, layout, deck size, post size, clamping/fastening system, deck/slide/climber height, ADA accessibility, appearance, color and construction detail of the playground equipment, structure or modular unit, specified in the drawings. Reasonable variations in size/height (no more than +/- 5%) and manufacturer's standard colors may be allowed at the

owner's discretion. Color schemes are to match as closely as possible to the original specified colors. Play value and safety features of components must be equal or superior to specified design as judged by the owner or owner's representative.

1. Any expense of modification, adjustment or revision required to ensure compliance of furnished equipment to specified equipment and playground design shall be the sole expense and responsibility of the Contractor.
2. Equals will be considered against the specified equipment's standard of quality and design and will be determined at the owner's discretion.

2.04 MATERIALS:

1. Anemone Frame Coating: Metal Frame shall be treated with C3 Coating. 2-coat 2K Epoxi – Haftgrund 855, 120 g per layer per square meter. Color: Gray. 2-coat 2K-PUR-Acrylc 5714, 120 g per layer per square meter. This item must be classified in corrosion class "C3 high" according to ISO 12944-5 according to salt fog test ISO 9227.
2. Rope play equipment: Anemone shall be supplied according to following description and installed according to manufacturer's instruction.
 - a. Planar rope net following the steel pipes, side length approx. 25.00 x 21.50 m, height 2.80 m (with a layer thickness of protection material of 0.40 m). Mesh size generally 30 x 30 cm. Rope made of galvanized six-stranded wires of the "Herkules" type Ø 19 mm, in which each strand is tightly wrapped with PES yarn, PES "wrapping" inductively melted on to each strand. Liana ropes Ø 21 mm, reinforced with a steel wire core. Nets are completely preassembled, crossing points joined by maintenance-friendly "S" clamps of stainless steel No. 4571, Ø 8 mm. Nets fixed to the steel pipes with half formed "S" clamps of stainless steel No. 4571, Ø 8 mm and welded steel straps. Steel pipes made of S 235, delivered in 10 pieces, connected on site with muffle elements. Class of resistance to corrosion: C3 according to ISO12944-5, double primed with 2K epoxy undercoat, paint application by double coating with 2K-PUR-Acryl 5741, coating thicknesses 120 g/m² each.
 - b. 54 m bended steel pipe, Ø 273.0 x 6.3 mm
 - c. 40 m bended steel pipe, Ø 273.0 x 12.5 mm
 - d. Equipment and fitting according to EN 1176-1:2008 and EN 1176-11:2014, rope play equipment with a valid certificate of an independent testing laboratory.
3. Foundations:
 - a. Unless otherwise specified, the bury depth of all footings shall be 34" min below Finished Grade (FG) on all in-ground play events/posts.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Play equipment shall be installed in accordance with manufacturers' recommendations.
- B. Play equipment shall be completely surrounded by unobstructed safety zones as recommended by the manufacturers. Resilient play surfaces only shall be located within

safety zones. Play equipment safety zones shall not overlap one another unless allowed by ASTM or CPSC standards.

- C. Explicit installation instructions shall be provided by the manufacturer, which shall include detailed, scaled plan view; elevations; footing drawings and details; as well as, written instructions to assure proper installation of the playground equipment, structure or modular unit.
- D. Playground equipment must be installed by a manufacturer certified installer and be installed in accordance with the manufacturer's installation specifications. Installation crew leader must be CPSI certified. An independent 3rd party inspector, provided by the Contractor, must inspect the final installation prior to acceptance. Independent 3rd party inspector must be a Certified Playground Safety Inspector and not employed by the installer or manufacturer.
- E. Close Out: Contractor shall provide the owner with one copy of complete manufacturers installation instructions and maintenance kit. Each manufacturer sends at least two sets of installation manuals with each order. Additional sets of install instructions should be purchased from the manufacturer if originals are lost or damaged. It is the contractor's responsibility to secure the installation instructions from the installer.
- F. Clean up: The site shall be kept clean and free of tools, trash, debris, and installation materials on a daily basis. Material may be stored on site during installation with appropriate protective measures and approval by the Owner's representative.

3.02 MAINTENANCE

- A. Contractor shall maintain play equipment, resilient fill, and accessible resilient surfaces throughout the maintenance period.
- B. Scratches, dents and other damage to play equipment resulting from Contractor's operations shall be repaired to original condition, or play equipment shall be replaced as determined by the City's representative.

END OF SECTION 116813

SECTION 32 18 16

PLAYGROUND PROTECTIVE SURFACING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes:
1. Poured-in-Place (PIP) Playground Surfacing System shall consist of 0.5-1.5 mm size TPV (ThermalPlastic Vulcanized) granules mixed with an Aliphatic binder.
 2. Excavation, permeable concrete base, and subdrainage for playground surfacing.

1.2 REFERENCES

- A. APPLICABLE STANDARDS ASTM International:
1. ASTM C1028 Standard Test Method for Determining the Static Coefficient of friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull Meter Method – This standard replaces ASTM D2047 02/2019.
 2. ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers – Tension
 3. ASTM D624 Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers
 4. ASTM D2859 Standard Test Method for Flammability of Finished Textile Floor Covering Materials
 5. ASTM E303 Standard Test Method for Measuring Surface Frictional Properties using the British Pendulum Tester
 6. ASTM F1292-18 Standard Specification for Impact Attenuation of Surfacing Materials within the Use Zone of Playground Equipment
 7. ASTM F1951 Standard Specification for Determination of Accessibility of Surface Systems under and around Playground Equipment
 8. ASTM F2479-12 Standard Specification for Purchase, Installation and Maintenance

1.3 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide a 2 layer rubber-urethane playground surfacing system which has been designed, manufactured and installed to meet the following criteria:
1. Shock Attenuation (ASTM F1292-09):
 - a. Gmax: Less than 200.
 - b. Head Injury Criteria: Less than 1000.
 - c. Flammability (ASTM D2859): Pass.
 - d. Tensile Strength (ASTM D412): 60 psi (413 kPa).
 - e. Tear Resistance (ASTM D624): 140%.

- f. Water Permeability: 0.4 gal/yd²/second.
- g. Accessibility: Comply with requirements of ASTM F1951.

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions.
- B. Verification Samples: Submit manufacturer's standard verification samples of 6" x 6" minimum.
- C. Quality Assurance/Control Submittals: Submit the following:
 - 1. Certificate of qualifications of the playground surfacing installer.
 - 2. Closeout Submittals: Warranty documents.

1.5 QUALITY ASSURANCE

- A. Area Safety: Poured in place within playground equipment use zones shall meet or exceed the performance requirements of the CPSC, ADA and Fall Height Test ASTM F1292-18. The surface must yield both a peak deceleration of no more than 200 G-max and a Head Injury Criteria (HIC) value of no more than 1,000 for a head-first fall from the highest accessible portion of play equipment being installed as shown on drawings. IPEMA certification is required. (ASTM F1292-18 section 4.3.3: The laboratory test used to determine critical fall height shall have been conducted on surfacing material samples identical in design, materials, components, and thickness and manufactured as the installed playground surface). ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers-Tension.
- B. Accessibility: NOTE: Children's outdoor play areas shall be in compliance with the Uniform Federal Accessibility Standards (UFAS) FED-STD-795 and the Architectural and Engineer Instructions (9AEI) Design Criteria. The requirements of the Americans with Disabilities Act Accessibility Guidelines (ADAAG) 28 CFR Part 36 that provide equal or greater accessibility than the requirements of UFAS must also be met in children's outdoor play areas.
- C. (PIP) Playground Surfacing Systems intended to serve as accessible paths of travel for persons with disabilities shall be firm, stable, and slip resistant, and shall meet the requirements of ASTM F195-14 and ASTM F1292-18.
- D. TPV material shall be angular granules with a (Shore A) hardness of 65°A ±5 and a particle size between .5-1.5 mm. Binder shall be not less than 15% percent of the total weight of TPV material used in the wear surface and shall provide 100% percent coating of the particles. No other granule sizes are acceptable.
- E. Third part test results of tensile strength equal to or greater than 170psi and elongation yield equal to or greater than 80% percent.
- F. Certifications: Certified Installers should be under the installers employ for a minimum of 180 days.

1.6 DELIVERY, STORAGE & HANDLING

- A. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- B. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at a minimum temperature of 40 degrees F (4 degrees C) and a maximum temperature of 90 degrees F (32 degrees C).

1.7 PROJECT/SITE CONDITIONS

- A. PIP surfacing must be installed on a dry subsurface, with no prospect of rain within the initial drying period, and within the recommended temperature range of the manufacturer. Installation in weather conditions of extreme heat, or less than 55°F, and/or high humidity may affect cure time and the structural integrity of the final product. Immediate surroundings of the site must be reasonably free of dust conditions as this could affect the final surface appearance. The manufacturer's Service Center Manager reserves the right to control the installation based on such factors without penalty to the company

1.8 WARRANTY

- A. Warranty: PIP surfacing shall maintain required impact attenuation characteristics and be guaranteed against defects in workmanship and materials. Warranty will be specific to maintenance requirements and performance standards of completed product.
- B. Proper drainage is critical to the longevity of the Poured-in-Place surfacing system. Inadequate drainage will cause premature breakdown of the poured system in affected areas and void the warranty.
- C. Warranty Period: Seven (7) years from date entire project is accepted by the City of San Diego, as determined by the Resident Engineer.

PART 2 - PRODUCTS

2.1 POURED-IN-PLACE PLAYGROUND SURFACING SYSTEM

- A. Manufacturer: TotTurf TPV Supreme, or approved equal.
Contact: David Purcell @ Roberson Recreational Surfaces 2414 W. 12th Street, Suite 5; Temple, AZ 85281; Telephone: (760) 809-1875; Fax: (602) 340-0402; E-mail: dpurcell@totturf.com
Manufacturers Website: <http://www.totturf.com>
 - 1. PRODUCT SCOPE:
Poured in Place Surface: The poured in place surface shall consist of a uniform material manufactured in such a way that the Wear Course meets the requirements specified herein for wear surface.
 - a. The type safety surfacing shall be a poured-in-place system and shall be indicated on the drawings.

- b. Overall thickness: Critical Fall Height (CFH): Per ASTM 1292 and IPEMA Certification, Overall Thickness for Tot Turf Supreme shall be as follows:
 - 2.5 inches = up to 5' CFH (2" Cushion Layer + ½" Wear Course)
 - 3 inches = up to 6' CFH (2.5" Cushion Layer + ½" Wear Course)
 - 4 inches = up to 8' CFH (3.5" Cushion Layer + ½" Wear Course)
 - 5 inches = up to 11' CFH (4.5" Cushion Layer + ½" Wear Course)

2. CUSHION LAYER SECTION

- a. Impact Attenuating Cushion Layer: Cushion Layer consists of shredded styrene butadiene rubber (SBR) and/or cryogenic crumb rubber and adhered with a 100% percent solids polyurethane binder to form a resilient porous material.
- b. Strands of SBR may vary from 0.5 mm – 2.0 mm in thickness by 3.0 mm – 20 mm in length.
- c. SBR Crumb Rubber (5-9 mesh) using a sieve analysis ASTM D5644 with a fiber content of .1% or less mixed in.
- d. Foam or standard rubber granules are not to be permitted in a Cushion Layer.
- e. Binder shall be between 10-14% percent of the total weight of the material and shall provide 100% percent coating of the particles.
- f. The Cushion Layer shall be compatible with the Wear Course and must meet requirements herein for impact attenuation.

3. WEAR COURSE

- a. Wear Course shall consist of Thermal Plastic Vulcanized (TPV) granules with an Aliphatic binder formulated to produce an even, uniform, seamless surface up to 2000 square feet. (Contact sales representative for seamless pads over 2000 square feet).
- b. TPV material shall be angular granules with a (Shore A) hardness of 65°A ±5 and particle size between 0.5-1.5 mm. Binder shall be 22-24% percent of the total weight of TPV material used in the wear surface and shall provide 100% percent coating of the particles. No other granule sizes are acceptable.
- c. Thickness of the Wear Course shall be ½" – 5/8" inch (minimum ½" inch, 12.7mm).
- d. The Wear Course shall be porous.
- e. See the manufacturer's specification for the TPV High Density wear resistant inserts under swings, slide exits, and high traffic areas.

4. BINDER

- a. No Toluene Diphenyl Isocyanate (TDI) shall be used. Aliphatic urethane is to be used.
- b. No filler materials shall be used in urethane such as plasticizers, and the catalyzing agent shall contain no heavy metals.
- c. Weight of polyurethane shall be no less than 8.5 lbs/gal (1.02 Kg/1) and no more than 9.5 lbs/gal (1.14 Kg/1).

- d. Manufacturer is permitted to modify the type of urethane required to match extreme weather conditions. Substitutions must be equal to or exceed Aliphatic quality

PART 3 - EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

- A. Comply with the instructions and recommendations of the playground surfacing manufacturer.

3.2 PREPARATION

- A. Finished Grade/Slope: Verify that finished elevations of adjacent areas are as indicated on the architectural or site plans, that the appropriate sub-grade elevation has been established for the particular safety surface to be installed, and that the subsurface has been installed per architectural, site or equipment plans while meeting accessibility and use zones requirements.
- B. Permeable Concrete Sub Base: Tolerance of concrete or bituminous sub base shall be within 1/8" inch (3.0 mm) in 10' feet (3050 mm). Per ADA Guidelines: Concrete a minimum of 4" inches. Concrete must cure for 7 days prior to application of cushion layer. Concrete must cure 28 days if wear course is to be applied directly to concrete surface. If Poured in Place surfacing is installed, verify that the Concrete Sub Base has cured (all areas appear white in color usually at 7 days) and that all concrete curing compounds and other deleterious substances that might adversely affect adhesion have been removed. Surface shall be clean and dry.
- C. Drainage: Verify that sub-surfacing drainage, if required, has been installed to provide positive drainage.

3.3 INSTALLATION

- A. Poured in Place Surfacing: Components of the poured in place surfacing shall be mixed on site in a rotating tumbler to ensure components are thoroughly mixed and are in accordance with manufacturer's recommendations. Installation of surfacing shall be seamless up to 2,000 square feet per day and completely bonded to concrete of sub base. Material shall cover all foundations and fill around all elements penetrating the surface.
- B. Cushion Layer: Whenever practical, cushion layer of surfacing material shall be installed in one continuous pour on the same day of up to 2,000 square feet. When a second pour is required, step the seam (see detail) and fully coat the step of the previous work with polyurethane binder to ensure 100% percent bond with new work. Apply adhesive in small quantities so that new cushion layer can be placed before the adhesive dries.
- C. Wear Course: Wear Course must be TPV (Thermoplastic Elastomer Vulcanized) rubber granules. Wear surface shall be bonded to Cushion Layer. If necessary, additional primer will be used between the cushion layer and Wear Course. Apply adhesive to Cushion Layer in small quantities

allowing the Wear Course to be applied before adhesive dries. Surface shall be hand troweled to a smooth, even finish. Except where the Wear Course is composed of differing color patterns, pour shall be continuous and seamless up to 2,000 square feet per day; (Contact sales representative for seamless installations in excess of 2000 square feet). Where seams are required due to color change, size or adverse weather, a step configuration will be constructed to maintain Wear Course integrity. The edge of initial pour shall be coated with adhesive and wearing surface mixture shall be immediately applied. Pads with multiple seams are encouraged to include a top coat of urethane before being placed into use. Butt joint seams are not acceptable except for repairs. Under special conditions and with owners written approval seams may be permitted in same color pad. Consult with manufacturer for specific applications.

- D. Perimeter: For installations over Existing Concrete, the perimeter must be saw cut to provide a keyway 1" inch deep by 1" inch wide, or formed during the pour, with surfacing rolled down into the void. Primer adhesive must be applied to all sides of the void. When connecting to a concrete curb or border, the inside vertical edge shall be primed with adhesive and the final 2" inches of the cushion layer shall be tapered to allow the wear surface material to be 1.5" inches – 2" inches thick where it joins the concrete edge.
- E. Thickness: Construction methods, such as the use of measured screeds or guides shall be employed to ensure that full depth or specified surfacing material is installed. Surfacing system thickness throughout the playground equipment use zone shall be as required to meet the impact attenuation requirements specified herein.
- F. Clean up: Manufacturer's installers shall work to minimize excessive adhesive on adjacent surfaces or play equipment. Spills of excess adhesive shall be promptly cleaned. Manufacturer's Services: For poured in place safety surfacing, a manufacturer's representative who is experienced in the installation of playground safety surfacing shall be provided. The representative shall supervise the installation to ensure that the system meets the impact attenuation requirements as specified herein.
- G. Security & Waste Disposal: Surface installation crew shall be responsible for the protection of surface during the installation process while on site only. Owner or general contractor shall be responsible for the protection of the surface during the curing period upon completion of the installation and overnight during the installation. Owner or general contractor shall be responsible for having a dumpster on site for all waste and debris. Failure to provide security and a dumpster will result in additional cost.
- H. Utilities & Access: Power and water must be available within 300 feet of installation. Site will require tractor-trailer access. In a case where tractor-trailer access is not possible, owner or general contractor shall be responsible for transporting materials from delivering carrier to the installation site.

3.4 PROTECTION

- A. Protect the installed playground surface from damage resulting from subsequent construction activity on the site.

- B. Protection: The safety surface shall be allowed to fully cure in accordance with Manufacturer's instructions. The surface shall be protected by the owner from all traffic during the curing period of 48 hours or as instructed by the Manufacturer.

END OF SECTION 32 18 16

SECTION 26 05 19

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Building wires and cables rated 600 V and less.
 - 2. Connectors, splices, and terminations rated 2000 V and less.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Product Schedule: Indicate type, use, location, and termination locations.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For manufacturer's authorized service representative.
- B. Field quality-control reports.

1.5 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Member company of NETA.
 - 1. Testing Agency's Field Supervisor: Certified by NETA to supervise on-site testing.

PART 2 - PRODUCTS

2.1 CONDUCTORS AND CABLES

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

1. Alpha Wire Company.
2. American Bare Conductor.
3. Belden Inc.
4. Cerro Wire LLC.
5. Encore Wire Corporation.
6. General Cable Technologies Corporation.
7. Service Wire Co.
8. Southwire Company.

- B. 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.
- C. Conductor and Cable Marking: Comply with wire and cable marking according to UL's "Wire and Cable Marking and Application Guide."
- D. Conductors: Copper, complying with NEMA WC 70/ICEA S-95-658.
1. Conductor Insulation: Comply with NEMA WC 70/ICEA S-95-658 for Type THHN/THWN-2.

2.2 CONNECTORS AND SPLICES

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. 3M Electrical Products.
 2. AFC Cable Systems; a part of Atkore International.
 3. Gardner Bender.
 4. Hubbell Power Systems, Inc.
 5. Ideal Industries, Inc.
 6. ILSCO.
 7. NSi Industries LLC.
 8. O-Z/Gedney; a brand of Emerson Industrial Automation.
 9. Service Wire Co.
 10. TE Connectivity Ltd.
- B. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated; listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

PART 3 - EXECUTION

3.1 CONDUCTOR MATERIAL APPLICATIONS

- A. Feeders: Copper; solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.
- B. Branch Circuits: Copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

- A. Feeders Concealed in Concrete, below Slabs-on-Grade, and Underground: Type THHN/THWN-2, single conductors in raceway.
- B. Branch Circuits Concealed in Ceilings, Bridge Structure: Type THHN/THWN-2, single conductors in raceway.
- C. Branch Circuits Concealed Underground: Type THHN/THWN-2, single conductors in raceway.

3.3 INSTALLATION OF CONDUCTORS AND CABLES

- A. Conceal cables underground in finished walls, ceilings, and under bridge structures unless otherwise indicated.
- B. Complete raceway installation between conductor and cable termination points according to Section 26 05 33 "Raceways and Boxes for Electrical Systems" prior to pulling conductors and cables.
- C. 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.
- D. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.
- E. Support cables according to Section 26 05 29 "Hangers and Supports for Electrical Systems."

3.4 CONNECTIONS

- A. 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-486B.
- B. Make splices, terminations, 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, termination, and tap for aluminum conductors.
- C. Wiring at Outlets: Install conductor at each outlet, with at least 6 inches (150 mm) of slack.

3.5 IDENTIFICATION

- A. Identify and color-code conductors and cables according to Section 260553 "Identification for Electrical Systems."

- B. Identify each spare conductor at each end with identity number and location of other end of conductor, and identify as spare conductor.

3.6 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and equipment installations, including connections.
- B. Perform the following tests and inspections with the assistance of a factory-authorized service representative:
 - 1. Perform each of the following visual and electrical tests:
 - a. Inspect exposed sections of conductor and cable for physical damage and correct connection according to the single-line diagram.
 - b. Test bolted connections for high resistance using one of the following:
 - 1) A low-resistance ohmmeter.
 - 2) Calibrated torque wrench.
 - c. Inspect compression applied connectors for correct cable match and indentation.
 - d. Inspect for correct identification.
 - e. Inspect cable jacket and condition.
 - f. Insulation-resistance test on each conductor with respect to ground and adjacent conductors. Apply a potential of 500-V dc for 300-V rated cable and 1000-V dc for 600-V rated cable for a one-minute duration.
 - g. Continuity test on each conductor and cable.
 - h. Uniform resistance of parallel conductors.
- C. Cables will be considered defective if they do not pass tests and inspections.
- D. Prepare test and inspection reports to record the following:
 - 1. Procedures used.
 - 2. Results that comply with requirements.
 - 3. Results that do not comply with requirements and corrective action taken to achieve compliance with requirements.

END OF SECTION 260519

SECTION 26 05 26

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

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 grounding and bonding systems and equipment.
- B. Section includes grounding and bonding systems and equipment, plus the following special applications:
 - 1. Underground distribution grounding.
 - 2. Foundation steel electrodes.

1.3 ACTION SUBMITTALS

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

1.4 INFORMATIONAL SUBMITTALS

- A. As-Built Data: Plans showing dimensioned as-built locations of grounding features specified in "Field Quality Control" Article, including the following:
 - 1. Ground rods.
- B. Field quality-control reports.

1.5 QUALITY ASSURANCE

- A. Comply with UL 467 for grounding and bonding materials and equipment.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Burndy; Part of Hubbell Electrical Systems.
 2. Dossert; AFL Telecommunications LLC.
 3. ERICO International Corporation.
 4. Fushi Copperweld Inc.

2.2 SYSTEM DESCRIPTION

- A. Comply with UL 467 for grounding and bonding materials and equipment.

2.3 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 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.

2.4 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.
- C. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.

2.5 GROUNDING ELECTRODES

- A. Ground Rods: Copper-clad steel; 3/4 inch by 10 feet (19 mm by 3 m).

PART 3 - EXECUTION

3.1 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. 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.

3.2 GROUNDING UNDERGROUND DISTRIBUTION SYSTEM COMPONENTS

- A. Comply with IEEE C2 grounding requirements.
- B. Grounding Handholes: Install a driven ground rod through handhole floor, per drawing detail.

3.3 EQUIPMENT GROUNDING

- A. Install insulated equipment grounding conductors with all feeders and branch circuits.
- B. 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. Flexible raceway runs.
- C. 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.
- D. Metallic Fences: Comply with requirements of IEEE C2.
 - 1. Grounding Conductor: Bare copper, not less than No. 8 AWG.
 - 2. Gates: Shall be bonded to the grounding conductor with a flexible bonding jumper.
 - 3. Barbed Wire: Strands shall be bonded to the grounding conductor.

3.4 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.
- C. Test Wells: Ground rod driven through drilled hole in bottom of handhole. Handholes are specified in Section 260543 "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. Use exothermic-welded connectors for outdoor locations; if a disconnect-type connection is required, use a bolted clamp.

3.5 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
 - 1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
- B. Tests and Inspections:
 - 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 individual ground rods. Make tests at ground rods before any conductors are connected.
 - a. Measure ground resistance no fewer than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.

- b. Perform tests by fall-of-potential method according to IEEE 81.
- C. Grounding system will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports.
- E. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify the Resident Engineer promptly and include recommendations to reduce ground resistance.

END OF SECTION 260526

SECTION 26 05 43

UNDERGROUND DUCTS AND RACEWAYS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Direct-buried conduit, ducts, and duct accessories.
 - 2. Handholes and boxes.

1.3 DEFINITIONS

- A. Trafficways: Locations where vehicular or pedestrian traffic is a normal course of events.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include duct-bank materials, including separators and miscellaneous components.
 - 2. Include ducts and conduits and their accessories, including elbows, end bells, bends, fittings, and solvent cement.
 - 3. Include warning tape.

1.5 INFORMATIONAL SUBMITTALS

- A. Duct-Bank Coordination Drawings: Show duct profiles and coordination with other utilities and underground structures.
 - 1. Include plans and sections, drawn to scale, and show bends and locations of expansion fittings.
- B. Product Certificates: For concrete and steel used in precast concrete handholes, as required by ASTM C 858.
- C. Qualification Data: For professional engineer and testing agency responsible for testing nonconcrete handholes and boxes.

D. Source quality-control reports.

E. Field quality-control reports.

1.6 QUALITY ASSURANCE

A. Testing Agency Qualifications: Qualified according to ASTM E 329 for testing indicated.

1.7 FIELD CONDITIONS

A. Ground Water: Assume ground-water level is 36 inches (900 mm) below ground surface unless a higher water table is noted on Drawings.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS FOR DUCTS AND RACEWAYS

A. Comply with ANSI C2.

2.2 CONDUIT

A. Rigid Steel Conduit: Galvanized. Comply with ANSI C80.1.

B. RNC: NEMA TC 2, Type EPC-40-PVC, UL 651, with matching fittings by same manufacturer as the conduit, complying with NEMA TC 3 and UL 514B.

2.3 NONMETALLIC DUCTS AND DUCT ACCESSORIES

A. Solvents and Adhesives: As recommended by conduit manufacturer.

B. Duct Accessories:

1. Duct Separators: Factory-fabricated rigid PVC interlocking spacers, sized for type and size of ducts with which used, and selected to provide minimum duct spacing indicated while supporting ducts during concreting or backfilling.
2. Warning Tape: Underground-line warning tape specified in Section 260553 "Identification for Electrical Systems."

2.4 PRECAST CONCRETE HANDHOLES AND BOXES

A. Comply with ASTM C 858 for design and manufacturing processes.

- B. Description: Factory-fabricated, reinforced-concrete, monolithically poured walls and bottom unless open-bottom enclosures are indicated. Frame and cover shall form top of enclosure and shall have load rating consistent with that of handhole or box.
 - 1. Frame and Cover: Weatherproof steel frame, with steel cover with recessed cover hook eyes and tamper-resistant, captive, cover-securing bolts.
 - 2. Cover Legend: Molded lettering, "LIGHTING" or "ELECTRIC", based on wiring.
 - 3. Configuration: Units shall be designed for flush burial and have integral closed bottom unless otherwise indicated.
 - 4. Extensions and Slabs: Designed to mate with bottom of enclosure. Same material as enclosure.
 - a. Extension shall provide increased depth of 12 inches (300 mm).
 - b. Slab: Same dimensions as bottom of enclosure, and arranged to provide closure.
 - 5. Joint Sealant: Asphaltic-butyl material with adhesion, cohesion, flexibility, and durability properties necessary to withstand maximum hydrostatic pressures at the installation location with the ground-water level at grade.
- C. Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Coordinate layout and installation of ducts, handholes, and boxes with final arrangement of other utilities, site grading, and surface features as determined in the field. Notify Resident Engineer if there is a conflict between areas of excavation and existing structures or archaeological sites to remain.
- B. Coordinate elevations of ducts and duct-bank entrances into manholes, handholes, and boxes with final locations and profiles of ducts and duct banks, as determined by coordination with other utilities, underground obstructions, and surface features. Revise locations and elevations as required to suit field conditions and to ensure that duct runs drain to manholes and handholes, and as approved by Resident Engineer.
- C. Clear and grub vegetation to be removed, and protect vegetation to remain according to Section 300 of the White Book. Remove and stockpile topsoil for reapplication according to Section 300 of the White Book.

3.2 UNDERGROUND DUCT APPLICATION

- A. Ducts for Electrical Feeders 600 V and Less: RNC, NEMA Type EPC-40-PVC, in direct-buried duct bank unless otherwise indicated.
- B. Ducts for Electrical Branch Circuits: RNC, NEMA Type EPC-40-PVC, in direct-buried duct bank unless otherwise indicated.

3.3 EARTHWORK

- A. Earthwork: Comply with Section 300 of the White Book, but do not use heavy-duty, hydraulic-operated, compaction equipment.
- B. Restore surface features at areas disturbed by excavation, and re-establish original grades unless otherwise indicated. Replace removed sod immediately after backfilling is completed.
- C. Restore areas disturbed by trenching, storing of dirt, cable laying, and other work. Restore vegetation and include necessary top soiling, fertilizing, liming, seeding, sodding, sprigging, and mulching. Comply with Section 800 of the White Book "Landscaping and Irrigation."
- D. Cut and patch existing pavement in the path of underground ducts and utility structures.

3.4 DUCT INSTALLATION

- A. Install ducts according to NEMA TCB 2.
- B. Slope: Pitch ducts a minimum slope of 1:300 down toward manholes and handholes and away from buildings and equipment. Slope ducts from a high point in runs between two manholes, to drain in both directions.
- C. Curves and Bends: Use 5-degree angle couplings for small changes in direction. Use manufactured long sweep bends with a minimum radius of 48 inches (1200 mm), both horizontally and vertically, at other locations unless otherwise indicated.
- D. Joints: Use solvent-cemented joints in ducts and fittings and make watertight according to manufacturer's written instructions. Stagger couplings so those of adjacent ducts do not lie in same plane.
- E. Installation Adjacent to High-Temperature Steam Lines: Where duct banks are installed parallel to underground steam lines, perform calculations showing the duct bank will not be subject to environmental temperatures above 40 deg C. Where environmental temperatures are calculated to rise above 40 deg C, and anywhere the duct bank crosses above an underground steam line, install insulation blankets listed for direct burial to isolate the duct bank from the steam line.
- F. Sealing: Provide temporary closure at terminations of ducts that have cables pulled. Seal spare ducts at terminations. Use sealing compound and plugs to withstand at least 15-psig (1.03-MPa) hydrostatic pressure.
- G. Pulling Cord: Install 100-lbf- (445-N-) test nylon cord in empty ducts.
- H. Direct-Buried Duct Banks:
 - 1. Excavate trench bottom to provide firm and uniform support for duct bank. Comply with requirements in 300 of the White Book for preparation of trench bottoms for pipes less than 6 inches (150 mm) in nominal diameter.
 - 2. Support ducts on duct separators coordinated with duct size, duct spacing, and outdoor temperature.

3. Space separators close enough to prevent sagging and deforming of ducts, with not less than five spacers per 20 feet (6 m) of duct. Secure separators to earth and to ducts to prevent displacement during backfill and yet permit linear duct movement due to expansion and contraction as temperature changes. Stagger spacers approximately 6 inches (150 mm) between tiers.
4. Depth: Install top of duct bank at least 36 inches (900 mm) below finished grade unless otherwise indicated.
5. Set elevation of bottom of duct bank below frost line.
6. Install ducts with a minimum of 3 inches (75 mm) between ducts for like services and 6 inches (150 mm) between power and signal ducts.
7. Elbows: Install manufactured duct elbows for stub-ups at poles and equipment, at building entrances through floor, and at changes of direction in duct run unless otherwise indicated. Encase elbows for stub-up ducts throughout length of elbow.
8. Install manufactured rigid steel conduit elbows for stub-ups at poles and equipment, at bridge structure, and at changes of direction in duct run.
 - a. Couple steel conduits to ducts with adapters designed for this purpose, and encase coupling with 3 inches (75 mm) of concrete.
 - b. For 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.
9. After installing first tier of ducts, backfill and compact. Start at tie-in point and work toward end of duct run, leaving ducts at end of run free to move with expansion and contraction as temperature changes during this process. Repeat procedure after placing each tier. After placing last tier, hand place backfill to 4 inches (100 mm) over ducts and hand tamp. Firmly tamp backfill around ducts to provide maximum supporting strength. Use hand tamper only. After placing controlled backfill over final tier, make final duct connections at end of run and complete backfilling with normal compaction. Comply with requirements in 300 of the White Book for installation of backfill materials.
 - a. Place minimum 3 inches (75 mm) of sand as a bed for duct bank. Place sand to a minimum of 6 inches (150 mm) above top level of duct bank.
 - b. Place minimum 6 inches (150 mm) of engineered fill above concrete encasement of duct bank.
- I. Warning Tape: Bury warning tape approximately 12 inches (300 mm) above all concrete-encased ducts and duct banks. Align tape parallel to and within 3 inches (75 mm) of centerline of duct bank. Provide an additional warning tape for each 12-inch (300-mm) increment of duct-bank width over a nominal 18 inches (450 mm). Space additional tapes 12 inches (300 mm) apart, horizontally.

3.5 INSTALLATION OF CONCRETE, HANDHOLES, AND BOXES

A. Precast Concrete Handhole Installation:

1. Comply with ASTM C 891 unless otherwise indicated.
2. Install units level and plumb and with orientation and depth coordinated with connecting ducts, to minimize bends and deflections required for proper entrances.

3. Unless otherwise indicated, support units on a level bed of crushed stone or gravel, graded from 1-inch (25-mm) sieve to No. 4 (4.75-mm) sieve and compacted to same density as adjacent undisturbed earth.

B. Elevations:

1. Handhole Covers: In paved areas and trafficways, set surface flush with finished grade. Set covers of other handholes 1 inch (25 mm) above finished grade.
2. Where indicated, cast handhole cover frame integrally with handhole structure.

3.6 GROUNDING

- A. Ground underground ducts according to Section 260526 "Grounding and Bonding for Electrical Systems."

3.7 FIELD QUALITY CONTROL

- A. Perform the following tests and inspections and prepare test reports:

1. Demonstrate capability and compliance with requirements on completion of installation of underground ducts.
2. Pull solid aluminum or wood test mandrel through duct to prove joint integrity and adequate bend radii, and test for out-of-round duct. Provide a minimum 6-inch- (150-mm-) long mandrel equal to 80 percent fill of duct. If obstructions are indicated, remove obstructions and retest.
3. Test handhole grounding to ensure electrical continuity of grounding and bonding connections. Measure and report ground resistance as specified in Section 260526 "Grounding and Bonding for Electrical Systems."

- B. Correct deficiencies and retest as specified above to demonstrate compliance.

3.8 CLEANING

- A. Pull leather-washer-type duct cleaner, with graduated washer sizes, through full length of ducts. Follow with rubber duct swab for final cleaning and to assist in spreading lubricant throughout ducts.

END OF SECTION 260543

SECTION 26 05 33

RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Metal conduits and fittings.
2. Surface raceways.
3. Boxes, enclosures, and cabinets.

B. Related Requirements:

1. Section 260543 "Underground Ducts and Raceways for Electrical Systems" for exterior ductbanks, manholes, and underground utility construction.

1.2 DEFINITIONS

A. GRC: Galvanized rigid steel conduit.

1.3 ACTION SUBMITTALS

- A. Product Data: For surface raceways, wireways and fittings, hinged-cover enclosures, and cabinets.
- B. Shop Drawings: For custom enclosures and cabinets. Include plans, elevations, sections, and attachment details.

1.4 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Conduit routing plans, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of items involved:
 1. Structural members in paths of conduit groups with common supports.

PART 2 - PRODUCTS

2.1 METAL CONDUITS AND FITTINGS

A. Metal Conduit:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. AFC Cable Systems; a part of Atkore International.
 - b. Allied Tube & Conduit; a part of Atkore International.
 - c. Anamet Electrical, Inc.
 - d. Calconduit.
2. Listing and Labeling: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
3. GRC: Comply with ANSI C80.1 and UL 6.
4. EMT: Comply with ANSI C80.3 and UL 797.

B. Metal Fittings:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. AFC Cable Systems; a part of Atkore International.
 - b. Allied Tube & Conduit; a part of Atkore International.
 - c. Anamet Electrical, Inc.
 - d. Calconduit.
2. Comply with NEMA FB 1 and UL 514B.
3. Listing and Labeling: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
4. Fittings, General: Listed and labeled for type of conduit, location, and use.
5. Fittings for EMT:
 - a. Material: Steel.
 - b. Type: Compression.

2.2 BOXES, ENCLOSURES, AND CABINETS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. Adalet.
 2. Crouse-Hinds, an Eaton business.
 3. EGS/Appleton Electric.
 4. Erickson Electrical Equipment Company.
- B. General Requirements for Boxes, Enclosures, and Cabinets: Boxes, enclosures, and cabinets installed in wet locations shall be listed for use in wet locations.
- C. Luminaire Outlet Boxes: Nonadjustable, designed for attachment of luminaire weighing 50 lb (23 kg). Outlet boxes designed for attachment of luminaires weighing more than 50 lb (23 kg) shall be listed and marked for the maximum allowable weight.

- D. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.
- E. Cast-Metal Access, Pull, and Junction Boxes: Comply with NEMA FB 1 and UL 1773, galvanized, cast iron with gasketed cover.
- F. Gangable boxes are prohibited.

PART 3 - EXECUTION

3.1 RACEWAY APPLICATION

- A. Outdoors: Apply raceway products as specified below unless otherwise indicated:
 - 1. Exposed Conduit: GRC.
 - 2. Concealed Conduit, Aboveground: EMT.
 - 3. Boxes and Enclosures, Aboveground: NEMA 250, Type 4.
- B. Minimum Raceway Size: 3/4-inch (21-mm) trade size.
- C. 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. Comply with NEMA FB 2.10.
 - 2. EMT: Use compression, cast-metal fittings. Comply with NEMA FB 2.10.
 - 3. Flexible Conduit: Use only fittings listed for use with flexible conduit. Comply with NEMA FB 2.20.
- D. Install surface raceways only where indicated on Drawings.

3.2 INSTALLATION

- A. Comply with requirements in Section 260529 "Hangers and Supports for Electrical Systems" for hangers and supports.
- B. Comply with NECA 1 and NECA 101 for installation requirements except where requirements on Drawings or in this article are stricter. Comply with NECA 102 for aluminum conduits. Comply with NFPA 70 limitations for types of raceways allowed in specific occupancies and number of floors.
- C. Do not fasten conduits onto the bottom side of a metal deck roof.
- D. 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.
- E. Complete raceway installation before starting conductor installation.
- F. Arrange stub-ups so curved portions of bends are not visible above finished slab.

- G. Install no more than the equivalent of three 90-degree bends in any conduit run except for control wiring conduits, for which fewer bends are allowed. Support within 12 inches (300 mm) of changes in direction.
- H. Make bends in raceway using large-radius preformed ells. Field bending shall be according to NFPA 70 minimum radii requirements. Use only equipment specifically designed for material and size involved.
- I. Conceal conduit within finished walls, ceilings, and floors unless otherwise indicated. Install conduits parallel or perpendicular to building lines.
- J. Support conduit within 12 inches (300 mm) of enclosures to which attached.
- K. 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. Secure raceways to reinforcement at maximum 10-foot (3-m) intervals.
 - 2. Arrange raceways to cross building expansion joints at right angles with expansion fittings.
 - 3. Arrange raceways to keep a minimum of 1 inch (25 mm) of concrete cover in all directions.
 - 4. Do not embed threadless fittings in concrete unless specifically approved by Architect for each specific location.
 - 5. Change from ENT to GRC before rising above floor.
- L. Stub-Ups to Above Recessed Ceilings:
 - 1. Use EMT or RMC for raceways.
 - 2. Use a conduit bushing or insulated fitting to terminate stub-ups not terminated in hubs or in an enclosure.
- M. Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions: Apply listed compound to threads of raceway and fittings before making up joints. Follow compound manufacturer's written instructions.
- N. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors including conductors smaller than No. 4 AWG.
- O. Terminate threaded conduits into threaded hubs or with locknuts on inside and outside of boxes or cabinets. Install bushings on conduits up to 1-1/4-inch (35mm) trade size and insulated throat metal bushings on 1-1/2-inch (41-mm) trade size and larger conduits terminated with locknuts. Install insulated throat metal grounding bushings on service conduits.
- P. Install raceways square to the enclosure and terminate at enclosures with locknuts. Install locknuts hand tight plus 1/4 turn more.
- Q. Do not rely on locknuts to penetrate nonconductive coatings on enclosures. Remove coatings in the locknut area prior to assembling conduit to enclosure to assure a continuous ground path.
- R. Cut conduit perpendicular to the length. For conduits 2-inch (53-mm) trade size and larger, use roll cutter or a guide to make cut straight and perpendicular to the length.

- S. 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. Cap underground raceways designated as spare above grade alongside raceways in use.
- T. Surface Raceways:
 - 1. Install surface raceway with a minimum 2-inch (50-mm) radius control at bend points.
 - 2. Secure surface raceway with screws or other anchor-type devices at intervals not exceeding 48 inches (1200 mm) and with no less than two supports per straight raceway section. Support surface raceway according to manufacturer's written instructions. Tape and glue are not acceptable support methods.
- U. Install raceway sealing fittings at accessible locations according to NFPA 70 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 according to NFPA 70.
- V. Comply with manufacturer's written instructions for solvent welding RNC and fittings.
- W. Fasten junction and pull boxes to or support from building structure. Do not support boxes by conduits.

3.3 PROTECTION

- A. Protect coatings, finishes, and cabinets from damage and deterioration.
 - 1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.

END OF SECTION 260533

SECTION 26 05 29

HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Mounting, anchoring, and attachment components, including powder-actuated fasteners, mechanical expansion anchors, concrete inserts, clamps, through bolts, toggle bolts, and hanger rods.
 2. Fabricated metal equipment support assemblies.

1.2 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Reflected ceiling plan(s) and other details, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:
1. Structural members to which hangers and supports will be attached.

PART 2 - EXECUTION

2.1 APPLICATION

- A. Comply with the following standards for application and installation requirements of hangers and supports, except where requirements on Drawings or in this Section are stricter:
1. NECA 1.
 2. NECA 101
 3. NECA 102.
 4. NECA 105.
 5. NECA 111.
- B. Comply with requirements for raceways and boxes specified in Section 260533 "Raceways and Boxes for Electrical Systems."
- C. Maximum Support Spacing and Minimum Hanger Rod Size for Raceways: Space supports for EMT, IMC, and RMC as required by NFPA 70. Minimum rod size shall be 1/4 inch (6 mm) in diameter.
- D. Raceways or Cables:
1. Secure raceways and cables with two-bolt conduit clamps.

2.2 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 and RMC may be supported by openings through structure members, according to 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 Light Steel: Sheet metal screws.
 - 7. 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.
- E. Drill holes for expansion anchors in concrete at locations and to depths that avoid the need for reinforcing bars.

2.3 INSTALLATION OF FABRICATED METAL SUPPORTS

- A. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.
- B. Field Welding: Comply with AWS D1.1/D1.1M.

2.4 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. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A780.

END OF SECTION 260529

SECTION 26 05 53

IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Identification for conductors.
 - 2. Underground-line warning tape.
 - 3. Warning labels and signs.
 - 4. Equipment identification labels, including arc-flash warning labels.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for electrical identification products.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Comply with ASME A13.1 and IEEE C2.
- 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.

2.2 COLOR AND LEGEND REQUIREMENTS

- A. Cables Carrying Circuits at 600 V or Less:

1. Black letters on an white field.
- B. Warning labels and signs 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)."

2.3 EQUIPMENT IDENTIFICATION LABELS

- A. Engraved, Laminated Acrylic or Melamine Label: Punched or drilled for screw mounting. Black letters on a white background. Minimum letter height shall be 3/8 inch (10 mm).

2.4 LABELS

- A. Vinyl Labels for Raceways Carrying Circuits at 600 V or Less: Preprinted, flexible labels laminated with a clear, weather- and chemical-resistant coating and matching wraparound clear adhesive tape for securing label ends.

2.5 TAPES AND STENCILS:

- A. Marker Tapes: Vinyl or vinyl-cloth, self-adhesive wraparound type, with circuit identification legend machine printed by thermal transfer or equivalent process.
- B. Self-Adhesive Vinyl Tape: Colored, heavy duty, waterproof, fade resistant; not less than 3 mils (0.08 mm) thick by 1 to 2 inches (25 to 50 mm) wide; compounded for outdoor use.
- C. Underground-Line Warning Tape
1. Tape:
 - a. Recommended by manufacturer for the method of installation and suitable to identify and locate underground electrical utility lines.
 - b. Printing on tape shall be permanent and shall not be damaged by burial operations.
 - c. Tape material and ink shall be chemically inert and not subject to degradation when exposed to acids, alkalis, and other destructive substances commonly found in soils.
 2. Color and Printing:
 - a. Comply with ANSI Z535.1, ANSI Z535.2, ANSI Z535.3, ANSI Z535.4, and ANSI Z535.5.
 - b. Inscriptions for Red-Colored Tapes: "ELECTRIC LINE, HIGH VOLTAGE".

2.6 MISCELLANEOUS IDENTIFICATION PRODUCTS

- A. Fasteners for Labels and Signs: Self-tapping, stainless-steel screws or stainless-steel machine screws with nuts and flat and lock washers.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Self-Adhesive Identification Products: Before applying electrical identification products, clean substrates of substances that could impair bond, using materials and methods recommended by manufacturer of identification product.

3.2 INSTALLATION

- A. Verify and coordinate identification names, abbreviations, colors, and other features with requirements in other Sections requiring identification applications, Drawings, Shop Drawings, manufacturer's wiring diagrams, and operation and maintenance manual. Use consistent designations throughout Project.
- B. Verify identity of each item before installing identification products.
- C. Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment. Install access doors or panels to provide view of identifying devices.
- D. Apply identification devices to surfaces that require finish after completing finish work.
- E. Attach signs and plastic labels that are not self-adhesive type with mechanical fasteners appropriate to the location and substrate.
- F. Attach plastic raceway and cable labels that are not self-adhesive type with clear vinyl tape, with adhesive appropriate to the location and substrate.
- G. During backfilling of trenches, install continuous underground-line warning tape directly above cable or raceway 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 exceeds 16 inches (400 mm) overall.

3.3 IDENTIFICATION SCHEDULE

- A. Power-Circuit Conductor Identification, 600 V or Less: For conductors in vaults, pull and junction boxes, 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 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. 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.
- B. Control-Circuit Conductor Identification: For conductors and cables in pull and junction boxes, manholes, and handholes, use self-adhesive vinyl labels with the conductor or cable designation, origin, and destination.
- C. 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 operation and maintenance manual.
- D. Locations of Underground Lines: Identify with underground-line warning tape for power, lighting, and control wiring cable.
1. Install underground-line warning tape for direct-buried cables and cables in raceways.
- E. Equipment Identification Labels: On each unit of equipment, install unique designation label that is consistent with wiring diagrams, schedules, and operation and maintenance manual. Apply labels to disconnect switches and protection equipment, control panels. Systems include power, lighting, control, communication, signal, monitoring, and alarm unless equipment is provided with its own identification.
1. Labeling Instructions:
 - a. Outdoor Equipment: Engraved, laminated acrylic or melamine label.
 - b. Unless labels are provided with self-adhesive means of attachment, fasten them with appropriate mechanical fasteners that do not change the NEMA or NRTL rating of the enclosure.
 2. Equipment To Be Labeled:
 - a. Panelboards: Typewritten directory of circuits in the location provided by panelboard manufacturer. Panelboard identification shall be in the form of an engraved, laminated acrylic label.
 - b. Enclosures and electrical cabinets.
 - c. Enclosed controllers.
 - d. Contactors.
 - e. Remote-controlled switches, dimmer modules, and control devices.

END OF SECTION 260553

SECTION 26 09 23

LIGHTING CONTROL DEVICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Central Management System - The System shall utilize a Central Management System that is hosted by the system provider or specified hosting partner location.
 - 2. Backhaul Communication Network - The System shall utilize a Backhaul Communication Network specified by the City and approved by the Vendor.
 - 3. Field Devices.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include data features, accessories, and finishes.
 - 2. Include physical description and dimensions of devices.
 - 3. Wiring diagrams for power, control, and signal wiring.
 - 4. Light Grid Node devices – remote outdoor wireless control system.
 - 5. Light Grid Gateway – remote monitoring and control, utility grade energy measurement.
- B. Shop Drawings: Show installation details for field devices and control system.
 - 1. Interconnection diagrams showing field-installed wiring.
 - 2. Include diagrams for power, signal, and control wiring.

1.4 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.

1.5 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For each type of lighting control device to include in operation, and maintenance manuals.

PART 2 - PRODUCTS

2.1 CENTRAL MANAGEMENT SYSTEM

A. Physical Features and Requirements.

1. The Central Management System will display screen images depicting the following features and functions, as applicable:
 - a. Map Data.
 - b. Satellite Image Data.
 - c. Control Point location.
 - d. Control Point equipment type (i.e. luminaire type).
 - e. Controller and Gateway status (i.e. online, online reporting error, offline).
 - f. Luminaire status (On, Off).
 - g. Luminaire Dimmed State.
 - h. Luminaire Location via controller integrated GPS receiver.
2. The Central Management System shall be accessible to individual users only by name and password.
3. The Central Management System shall be capable of restricting user access to specific functions. At a minimum, these functions shall include the following:
 - a. Creating and managing users and groups.
 - b. Configuration.
 - c. Monitoring.
 - d. Control.
 - e. Basic report generation.
4. The Central Management System shall be accessible through a handheld mobile device via a WEB BROWSER.
5. All asset data shall be stored on the Central Management System.
6. The Central Management System shall be capable of storing the following asset information for all Control Points:
 - a. Pole number.
 - b. Pole type.
 - c. Pole GPS location
 - d. Pole grouping.
 - e. Luminaire make and model.
 - f. Luminaire nominal input voltage.
 - g. Luminaire power requirement (wattage).
 - h. Luminaire installation date.
 - i. Utility billing account number.

7. The Central Management System shall store all remote monitoring data for a period needed to operate the system.

B. Logical Features and Requirements

1. The Central Management System shall ensure secure communication between itself and all Field Devices by logically enabling security features inherent to the underlying communications protocols.
2. The Central Management System shall be capable of detecting communication failures between Field Devices and the Central Management System.
3. The Central Management System shall be capable of delivering Field Device firmware upgrades over the Backhaul Communication Network.
4. The Central Management System shall be capable of remotely monitoring Field Device performance, in order to identify and report exceptions.

C. Power Trimming

1. All controllers shall continuously adjust the load consumption with 2% of the user defined target over the full temperature range.
2. All controllers shall utilize a power change ramp rate of 1 second per 1% of total load wattage change.
3. All controllers shall support Lumen Maintenance and Constant Light output over the life of the load (default is L70).

D. Management Features and Requirements

1. The Central Management System shall be capable of RETRIEVING and STORING the following online Control Point parameters:
 - a. Controller status (Online, Offline, Warnings, Errors).
 - b. Luminaire status (ON, OF, Dimmed State, Warnings, Errors).
 - c. Average input voltage (RMS) in ON state.
 - d. Average input current (mA) in ON state.
 - e. Average input power (W) in ON state.
 - f. Average input power factor in ON state.
 - g. Cumulative ON state time (minutes).
 - h. Cumulative energy consumption (kWh).
 - i. Actual GPS location via Controller integrated GPS receiver.
 - j. Temperature.
2. The Central Management System shall be capable programming the online Control Point parameter Reporting Frequency for ALL Control Points.
3. The Central Management System shall be capable of programming the online Control Point parameter Reporting Frequency for A SINGLE Control Point.
4. The Central Management System shall be capable of defining Luminaire groups.
5. The Central Management System shall be capable of Manual Control, whereby the ON/OFF and DIMMED state of a single Luminaire or group of Luminaires is modified in response to commands created by the Central Management System.

6. The Central Management System shall be capable of creating programs for Scheduled Control, whereby the ON/OFF and DIMMED state of a single Luminaire or a group of Luminaires is modified according to a predefined schedule.
7. The Central Management System shall be capable of creating programs for Scheduled Control containing a minimum of 6 times/events per day.
8. The Central Management System shall be capable of creating programs for Scheduled Control that is time-based, whereby Controllers modify Luminaire operation when a specific time in the schedule occurs, or event-based, whereby Controllers modify Luminaire operation when the next event in the schedule occurs.
9. The Central Management System shall be capable of creating programs for time-based Scheduled Control that are defined:
 - a. On a daily recurring basis.
 - b. On a weekday recurring basis.
 - c. On a weekend recurring basis.
10. Field Devices shall be capable of true input power control, whereby the Luminaire DIMMED state is actuated to achieve to a desired true input power (percent relative watts).
11. The Central Management System shall be capable of creating programs for automatically maintaining constant Luminaire light output (lumens) over time by compensating for Luminaire lumen depreciation.
12. The Central Management System shall be capable of comparing all reported Control Point parameters with optional pre-defined maximum and minimum thresholds, and generating error messages in real-time (based on reported data availability) for any condition that violates a specified threshold a specified number (1 or more) of times.
13. The Central Management System shall be capable of creating Remote Monitoring reports:
 - a. Based on the generation of an error message.
 - b. Based on a schedule.
14. The Central Management System shall be capable of creating pre-defined Remote Monitoring reports containing:
 - a. Instances of communication loss between Field Devices and the Central Management System.
 - b. Control points with error conditions, sorted by error type and/or Electrical Service Point location.
 - c. Energy Consumption Data for individual Luminaries and/or groups of Luminaires.
15. The Central Management System shall be capable of creating customized Remote Monitoring reports.
16. The Central Management System shall be capable generating Notifications, whereby specified Remote Monitoring reports (pre-defined or customized) are sent to assigned users and/or user groups via text message (SMS) and/or email.

2.2 FIELD DEVICES

A. Physical Features and Requirements

1. Field Devices shall be capable of normal operation over an ambient temperature range of 40 degrees C to 50 degrees C (cold environment).
2. Field Devices installed external to luminaires shall be rated IP54 and allow any moisture to drain without effecting operation. The Gateway housing shall be rated IP66.
3. Field Devices shall operate from the following input voltage (nominal $\pm 10\%$) 120-277 AC RMS (For LED Post TOP Luminaire and 347V-480V for LED sports lighting).
4. The peak power requirement of will be less than Controller 2W, Gateway 3W.
5. Controllars shall be integrated (mechanically and electrically connected) at Control Points External to Luminaires, using a NEMA C136.41 standard polarized twist-lock receptacle for both electrical and dimming control signal connectivity.
6. Controllars shall be capable of actuating the status (ON state, OFF state) of Luminaires.
7. Controllars shall be capable of actuating a Luminaire OFF state that results in a ZERO watt power requirement for the Luminaire. It is understood that the Controller will require power to remain online.
8. Controllars shall be capable of actuating a Luminaire DIMMED state by creating A 0-10V control signal.
9. Actuated changes to Luminaire DIMMED states by Controllars shall occur at the following rate at a user of 1% change per second.
10. Controllars shall be capable or measuring instantaneous true input power, input voltage (RMS), input current and power factor.
11. True input power, input voltage (RMS), input current and power factor shall be measured, at each Control Point for the combined system of the Luminaire AND the Controller.
12. Each Controller shall be capable physically monitoring or measuring the following parameters:
 - a. Nominal sunrise and sunset times (via integrated photo detector).
 - b. GPS Location (via integrated GPS receiver).
 - c. Temperature.
13. Field Devices shall be capable of logging cumulative hours in the ON state for each Control Point.
14. Field Devices shall be capable of logging cumulative energy consumption at each Control Point.
15. During Offline Operation, Field Devices shall be capable of monitoring and STORING the following offline TIME-STAMPED Control Point parameters:
 - a. Controller status (Online, Offline, Warnings, Errors).
 - b. Luminaire status (ON, OFF, Dimmed State, Warnings, Errors).
 - c. Cumulative ON state time (minutes).
 - d. Cumulative energy consumption (kWh).
16. During Offline Operation Field Devices shall be capable of STORING measurements of voltage, current, power, power factor, energy (KWH) and ON time. Frequency and the number of days to be stored are user configurable.

B. Logical Features and Requirements

1. During Online Operation, Field Devices shall be capable of monitoring and REPORTING the following online Control Point parameters:

- a. Controller status (Online, Offline, Warnings, Errors).
 - b. Luminaire status (ON, OF, Dimmed State, Warnings, Errors).
 - c. Average input voltage (RMS) in ON state.
 - d. Average input current (mA) in ON state.
 - e. Average input power (W) in ON state.
 - f. Average input power factor in ON state.
 - g. Cumulative ON state time (minutes).
 - h. Cumulative energy consumption (kWh).
 - i. Driver status (Warnings, Errors).
 - j. Ambient light (via integrated photoelectric sensor).
 - k. GPS location (via integrate GPS receiver).
 - l. Temperature internal to Controller.
2. Field Devices shall respond to any single command received from the Backhaul Communication Network in less than 60 seconds.
 3. Field Devices shall automatically REPORT all data STORED during Offline Operation once Online Operation is restored.

C. Control Features and Requirements

1. Field Devices shall be capable of controlling a single Luminaire or groups of Luminaires (contactors may be required if total load exceeds 450W).
2. Changes in the ON/OFF or DIMMED states to groups of Luminaires shall be staggered to limit the inrush current through other electrical components (e.g. contactors, relays, circuit breakers) on the Luminaire group electrical circuit.
3. Field Devices shall be capable of Manual Control, whereby the ON/OFF and DIMMED state of a single Luminaire or group of Luminaires is modified in response to commands from the Central Management System.
4. Field Devices shall be capable of Scheduled Control, whereby the ON/OFF and DIMMED state of a single Luminaire or group of Luminaires is modified according to a predefined schedule.
5. Field Devices shall be capable of Scheduled Control that is defined for a minimum of (Instructions: enter appropriate number) times/events per day).
6. Field Devices shall be capable of Scheduled Control that is either time-based, whereby Controllers modify Luminaire operation when a specific time in the schedule occurs, or event-based, whereby Controllers modify Luminaire operation when the next event in the schedule occurs.
7. Field Devices shall be capable of time-based Scheduled Control that is defined:
 - a. On a weekday recurring basis.
 - b. On a weekend recurring basis.
8. Field Devices shall be capable of Adaptive Control, whereby the ON/OFF and DIMMED state of a single Luminaire or a group of Luminaires is modified in response to dynamic inputs from integral sensors or the Central Management System.
9. During Offline Operation Field Devices shall be capable of maintaining Luminaire control by Continuing to operate according to the most recently programmed Scheduled Control or a default Scheduled Control if one has not yet been programmed.
10. Field Devices shall be capable of true input power control, whereby the Luminaire DIMMED state is actuated to achieve to a desired true input power (percent relative watts).

D. Energy Metering and Billing Transfer

1. All controllers shall contain a metrology subsystems that complies to ANSI 12.20 0.5% Metering Accuracy Class.
2. The Control shall in all cases report the combined total of all energy consumed by both the controller and the load.
3. Energy Metering shall start within 3 seconds of power being applied to the controller.
4. Power Outage recovery events shall not result in more than 3 seconds of unmetered energy consumption.
5. The System shall export energy consumption for each controller at a minimum of once every 24 hours.
6. The system shall report that total energy consumption in 15 minute intervals that shall end on the ¼ hour GMT (IE 00:15:30:45).
7. All Data shall be formatted and transferred in accordance to the US DOE Green Button Data Formatting Standard.

E. Wireless Mesh

1. The Wireless Lighting Control System Shall: Utilize Licence free 915 MHz spectrum to minimise interference and increases range compared to 2400 MHz spectrum in all cases provide a wireless connection to all other controllers or gateways within 500 meters free from obstacles.
2. Transmit using a randomly selected channel from a group of a minimum of 50 discrete channels to minimise interference.
3. Comply with all IEEE 802.15.4g PHY communication standard requirements.
4. Comply with all IETF 6 Low PAN communication Standard Requirements.
5. Utilise a self-forming and self-restoring mesh communications protocol.

F. Security

1. All System components shall be assigned a unique permanent serial number by the manufacturer (MAC Address).
2. All System components will only use a system wide unique IPV6 address reference, no dynamic address schemes.
3. All Wireless connection will utilise a unique 128 bit ECC encryption key 256 bit Certificate Authority registered authentication key.
4. All wired connections will utilize a unique 256 bit encryption key and 256 bid Certificate Authority registered authentication key.
5. All encryption & authentication keys will be wirelessly revocable & updateable by the user should they be compromised.

2.3 SOFTWARE

A. Platform Architecture

1. Supports multiple developer frameworks and an ecosystem of application services to build, test, deploy, and, scale applications such as: Future Intelligent City Devices such as Gun Shot Detection, Motion Detection, Environmental Monitoring & Analysis, Video

- Surveillance, Traffic Analysis, Traffic Optimization, Vibration Detection, and Parking Optimization.
2. Availability of a self-service portal where developers can access specialized services intended for use in Industrial Internet applications.
 3. Supports Time Series Data Storage.
 4. Supports Blob Data Storage.
 5. Supports Relational Database Storage.
 6. Microservices Based.
 7. Context Based User Interface - Providing right information to the right user at the right time.
 8. Supports Predictive and Operational Analytics.
- B. File and Data Transfer
1. Ability to push data to the cloud by streaming batching or by uploading a file.
- C. Store and Forward
1. Ability to manage intermittent connectivity by collecting and storing data locally and then forwarding to the cloud once connectivity is reestablished.
- D. Local Data Store and Access
1. Capability to store data locally in the intelligent node for local access by say a service technician.
- E. Sensor Data Aggregation
1. Ability to integrate data from multiple sensors and then push an aggregated data gathered from all of the sensors to Cloud.
- F. Edge Analytics
1. Capability to run the computational algorithms directly on the data that is streaming of the Intelligent Node.
- G. Certificate Management
1. End-to-end security using certificate management.
- H. Device Positioning
1. Auto registration and provisioning of Intelligent Nodes for further management and software upgrades.
- I. Device Decommissioning
1. Ability to Notify the Cloud/CMS when an Intelligent is offline and no longer needs to be managed.

J. Configuration Management

1. Ability to remotely configure the Intelligent Node and the track configuration changes over the lifetime of the Node.

2.4 RATED LIFE & RELIABILITY

- A. The rated life of all Field Devices shall be 15 years or more at an ambient temperature of 25 degrees Celsius.
- B. The Vendor shall report the reliability of the Field Devices, as measured by Mean Time between Failures (MTBF) according to Telcordia SR-332.

2.5 CONDUCTORS AND CABLES

- A. Power Wiring to Supply Side of Remote-Control Power Sources: Not smaller than No. 12 AWG. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables".

2.6 COMPONENT WARRANTY

- A. Warranty Period
 1. Hardware
 - a. All components shall be covered by a single-source written replacement warranty covering material and workmanship for a period of TEN (10) year.
 2. Software & Firmware
 - a. All software and firmware shall be covered by a written replacement warranty covering material and workmanship for a period of TWO (2) year.

PART 3 - EXECUTION

3.1 FIELD DEVICE INSTALLATION

- A. Install all field devices required to provide a complete outdoor wireless control system of pedestrian post top luminaires and skate park sports lighting.

3.2 CENTRAL MANAGEMENT INSTALLATION

- A. Install all hardware and software required to provide a complete outdoor wireless control system.

3.3 COMPONENT INSTALLATION

A. Responsibility

1. All Components shall be installed by the Vendor or their 3rd Party representative.

B. Requirements

1. All hardware, software and firmware necessary for installation, operation and management of all Components shall be provided.

C. Vendor Services

1. ALL Components shall be installed by the Vendor or their 3rd Party representative:
 - a. The Vendor shall provide all pertinent installation and start up instructions and manuals in Portable Document Format (PDF).
 - b. The Vendor or a manufacturer-qualified representative shall provide installation support in person, or Via telephone and/or the internet.
 - c. The Vendor shall provide installation training.
 - d. The Vendor and Resident Engineer shall jointly perform an installation audit.

3.4 WIRING INSTALLATION

- #### A. Wiring Method: Comply with Section 260519 "Low-Voltage Electrical Power Conductors and Cables." Minimum conduit size is 1/2 inch (13 mm).

- #### B. Wiring within Enclosures: Comply with NECA 1. Separate power-limited and nonpower-limited conductors according to conductor manufacturer's written instructions.

- #### C. Size conductors according to lighting control device manufacturer's written instructions unless otherwise indicated.

- #### D. Splices, Taps, and Terminations: Make connections only on numbered terminal strips in junction, pull, and outlet boxes; terminal cabinets; and equipment enclosures.

3.5 SYTEM START UP

A. Responsibility

1. The System Start up shall be performed by the Vendor in conjunction with the City or their 3rd Party representative and supported by the vendor. REQUIREMENTS:
 - a. The Wireless communications shall be automatically established and optimized without the use of any form of "in field" programing. The use of field programing electronic tools/computes will not be required during the installation. The physical location of each controller shall be automatically transmitted to the CMS without any in field program requirements.

- b. The System shall be examined for any hardware, software, or firmware incompatibilities or errors that occurred during Installation.
- c. The Configuration period shall begin immediately following the completion of installation, successful Start-Up, and Successful demonstration of all System functions and capabilities.
- d. The Configuration period shall include a trial period comprised of 30 consecutive calendar days of System operation. The trial will not start until the system has reached "substantial completion", been signed off by the Resident Engineer, and has met the specification requirements.
- e. Over the course of the trial period, all System functions and capabilities described during Vendor training shall be successfully demonstrated.
- f. Over the course of the trial period, all System functions and capabilities shall operate normally for at least ninety-eight Percent (98%) of the time.
- g. The Commissioning Period shall end following Resident Engineer acceptance of a successful trial period.

B. Vendor Services

1. Training

- a. The Vendor shall provide comprehensive training at the City's facility, covering (at a minimum), Testing and programming, configuration, administration, operation, and troubleshooting of the system. The contractor shall integrate a review of the User's manual and commissioning materials into City Staff Training.
- b. The Vendor training shall be scheduled based on availability of City's staff.
- c. The Vendor shall provide training manuals and all other documentation (i.e. Operations and Maintenance manuals) in Adobe™ Acrobat format.
- d. The Vendor shall provide all necessary instructional equipment to be used during the training sessions for training purposes.
- e. The Vendor training shall provide instruction using the installed System (not using a remote system or a simulated system), and geared towards new users.
- f. The City may elect to record these training sessions for the City's sole use for future training purposes. The resulting recordings shall be the sole property of the City and for the sole use of the City.
- g. The Vendor shall specify the degree of coordination needed with the City's IT staff in regard to communications with existing systems. The System is Setup and Configured by the Vendor or their 3rd Party. The system setup may require a manufacturer or manufacturer-authorized representative to be available during the testing period.

3.6 IDENTIFICATION

- A. Identify components and power and control wiring according to Section 260553 "Identification for Electrical Systems".
 - 1. Identify controlled circuits wireless field devices controlled with the outdoor lighting control system.
 - 2. Identify circuits or luminaires controlled by photoelectric and occupancy sensors at each sensor.

3.7 FIELD QUALITY CONTROL

- A. Perform the following tests and inspections with the assistance of a factory-authorized service representative:
 - 1. Operational Test: After installing and after electrical circuitry has been energized, start units to confirm proper outdoor wireless lighting control system operation.
 - 2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls field devices, software and equipment.
- B. Lighting control devices will be considered defective if they do not pass tests and inspections.
- C. Prepare test and inspection reports.

3.8 SYSTEM MAINTENANCE

- A. Occupancy Adjustments: When requested within 12 months from date of Substantial Completion, provide on-site assistance in adjusting field devices to suit actual occupied conditions. Provide up to two visits to Project during other-than-normal occupancy hours for this purpose.
 - 1. For daylighting controls, adjust set points and deadband controls to suit the City's operations.
- B. Wireless Control System Maintenance:
 - 1. Responsibility
 - a. The System shall be maintained by the City or their 3rd party contractor.
 - 2. Vendor Services
 - a. The System will be maintained by the City or their 3rd Party Representative:
 - b. The Vendor shall provide comprehensive maintenance training at the City's facility, covering all aspects of The System.
 - c. The Vendor shall provide hardware and software maintenance and support according to the warranty terms for the duration of the warranty period. Any Maintenance terms shall start following the applicable warranty period.
 - d. The Vendor shall specify any and all mandatory maintenance required to maintain the terms of the warranty.
 - e. Software and firmware upgrades, maintenance and support shall be provided for one year at no extra cost.

END OF SECTION 260923

SECTION 26 27 13

ELECTRICITY METERING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes equipment for electricity metering by utility company.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. “All-in-one” pedestal equipment
- C. Shop Drawings: Dimensioned plans and sections or elevation layouts and wiring diagrams.

1.3 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.

1.4 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data. For electricity-metering equipment to include in emergency, operation, and maintenance manuals.

1.5 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.

PART 2 - PRODUCTS

2.1 EQUIPMENT FOR ELECTRICITY METERING BY UTILITY COMPANY

- A. Meters will be furnished by utility company.
- B. Current-Transformer Cabinets: Comply with requirements of electrical-power utility company.
- C. Meter Sockets: Comply with requirements of electrical-power utility company.

- D. Modular Meter Center: Factory-coordinated assembly of a main service disconnect device, wireways, tenant meter socket modules, and tenant feeder circuit breakers arranged in adjacent vertical sections. Assembly shall be complete with interconnecting buses and other features as specified below.
1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
 - b. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
 - c. Siemens Energy & Automation, Inc.
 - d. Square D; a brand of Schneider Electric.
 - e. Pacific Utility Products
 - f. Or equal.
 2. Comply with requirements of utility company for meter center.
 3. Modular Meter Center: The “all-in-one” service equipment and all components shall be the latest standard product. Factory-coordinated assembly of a main service disconnect device, wireways, tenant meter socket modules, and tenant feeder circuit breakers arranged in adjacent vertical sections. Assembly shall be complete with interconnecting buses and other features as specified below.
 - a. Housing: NEMA 250, Type 3R enclosure.
 - b. Minimum Short-Circuit Rating: 42,000 amperes symmetrical at rated voltage.
 - c. Main Disconnect Device: Circuit breaker, series-combination rated for use with downstream feeder and branch circuit breakers.
 - d. Meter Socket: Type as approved by utility company, with rating coordinated with indicated tenant feeder circuit rating.
 4. Phase and Ground Buses:
 - a. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment ground conductors; bonded to box.

2.2 Branch Circuit Panelboards

- A. Panelboards: NEMA PB 1, power and feeder distribution type.
1. Incoming Mains Location: Top.
 2. Phase, Neutral, and Ground Buses: Hard-drawn copper, 98 percent conductivity.
 3. Conductor Connectors: Suitable for use with conductor material and sizes.
 - a. Material: Hard-drawn copper, 98 percent conductivity.
 - b. Main and Neutral Lugs: Compression type.
 - c. Ground Lugs and Bus Configured Terminators: Compression type.
 4. Service Equipment Label: NRTL labeled for use as service equipment for panelboards with one or more main service disconnecting and overcurrent protective devices.
 5. Panelboard Short-Circuit Current Rating: Rated for series-connected system with integral or remote upstream overcurrent protective devices and labeled by an NRTL. Include size and type of allowable upstream and branch devices, and listed and labeled for series-connected short-circuit rating by an NRTL.

6. Directory Card: With transparent protective cover, mounted in metal frame, inside “all-in-one” door.

B. Branch Overcurrent Protective Devices:

1. Bolt-on circuit breakers.

2.3 OVERCURRENT PROTECTIVE DEVICES

A. Molded-Case Circuit Breaker: 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 225 A and larger.

B. Molded-Case Circuit-Breaker Features and Accessories: Standard frame sizes, trip ratings, and number of poles.

1. Lugs: Compression style, suitable for number, size, trip ratings, and conductor materials.

2. Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HACR for heating, air-conditioning, and refrigerating equipment.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with equipment installation requirements in NECA 1.

B. Install equipment for utility company metering. 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 Section 260553 "Identification for Electrical Systems."

E. Install panelboards and accessories according to NEMA PB 1.1.

1. Mount plumb and rigid without distortion of box

END OF SECTION 262713

SECTION 26 56 13

LIGHTING POLES AND STANDARDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Poles and accessories for support of luminaires.

1.3 DEFINITIONS

- A. EPA: Equivalent projected area.
- B. Luminaire: Complete lighting fixture.
- C. Pole: Luminaire-supporting structure.
- D. Standard: See "Pole."

1.4 ACTION SUBMITTALS

- A. Product Data: For each pole, accessory, and luminaire-supporting, arranged as indicated.
 - 1. Include data on construction details, profiles, EPA, cable entrances, materials, dimensions, weight, rated design load, and ultimate strength of individual components.
 - 2. Include finishes for lighting poles and luminaire-supporting devices.
 - 3. Anchor bolts and base plate covers.
 - 4. Manufactured pole foundations.
- B. Shop Drawings:
 - 1. Include plans, elevations, sections, and mounting and attachment details.
 - 2. Include details of equipment assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 - 3. Detail fabrication and assembly of poles and pole accessories.
 - 4. Foundation construction details, including material descriptions, dimensions, anchor bolts, support devices, and calculations, signed and sealed by a professional engineer licensed in the state of installation.
 - 5. Anchor bolt templates keyed to specific poles and certified by manufacturer.
 - 6. Method and procedure of pole installation. Include manufacturer's written installations.

1.5 INFORMATIONAL SUBMITTALS

- A. Pole and Support Component Certificates: Signed by manufacturers of poles, certifying that products are designed for indicated load requirements according to AASHTO LTS-6-M and that load imposed by luminaire and attachments has been included in design. The certification shall be based on design calculations signed and sealed by a professional engineer.
- B. Qualification Data: For Installer and testing agency.
- C. Seismic Qualification Certificates: For luminaire, accessories, and components, from manufacturer.
 - 1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.
 - 2. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
 - 3. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.
- D. Material Test Reports:
 - 1. For each pole, by a qualified testing agency.
- E. Source quality-control reports.
- F. Sample Warranty: Manufacturer's standard warranty.

- G. Soil test reports

1.6 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For poles to include in operation and maintenance manuals.
 - 1. "Operation and Maintenance Data," shall include pole inspection and repair procedures.

1.7 MAINTENANCE MATERIAL SUBMITTALS

- A. Pole repair materials.

1.8 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Qualified according to ASTM C 1093 for foundation testing.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Store poles on decay-resistant skids at least 12 inches (300 mm) above grade and vegetation. Support poles to prevent distortion and arrange to provide free air circulation.
- B. Retain factory-applied pole wrappings on metal poles until right before pole installation. Handle poles with web fabric straps.

1.10 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of pole(s) that fail in materials or workmanship; that corrode; or that fade, stain, perforate, erode, or chalk due to effects of weather or solar radiation within a specified warranty period. Manufacturer may exclude lightning damage, hail damage, vandalism, abuse, or unauthorized repairs from special warranty period.
 - 1. Warranty Period: Five years from date of Substantial Completion.
 - 2. Warranty Period for Corrosion Resistance: Five years from date of Substantial Completion.
 - 3. Warranty Period for Color Retention: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Seismic Performance: Foundation and pole shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

1. The term "withstand" means "the system will remain in place without separation of any parts when subjected to the seismic forces specified."
 2. Component Importance Factor: 1.5.
- B. Structural Characteristics: Comply with AASHTO LTS-6-M.
- C. Dead Load: Weight of luminaire and its horizontal and vertical supports, lowering devices, and supporting structure, applied according to AASHTO LTS-6-M.
- D. Live Load: Single load of 500 lbf (2200 N) distributed according to AASHTO LTS-6-M.
- E. Wind Load: Pressure of wind on pole and luminaire, calculated and applied according to AASHTO LTS-6-M.
1. Basic wind speed for calculating wind load for poles 50 feet (15 m) high or less is 90 mph (40 m/s).
 - a. Wind Importance Factor: 1.0.
 - b. Minimum Design Life: 25 years.
 - c. Velocity Conversion Factor: 1.0.
- F. Strength Analysis: For each pole, multiply the actual EPA of luminaires and brackets by a factor of 1.1 to obtain the EPA to be used in pole selection strength analysis.
- G. Luminaire Attachment Provisions: Comply with luminaire manufacturers' mounting requirements. Use stainless-steel fasteners and mounting bolts unless otherwise indicated.

2.2 WOODGRAIN CONCRETE POLES

- A. Source Limitations: Obtain poles from single manufacturer or producer.
- B. Source Limitations: For poles, obtain each color, grade, finish, type, and variety of pole from single source with resources to provide products of consistent quality in appearance and physical properties.
- C. Poles: Comply with ASTM C 1089.
1. Shape: Square, straight.
 2. Mounting Provisions: Anchor bolts, sized and quantity per manufacturer's recommendation.
- D. Concrete: Minimum 28-day compressive strength of 7000 psi (48,265 kPa).
- E. Cured with wet steam and aged for a minimum of 15 days prior to installation.
- F. Surface Treatment: Hard, nonporous, and resistant to water, frost, and road and soil chemicals; and shall have a maximum water-absorption rate of 3 percent.
- G. Finish Texture: Casted wood grain texture pigmented concrete coated exterior.

- H. Fasteners: Stainless steel, size and type as determined by manufacturer. Compatible with poles and standards as well as the substrates to which poles and standards are fastened and shall not cause galvanic action at contact points.
- I. Pole Brackets: Comply with ANSI C136.31.

2.3 POLE ACCESSORIES

- A. Decorative accessories, supplied by decorative pole manufacturer, include the following:
 - 1. Fixture Cross Arms: Aluminum, for mounting luminaire.
 - 2. 7-Pin Twist-Lock Receptacle: for wireless lighting control node with shorting cap.
- B. Brackets for Luminaires: Detachable, cantilever, without underbrace.
 - 1. Adaptor fitting welded to pole, allowing the bracket to be bolted to the pole-mounted adaptor, then bolted together with stainless-steel bolts.
 - 2. Cross Section: Tapered oval, with straight tubular end section to accommodate luminaire. Match pole material and finish.
- C. Pole-Top Tenons: Fabricated to support luminaire or luminaires and cross arm indicated, and securely fastened to pole top.
- D. Fasteners: Size and type as determined by manufacturer. Corrosion-resistant items compatible with support components.
 - 1. Materials: Compatible with poles and standards as well as the substrates to which poles and standards are fastened and shall not cause galvanic action at contact points.
 - 2. Anchor Bolts, Leveling Nuts, Bolt Caps, and Washers: Hot-dip galvanized after fabrication unless otherwise indicated.
- E. Grounding and Bonding Lugs: Welded 1/2-inch (13-mm) threaded lug, complying with requirements in Section 260526 "Grounding and Bonding for Electrical Systems," listed for attaching grounding and bonding conductors of type and size indicated, and accessible through handhole.

2.4 GENERAL FINISH REQUIREMENTS

- A. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- B. Appearance of Finished Work: Noticeable variations in same piece are unacceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine poles, luminaire-mounting devices, lowering devices, and pole accessories before installation. Components that are scratched, dented, marred, wet, moisture damaged, or visibly damaged are considered defective.
- C. Examine roughing-in for foundation and conduit to verify actual locations of installation.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 POLE FOUNDATION

- A. Concrete Pole Foundations: Cast in place, with anchor bolts to match pole-base flange. Structural steel complying with ASTM A36/A36M and hot-dip galvanized according to ASTM A123/A123M; and with top-plate and mounting bolts to match pole-base flange and strength require to support pole, luminaire and accessories.
- B. Anchor Bolts: Install plumb using manufacturer-supplied steel template, uniformity spaced.

3.3 POLE INSTALLATION

- A. Alignment: Align pole foundations and poles for optimum directional alignment of luminaires and their mounting provisions on pole.
- B. Clearances: Maintain the following minimum horizontal distances of poles from surface and underground features unless otherwise indicated on drawing.
 - 1. Fire Hydrants and Water Piping: 60 inches (1520 mm).
 - 2. Water, Gas, Electric, Communications, and Sewer Lines: 10 feet (3 m).
 - 3. Trees: 15 feet (5 m) from tree trunk.
- C. Raise and set pole using web fabric slings (not chain or cable) at locations indicated by manufacturer.

3.4 CORROSION PREVENTION

- A. Steel Conduits: Comply with requirements in Section 260533 "Raceways 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.

3.5 GROUNDING

- A. Ground Metal Poles and Support Structures: Comply with requirements in Section 260526 "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.

3.6 IDENTIFICATION

- A. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

3.7 FIELD QUALITY CONTROL

- A. Special Inspections: Engage a qualified special inspector to perform the following special inspections:
 - 1. Inspect poles for nicks, mars, dents, scratches, and other damage.
 - 2. System function tests.

END OF SECTION 265613

SECTION 26 56 19

LED EXTERIOR LIGHTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Exterior solid-state luminaires that are designed for and exclusively use LED lamp technology.
2. Luminaire supports.
3. Luminaire-mounted wireless lighting control node (integrated photoelectric sensor).

B. Related Requirements:

1. Section 260923 "Lighting Control Devices" for automatic and remote control of lighting, including outdoor wireless control and Central Management System.
2. Section 265613 "Lighting Poles and Standards" for poles and standards used to support exterior lighting equipment.

1.3 DEFINITIONS

- A. CCT: Correlated color temperature.
- B. CRI: Color rendering index.
- C. Fixture: See "Luminaire."
- D. IP: International Protection or Ingress Protection Rating.
- E. Lumen: Measured output of lamp and luminaire, or both.
- F. Luminaire: Complete lighting unit, including lamp, reflector, and housing.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of luminaire.
 1. Arrange in order of luminaire designation.

2. Include data on features, accessories, and finishes.
3. Include physical description and dimensions of luminaire.
4. Lamps, include life, output (lumens, CCT, and CRI), and energy-efficiency data.
5. Wiring diagrams for power, control, and signal wiring.
6. Means of attaching luminaires to supports and indication that the attachment is suitable for components involved.
7. Light Grid Node devices – remote outdoor wireless control system.

B. Shop Drawings: For nonstandard or custom luminaires.

1. Include plans, elevations, sections, and mounting and attachment details.
2. Include details of luminaire assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
3. Include diagrams for power, signal, and control wiring.

C. Product Schedule: For luminaires and lamps. Use same designations indicated on Drawings.

D. Delegated-Design Submittal: For luminaire supports.

1. Include design calculations for luminaire supports.

1.5 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Plans, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:

1. Luminaires.
2. Structural members to which equipment and luminaires will be attached.
3. Underground utilities and structures.
4. Existing underground utilities and structures.
5. Above-grade utilities and structures.
6. Existing above-grade utilities and structures.
7. Wireless remote control and monitoring system.

B. Qualification Data: For testing laboratory providing photometric data for luminaires.

C. Seismic Qualification Certificates: For luminaires, accessories, and components, from manufacturer.

1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.
2. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
3. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.

D. Product Certificates: For each type of the following:

1. Luminaire.
 2. Remote outdoor wireless control system.
- E. Product Test Reports: For each luminaire, for tests performed by manufacturer.
- F. Source quality-control reports.
- G. Sample warranty.

1.6 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For luminaires and remote outdoor wireless control system to include in operation and maintenance manuals.
1. Provide a list of all lamp types used on Project. Use ANSI and manufacturers' codes.
 2. Provide a list of remote outdoor wireless control system used on Project; use manufacturers' codes.

1.7 QUALITY ASSURANCE

- A. Luminaire Photometric Data Testing Laboratory Qualifications: Luminaire manufacturers' laboratory that is accredited under the NVLAP for Energy Efficient Lighting Products.
- B. Provide luminaires from a single manufacturer for each luminaire type.
- C. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.
- D. Mockups: For exterior luminaires, complete with power and control connections.
1. Obtain Resident Engineer's approval of luminaires in mockups before starting installations.
 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Resident Engineer specifically approves such deviations in writing.
 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Protect finishes of exposed surfaces by applying a strippable, temporary protective covering prior to shipping.

1.9 FIELD CONDITIONS

- A. Verify existing and proposed utility structures prior to the start of work associated with luminaire installation.

- B. Mark locations of exterior luminaires for approval by Resident Engineer prior to the start of luminaire installation.

1.10 WARRANTY

- A. Warranty: Manufacturer and Installer agree to repair or replace components of luminaires that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures, including luminaire support components.
 - b. Faulty operation of luminaires and accessories.
 - c. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - 2. Warranty Period: 5 year(s) from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Seismic Performance: Luminaires shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.
- B. Seismic Performance: Luminaires and lamps shall be labeled vibration and shock resistant.
 - 1. The term "withstand" means "the luminaire will remain in place without separation of any parts when subjected to the seismic forces specified."

2.2 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. UL Compliance: Comply with UL 1598 and listed for wet location.
- C. Lamp base complying with ANSI C81.61 or IEC 60061-1.
- D. CRI of minimum 70. CCT of 4000 K.
- E. L70 lamp life of 70000 hours.
- F. Lamps dimmable from 100 percent to 0 percent of maximum light output.
- G. Internal driver.
- H. Nominal Operating Voltage: 240 Vac.

- I. In-line Fusing: On the primary for each luminaire.
- J. Lamp Rating: Lamp marked for outdoor use.
- K. Source Limitations: For luminaires, obtain each color, grade, finish, type, and variety of luminaire from single source with resources to provide products of consistent quality in appearance and physical properties.

2.3 LUMINAIRE-MOUNTED REMOTE WIRELES CONTROL NODE

- A. Comply with UL 773 or UL 773A.
- B. REMOTE LIGHTING CONTROL NODE: Factory mounted, single throw, designed to fail in the on position, and factory set (when off network) to turn light unit on at 1.5 to 3 fc (16 to 32 lx) and off at 4.5 to 10 fc (48 to 108 lx) with 15-second minimum time delay. Relay shall have directional lens in front of photocell to prevent artificial light sources from causing false turnoff.
 - 1. Control node with locking-type receptacle shall comply with ANSI C136.41-2013 for dimming.
 - 2. Integrated photoelectric sensor shall comply with ANSI C136.10.
 - 3. Input voltage: 120-277V, 480V.
 - 4. Dimming 0-10V.
 - 5. GPS: Accuracy 3m on clear open sky.
 - 6. Utility Grade Energy Measurement: Complies with relevant sections of ANSI C12.20.

2.4 LUMINAIRE TYPES

- A. Area and Site:
 - 1. Luminaire Shape: Round, bell type.
 - 2. Mounting: Pole.
 - 3. Luminaire-Mounting Height: see schedule and detail drawings.
 - 4. Distribution: Type II/full cut off.
 - 5. Diffusers and Globes: Heat and impact resistant tempered flat glass.
 - 6. Housings:
 - a. Aluminum housing and heat sink.

2.5 FINISHES

- A. 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.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in for luminaire electrical conduit to verify actual locations of conduit connections before luminaire installation.
- C. Examine pedestrian bridge and pole base bridge overhang for suitable conditions where luminaires will be installed.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 GENERAL INSTALLATION REQUIREMENTS

- A. Comply with NECA 1.
- B. Use fastening methods and materials selected to resist seismic forces defined for the application and approved by manufacturer, and coordinated with pedestrian bridge fabricator.
- C. Install lamps in each luminaire.
- D. Fasten luminaire to structural support.
- E. Supports:
 - 1. Sized and rated for luminaire weight.
 - 2. Able to maintain luminaire position after cleaning and relamping.
 - 3. Support luminaires without causing deflection of finished surface.
 - 4. Luminaire-mounting devices shall be capable of supporting a horizontal force of 100 percent of luminaire weight and a vertical force of 400 percent of luminaire weight.
- F. Wiring Method: Install cables in raceways. Conceal raceways and cables.
- G. Install luminaires level, plumb, and square with finished grade unless otherwise indicated.
- H. Coordinate layout and installation of luminaires with other construction.
- I. Adjust luminaires that require field adjustment or aiming. Include adjustment of photoelectric device to prevent false operation of relay by artificial light sources, favoring a north orientation.
- J. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables" and 260533 "Raceways and Boxes for Electrical Systems" for wiring connections and wiring methods.

3.3 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 Section 260533 "Raceways 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.

3.4 IDENTIFICATION

- A. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

3.5 FIELD QUALITY CONTROL

- A. Inspect each installed luminaire for damage. Replace damaged luminaires and components.
- B. Perform the following tests and inspections with the assistance of a factory-authorized service representative:
 - 1. Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.
 - 2. Verify operation of photoelectric controls.
- C. Illumination Tests:
 - 1. Measure light intensities at night. Use photometers with calibration referenced to NIST standards. Comply with the following IES testing guide(s):
 - a. IES LM-5.
 - b. IES LM-50.
 - c. IES LM-52.
 - d. IES LM-64.
 - e. IES LM-72.
 - 2. Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.
- D. Luminaire will be considered defective if it does not pass tests and inspections.
- E. Prepare a written report of tests, inspections, observations, and verifications indicating and interpreting results. If adjustments are made to lighting system, retest to demonstrate compliance with standards.

3.6 DEMONSTRATION

- A. Train the City's maintenance personnel to adjust, operate, and maintain luminaires and wireless lighting control node.

3.7 ADJUSTING

- A. Occupancy Adjustments: When requested within 12 months after the date of Substantial Completion, provide on-site assistance in adjusting the direction of aim of luminaires to suit occupied conditions. Make up to two visits to Project during other-than-normal hours for this purpose. Some of this work may be required during hours of darkness.
 - 1. During adjustment visits, inspect all luminaires. Replace lamps or luminaires that are defective.
 - 2. Parts and supplies shall be manufacturer's authorized replacement parts and supplies.
 - 3. Adjust the aim of luminaires in the presence of the Resident Engineer.

END OF SECTION 265619

SUPPLEMENTAL SPECIFICATION / PREFABRICATED RESTROOM SPECIFICATIONS

PART 1	FLOOR/FOUNDATION
PART 2	WALL SYSTEMS
PART 3	INTERIOR FINISHES
PART 4	DOORS
PART 5	ROOF
PART 6	EXTERIOR FINISHES
PART 7	VENTILATION & INSULATION
PART 8	ACCESSORIES AND SIGNAGE
PART 9	PLUMBING
PART 10	ELECTRICAL
PART 11	EXTERNAL UTILITY CONNECTIONS

SUPPLEMENTAL SPECIFICATION / PREFABRICATED RESTROOM SPECIFICATIONS

RFL MODEL #B804DFSTSH3 OR APPROVED EQUAL

1. FLOOR / FOUNDATION

- 1.1. The floor/foundation for the modular restroom shall be a prefabricated 8-inch thick monolithic 8,000psi concrete mat slab shipped integral with the restroom building. The slab reinforcing shall be #3 and #5 grade 60 deformed rebar, placed and tied per the structural engineered drawings continuously throughout. #3 grade 60 vertical rebar for CMU walls shall be incorporated into the slab reinforcing rebar to a minimum length of 18", bent to vertical 90 degrees and extended above the concrete slab a minimum of 24". Doweling of the vertical CMU reinforcing steel into the mat slab is not permitted. The slab shall be designed to allow relocation of the slab and building intact at any future date with built-in lifting hardware.
- 1.2. Concrete shall cure for a minimum of 14 days before moving and have a minimum 28-day compressive strength of 8,000 psi.
- 1.3. The floor/foundation shall contain a concrete encased electrode consisting of 20' of bare copper conductor (No. 4 AWG) located near the bottom of the foundation, and encased in a minimum of 2" of concrete. Stub the ground conductor up through the foundation near the panel board location.

2. WALL SYSTEMS

- 2.1. Walls to 7'-4" above finish floor (AFF) shall be hollow load-bearing concrete masonry units and shall conform to UBC Standard 21-4, Grade N, and ASTM C-90. All units shall be medium weight. Wall system to be solid grout filled and to receive steel reinforcement throughout.
- 2.2. Walls above 7'-4" shall be framed with 2x kiln dried, #2 or better, SPF at 16" on center, nominal. Framing to be coated with Eco Shield preservative which is a proprietary broad spectrum anti-fungal, mold and termite blend with fire inhibiting chemicals. Eco Shield is an approved product treatment through testing

in accordance with ICC-ES Acceptance Criteria AC433 demonstrating full compliance as stated with an Engineering Services Report (ESR-3255). Wall system shall be anchored to block wall with 5/8" diameter all-thread 16" minimum into block.

- 2.3. Exterior framed walls to be dual sheared for wind and seismic loads with 5/8" structural rated exterior grade OSB, nailed and glued to walls in pattern per code.

3. INTERIOR FINISHES

- 3.1. Restroom floors to receive a two coat 100% solids modified epoxy floor coating system at 30-50 mils in thickness. To have a compressive strength of 15,000 psi per ASTM C579, flexural strength of 17,000 psi per ASTM D790, tensile strength of 11,300 psi per ASTM D307, Hardness Shore D of 82-85 per ASTM D2240 and a Taber Abrasion per ASTM D4060 of loss/1000 cycles = 25mg using CS 17 wheels. Color to be Gray.
- 3.2. Restroom walls to 7'-4" AFF to be CMU block, precision finish. To receive one coat of prime & fill acrylic block filler, one coat of 100% acrylic primer and two finish coats of 100% acrylic semi-gloss enamel paint. Color to be White.
- 3.3. Chase walls to 7'-4" AFF to be CMU block, precision finish. To receive one coat of 100% acrylic primer. Color to be Gray.
- 3.4. Chase walls above 7'-4" to be open framing. To receive one coat of 100% acrylic primer. Color to be Gray.
- 3.5. Restroom walls above 7'-4" to be Class "A" rated fiberglass reinforced concrete (FRC) panels. Panels to be blind fastened, filled and sanded, with a light texture finish. To receive one coat of 100% acrylic primer and two finish coats of 100% acrylic semi-gloss enamel paint. Color of paint to be White.
- 3.6. Ceilings to be exposed plank and beam. To receive two coats of Superdeck stain or equal, color to be Redwood.

4. DOORS

- 4.1. Restroom and Chase doors to be 1¾" thick, full-flush, 16-gauge steel face with stiffening ribs and 12" opening AFF. Door jambs shall be 16-gauge steel. Doors and jambs to receive one coat of DTM acrylic urethane Gray primer and two coats of DTM acrylic urethane tint base. Owner to make color selection from manufacturer's provided color chart.
- 4.2. Hinges for all pass-through doors to receive Roton continuous geared fully concealed leaf to ANSI/BHMA A156.26, aluminum; manufactured of 3 interlocking aluminum extrusions. (2 hinge leafs and 1 cover channel), door leaf and jamb leaf geared together for entire hinge length and joined by cover channel.
- 4.3. Door hardware is as follows (or equal):

Restroom Doors –

- Roton 780-224HD hinge
- Best Model XXXX deadbolt, key/thumb turn, with occupancy indicator
- Ives 8111-5 Pull handle
- Norton 7500 door closer
- Ives 8400, 10" high stainless steel kick plate (inside only)

- Storage Door – X
 - Roton 780-224HD hinge
 - Best Model XXXX deadbolt, key/thumb turn
 - Ives 8111-5 Pull handle
 - Wright Door Retainer chain stop

5. ROOF

- 5.1. Roof structure to be Eco Shield coated 2x6 v-joint, tongue and groove, kiln dried #2 or better SPF decking over 4x6 kiln dried #2 or better SPF rafters at 48” on center, nominal. Blocking with vent holes between rafters at exterior walls. Rafter to ridge connection via Simpson U26 or equal hangers. There shall be no roof penetrations except that of utilities.
- 5.2. Roof finish to be Metal Sales Image II or equal 26-gauge standing seam metal panels over 30lb. felt paper. Owner to make color selection from manufacturer’s provided color chart.
- 5.3. Rake and fascia to be kiln dried Eco Shield coated 2x SPF. To one coat of 100% acrylic primer and two finish coats of 100% acrylic semi-gloss enamel paint. Owner to make color selection from manufacturer’s provided color chart.
- 5.4. Rake and fascia trim to be 24 gauge galvanized metal. To receive one coat of DTM acrylic urethane Gray primer and two coats of DTM acrylic urethane tint base. Owner to make color selection from manufacturer’s provided color chart.

6. EXTERIOR FINISHES

- 6.1. Exterior of block to be precision face. Block to be through-color and treated with anti-graffiti coating. Owner to make color selection from manufacturer’s provided color chart.
- 6.2. Accent exterior block to be per plans.

7. VENTILATION & INSULATION

- 7.1. Vent screens at each end and at each restroom shall be McNichols perforated metal, 304 stainless steel, mill finish, 14 gauge, with ½” round holes on 11/16” staggered centers.
- 7.2. Vent screen on side wall at storage room to be custom fabricated translucent louvers of obscured polycarbonate in an inverted V-pattern frame and supports.

8. ACCESSORIES AND SIGNAGE

- 8.1. All wall mounted toilet accessories to be installed with stainless steel tamper-resistant screws.
- 8.2. Accessories are as follows (or equal):

36” Stainless Steel Grab Bar	Bobrick B6806.36
48” Stainless Steel Grab Bar	Bobrick B6806.48
Vertical SS 2-Roll TP holder	Brobrick B-386
Soap Dispenser, Surface Mounted	Bobrick B-2111
- 8.3. Signage to be in compliance with California Title 24 and ADA for restroom entrances.
- 8.4. Other signage to be as specified on plans.

9. PLUMBING

9.1. Plumbing drain, waste, and vent piping shall be schedule 40 PVC with solvent welded connections. All vents through the roof shall be cast iron and capped with vandal resistant cap.

9.2.

9.3. Water lines shall be Type L copper above ground and Type K copper below ground. Water supply in building shall have a built-in valve combo including a pressure-reducing valve to 80 psi, an in-line 30-micron filter, and two 160 psi pressure gauges.

9.4. Incoming water service shall be a 1-1/2" line, 50 gpm and 60psi minimums.

9.5. Each fixture shall be isolated with a ball valve or plumbing fixture flush valve. Ball valves to be Apollo full port domestic valves. All flush valves and P-traps shall be concealed in chase.

9.6. Plumbing fixtures shall be stainless steel as follows (or equal):

Water Closet Flush Valve	Acorn Dura-Ware 2100-W-1-CN Zurn ZH-6152AV-HET
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Lavatory Metering	Acorn Dura-Ware 1953-1-CSG-9-GE Faucet Chicago 333-665PSHCP
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9.7. A single hose bibb shall be in the plumbing chase and shall be installed with a vacuum breaker, to code. Hose bibb to be Woodford 24 - 3/4" or equal.

9.8. Floors shall drain to an integral floor drain with trap primers. Floor drains to be Zurn Z415-90-2NH w/ 5" B strainer or equal.

9.9. A commercial grade hose reel with 75' of hose shall be installed in the Chase for spray down cleaning of restrooms.

9.10. Drinking fountain, shall be a Haws Model #1119-14, Hi-Lo, ADA Compliant, with bottle filler, stainless steel, wall hung, with Haws Model #1119 standard wall hung drinking fountain mounted at child-height per plans.

9.11. Eyewash station to be Guardian G1814, wall hung, stainless steel.

9.12. Mop sink to be Florestone MSR2424, with Kohler Kinlock K-8907 faucet.

10. ELECTRICAL

10.1. Building shall have a 125 amp, 120/240V, 1-phase, 3-wire, 12-pole, NEMA type 1 load center with snap-in breakers. Panel to be a Cutler Hammer CH12B125B or equal.

10.2. Restroom lights shall be Kenall MS11EL-PP-MW-18L40K-120, 18 watt LED or equal in a marine grade die-cast aluminum base with integral heat sinks and a die-cut, closed cell EPDM self adhesive gasket

sealing baseplate to mounting surface. Lens to be UV stabilized, high impact resistant, virgin injection molded pearlescent polycarbonate. Color of housing to be White.

10.3. Restroom lights to be controlled by a Leviton ODS15-IDW or equal motion sensor mounted to wall for vandal resistance. Color to be White.

10.4. Exterior light(s) shall be Kenall MS11EL-PP-DB-18L40K-120, 18 watt LED or equal in a marine grade die-cast aluminum base with integral heat sinks and a die-cut, closed cell EPDM self adhesive gasket sealing baseplate to mounting surface. Lens to be UV stabilized, high impact resistant, virgin injection molded pearlescent polycarbonate. Color of housing to be Dark Bronze.

10.5. Exterior light(s) shall be controlled by an Tork 3000 photo cell.

10.6. Chase and storage lights shall be Cooper SNLED or equal 32 watt LED narrow strip light with cold rolled steel housing and acrylic lens. To be controlled by a single pole switch located inside storage area. Color to be White.

10.7. Each restroom shall receive one Fastaire HD03 manually operated hand dryer with cast aluminum nozzle, universal type 1/6hp motor with lubricant ball bearings, 2-stage blower and filter, 30 second activated timer after start, 50cfm airflow and 120VAC, 60Hz, 7.5A power. Motor and blower to be located in chase.

10.8. Building shall have four Hubbell 5362 or equal, 20 amp, 125 volt, GFI duplex receptacles. Two receptacles to be located in chase, one in storage area, and one on exterior of building. Exterior outlet to have protective cover. Additionally, storage area to receive one phone jack. Color of cover plates to be White.

10.9. Building to be grounded per local code.

11. EXTERNAL UTILITY CONNECTIONS

11.1. All utilities (water, sewer and electrical) shall be stubbed to 6' outside building line, and be terminated in concrete ground boxes properly marked sewer, water and electrical.

11.2. Flexible Connections: Due to a chance of total and differential settlements, flexible utility connections will be necessary. Ball joints, and sleeve-type or other flexible couplings shall be used when connecting existing utility stub-outs to the building system, as required.

END SECTION

SUPPLEMENTARY SPECIAL PROVISIONS
APPENDICES

APPENDIX A
ENVIRONMENTAL IMPACT REPORT

You may access this report at the following location:

<https://filecloud.sandiego.gov/url/bonitacovewestcif>

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

CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS	NUMBER DI 55.27	DEPARTMENT Water Department
SUBJECT FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)	PAGE 7 OF 10	EFFECTIVE DATE October 15, 2002
	SUPERSEDES DI 55.27	DATED April 21, 2000

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

CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS	NUMBER DI 55.27	DEPARTMENT Water Department
SUBJECT FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)	PAGE 8 OF 10	EFFECTIVE DATE October 15, 2002
	SUPERSEDES DI 55.27	DATED April 21, 2000

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.

CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS	NUMBER DI 55.27	DEPARTMENT Water Department
SUBJECT FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)	PAGE 9 OF 10	EFFECTIVE DATE October 15, 2002
	SUPERSEDES DI 55.27	DATED April 21, 2000

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.

CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS	NUMBER DI 55.27	DEPARTMENT Water Department
SUBJECT FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)	PAGE 10 OF 10	EFFECTIVE DATE October 15, 2002
	SUPERSEDES DI 55.27	DATED April 21, 2000

- 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:	
<small>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</small>			

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 CASH FLOW FORECAST

WBS #:	B18108
Date Submitted:	10/10/2018
NTP Date:	3/23/2018
Final Statement of WD Date:	5/23/2020
Contract #:	K-XX-XXXX-XXX-X
Contract Amount:	\$5,617,000

Construction Cash Flow Forecast
 "Sewer and Water Group Job 965 (W)"

Year	January	February	March	April	May	June	July	August	September	October	November	December
2018				15,000	25,000	52,000	52,000	100,000	10,000	100,000	100,000	100,000
2019	10,000	10,000	85,000	58,000	100,000	100,000	100,000	100,000	100,000	100,000	1,000,000	1,000,000
2020	100,000	100,000	100,000	1,000,000	1,000,000							
2021												
2022												
2023												
2024												
2025												

SAMPLE REFERENCE

APPENDIX E
LOCATION MAP

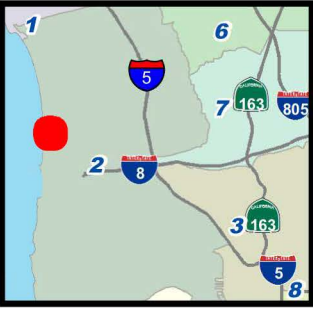
The City of
SAN DIEGO Public Works
**Bonita Cove West Improvements -
 Playground & Comfort Station**

PROJECT OFFICER II
 Kevin Oliver
 (619)533-5139

PROJECT MANAGER
 Kevin Nguyen
 (619)533-7471

PROJECT ENGINEER
 Efrain Velela-Mayo
 (619)533-5328

FOR QUESTIONS ABOUT THIS PROJECT
 Call: (619)533-4207
 Email: engineering@sandiego.gov



Legend

 **Project Location**




No Scale

Community Name: Mission Bay Park

Council District: 2

SAP ID: B18229/B18230

Date: September 20, 2018

Architectural Engineering & Parks DIVISION 

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APPENDIX F
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:

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• 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

This information is available in alternative formats upon request.

To contact the City of San Diego: SD Public Works 619-533-4207 | engineering@sandiego.gov | sandiego.gov/CIP

This information is available in alternative formats upon request.

APPENDIX G

ADVANCED METERING INFRASTRUCTURE (AMI) DEVICE PROTECTION

Protecting AMI Devices in Meter Boxes and on Street Lights

The Public Utilities Department (PUD) has begun the installation of the Advanced Metering Infrastructure (AMI) technology as a new tool to enhance water meter reading accuracy and efficiency, customer service and billing, and to be used by individual accounts to better manage the efficient use of water. **All AMI devices shall be protected per Section 5-2, "Protection", of the 2015 Whitebook.**

AMI technology allows water meters to be read electronically rather than through direct visual inspection by PUD field staff. This will assist PUD staff and customers in managing unusual consumption patterns which could indicate leaks or meter tampering on a customer's property.

Three of the main components of an AMI system are the:

- A. Endpoints, see Photo 1:

Photo 1



B. AMI Antenna attached to Endpoint (antenna not always required), see Photo 2:

Photo 2



Network Devices, see Photo 3:

Photo 3



AMI endpoints transmit meter information to the AMI system and will soon be on the vast majority of meters in San Diego. These AMI devices provide interval consumption data to the PUD's Customer Support Division. If these devices are damaged or communication is interrupted, this Division will be alerted of the situation. The endpoints are installed in water meter boxes, coffins, and vaults adjacent to the meter. A separate flat round antenna may also be installed through the meter box lid. This antenna is connected to the endpoint via cable. The following proper installation shall be implemented when removing the lid to avoid damaging the antenna, cable, and/or endpoint. Photo 4 below demonstrates a diagram of the connection:

Photo 4



The AMI device ERT/Endpoint/Transmitter shall be positioned and installed as discussed in this Appendix. If the ERT/Endpoint/Transmitter is disturbed, it shall be re-installed and returned to its original installation with the end points pointed upwards as shown below in Photo 5.

The PUD's code compliance staff will issue citations and invoices to you for any damaged AMI devices that are not re-installed as discussed in the Contract Document

Photo 5 below shows a typical installation of an AMI endpoint on a water meter.

Photo 5

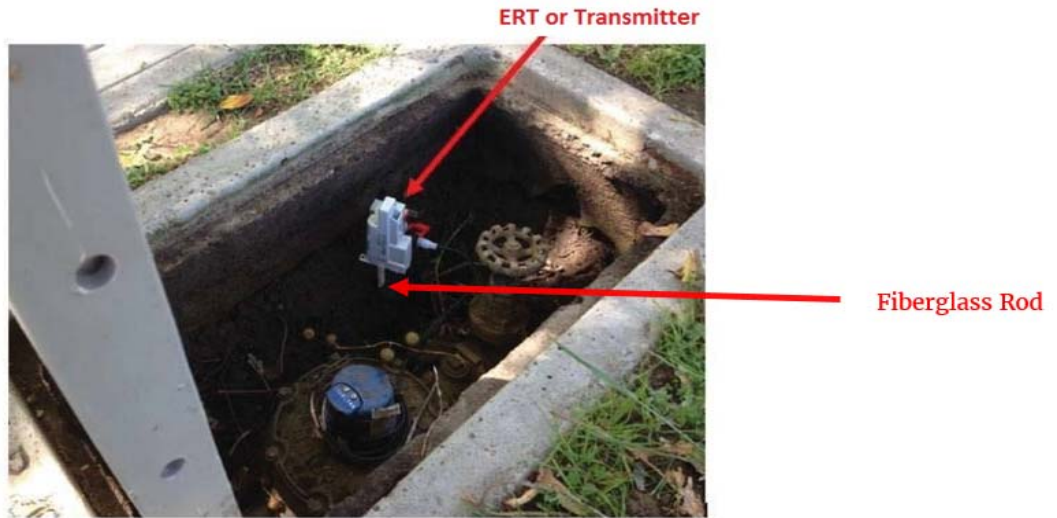


Photo 6 below is an example of disturbance that shall be avoided:

Photo 6



You are responsible when working in and around meter boxes. If you encounter these endpoints, use proper care and do not disconnect them from the registers on top of the water meter. If the lid has an antenna drilled through, do not change or tamper with the lid and inform the Resident Engineer immediately about the location of that lid. Refer to Photo 7 below:

Photo 7



Another component of the AMI system are the Network Devices. The Network Devices are strategically placed units (mainly on street light poles) that collect interval meter reading data from multiple meters for transmission to the Department Control Computer. **If you come across any of these devices on street lights that will be removed or replaced (refer to Photos 8 and 9 below), notify AMI Project Manager Arwa Sayed at (619) 362-0121 immediately.**

Photo 8 shows an installed network device on a street light. On the back of each Network Device is a sticker with contact information. See Photo 9. **Call PUD Water Emergency Repairs at 619-515-3525 if your work will impact these street lights.** These are assets that belong to the City of San Diego and you shall be responsible for any costs of disruption of this network.

Photo 8



Network Device

Photo 9



If you encounter any bad installations, disconnected/broken/buried endpoints, or inadvertently damage any AMI devices or cables, notify the Resident Engineer immediately. The Resident Engineer will then immediately contact the AMI Project Manager, Arwa Sayed, at (619) 362-0121.

APPENDIX H

SWPPP CONSTRUCTION BMP MAINTENANCE LOG

SWPPP Construction BMP Maintenance Log

Examples of construction BMP maintenance activities include but are not limited to tasks listed below. The contractor is ultimately responsible for compliance with the Storm Water Standards Manual and/or the Construction General Permit, and for ensuring all BMPs function per manufacturer's specifications. Use the attached log to schedule and document maintenance activities. The log shall be kept with the project SWPPP document at all times.

Construction BMP Maintenance Activities

- Maintain stabilized construction entrances/exits
- Redress gravel/rock to full coverage and remove any sediment accumulation
- Remove and replace geotextile/compost blanket/plastic with holes or tears
- Redress and restabilize erosion or rilling greater than 1-inch deep
- Reapply hydraulic stabilization products to full coverage
- Remove and replace silt fence/fiber roll/gravel bags/etc. with holes or tears
- Reinstall or replace silt fence/fiber roll/etc. with sags
- Remove sediment accumulation from perimeter controls
- Remove sediment accumulation from storm drain inlet protection and check dams
- Remove sediment accumulation from energy dissipators
- Repair or remove any vehicle/equipment that leaks
- Remove any accumulation in drip pans or containment
- Empty concrete washouts when they reach 75% capacity
- Empty waste disposal containers when they reach 95% capacity

Construction BMP Maintenance Log

Project Title:

WBS/IO No:

WDID:

Scheduled Date/Time	Completion Date/Time	Location	Maintenance Tasks Performed	Logged By

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 Wier Construction Corp, herein called "Contractor" for construction of **Bonita Cove West Improvements; Bid No. K-20-1884-DBB-3**; in the amount of **Three Million Three Hundred Thirty One Thousand Four Hundred Eighty Dollars and Zero Cents (\$3,331,480.00)**, 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 **Bonita Cove West Improvements**, on file in the office of the Public Works Department as Document No. **B-18229, B-18230**, 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 **Bonita Cove West Improvements**, Bid Number **K-20-1884-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 §22.3102 authorizing such execution.

THE CITY OF SAN DIEGO

APPROVED AS TO FORM

Mara W. Elliott, City Attorney

By 

By 

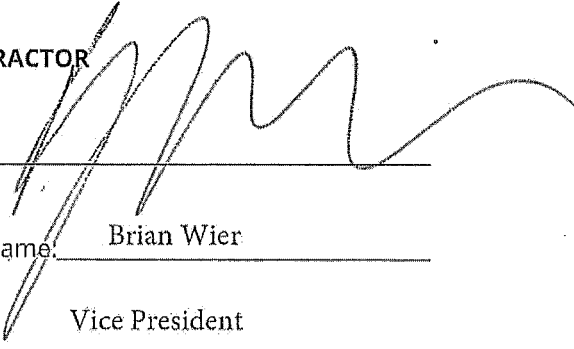
Print Name: Stephen Samara
Principal Contract Specialist
Public Works Department

Print Name: Bonny Hsu
Deputy City Attorney

Date: 10/31/2019

Date: 11/1/19

CONTRACTOR

By 

Print Name: Brian Wier

Title: Vice President

Date: 10/10/2019

City of San Diego License No.: B1994001930

State Contractor's License No.: 481419

DEPARTMENT OF INDUSTRIAL RELATIONS (DIR) REGISTRATION NUMBER: 1000025313

CERTIFICATIONS AND FORMS

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 certifications, forms and affidavits submitted as part of this bid 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 5-1.3, "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 5-1.2, "California Building Code, California Code of Regulations Title 24 and 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 5-1.4, ("Contractor Standards and Pledge of Compliance"), 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:

Bonita Cove West Improvements

(Project Title)

as particularly described in said contract and identified as Bid No. **K-20-1884-DBB-3**; SAP No. (WBS/IO/CC) **B-18229, B-18230**; 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 Y*** 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 - Section 3-2, "SELF-PERFORMANCE", 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	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	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**

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 Wier Construction Corporation as Principal, and The Ohio Casualty 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

Bonita Cove West Improvements; K-20-1884-DBB-3; Bid date: September 16, 2019

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 12th day of September, 2019

Wier Construction Corporation (SEAL)
(Principal)

The Ohio Casualty Insurance Company (SEAL)
(Surety)

By: [Signature]
(Signature)

By: [Signature]
(Signature)

Brooke Lafrenz, Attorney-in-fact

(SEAL AND NOTARIAL ACKNOWLEDGEMENT OF SURETY)

ALL- PURPOSE CERTIFICATE OF ACKNOWLEDGMENT

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 12 September 2019 before me, Audrey Rodriguez, Notary Public
(Here insert name and title of the officer)

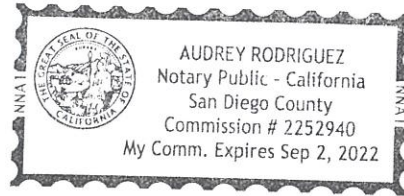
personally appeared Brooke Lafrenz,
 who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) 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.

Audrey Rodriguez
 Notary Public Signature

(Notary Public Seal)



ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date _____

CAPACITY CLAIMED BY THE SIGNER

Individual (s)

Corporate Officer

(Title)

Partner(s)

Attorney-in-Fact

Trustee(s)

Other _____

INSTRUCTIONS FOR COMPLETING THIS FORM

This form complies with current California statutes regarding notary wording and, if needed, should be completed and attached to the document. Acknowledgments from other states may be completed for documents being sent to that state so long as the wording does not require the California notary to violate California notary law.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he/she/they~~ is /are) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
 - ❖ Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document
 - ❖ Indicate title or type of attached document, number of pages and date.
 - ❖ Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document with a staple.

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 5886682

American Fire and Casualty Company
The Ohio Casualty Insurance Company

Liberty Mutual Insurance Company
West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Larry D Cogdill, Michael W Thomas, Brooke Lafrenz, Gladys Rogers, Audrey Rodriguez

all of the city of Del Mar, state of CA each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 19th day of December, 2012.



American Fire and Casualty Company
The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

By: Gregory W. Davenport
Gregory W. Davenport, Assistant Secretary

STATE OF WASHINGTON ss
COUNTY OF KING

On this 19th day of December, 2012, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Seattle, Washington, on the day and year first above written.



By: KD Riley
KD Riley, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes Gregory W. Davenport, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, David M. Carey, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 12TH day of SEPTEMBER, 20 19.



By: David M. Carey
David M. Carey, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, bank deposit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

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
		N	A		

Contractor Name: WIER CONSTRUCTION CORP.

Certified By CATHY WIER Title PRES.
Name

X [Signature] Date 9/16/19
Signature

USE ADDITIONAL FORMS AS NECESSARY

Mandatory Disclosure of Business Interests Form

BIDDER/PROPOSER INFORMATION

Legal Name	WIEN CONSTRUCTION CORPORATION ^{DBA}			
Street Address	City	State	Zip	
16884 OLD SULLY RD.	ESCONDIDO	CA	92065	
Contact Person, Title	Phone	Fax		
BRIAN WIEN - EST.	760 743 6716	760 746 5284		

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.

Name	Title/Position	
Brian Wien	Owner	
City and State of Residence	Employer (if different than Bidder/Proposer)	
Escondido CA		
Interest in the transaction		
owner		
Name	Title/Position	
Cathy Wien	Pres.	
City and State of Residence	Employer (if different than Bidder/Proposer)	
Escondido CA		
Interest in the transaction		
owner		

* 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 Mayor or Designee with written notice is grounds for Contract termination.

✗ CATHY WIEN - Pres. ✗		9/16/19
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: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____	N/A			
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 ****

City of San Diego

CITY CONTACT: Taylor Cox, Contract Specialist, Email: TJCox@sandiego.gov
Phone No. (619) 533-3033

ADDENDUM A



FOR

BONITA COVE WEST IMPROVEMENTS

BID NO.: K-20-1884-DBB-3
SAP NO. (WBS/IO/CC): B-18229, B-18230
CLIENT DEPARTMENT: 1714
COUNCIL DISTRICT: 2
PROJECT TYPE: BE

BID DUE DATE:

**2:00 PM
SEPTEMBER 16, 2019**

CITY OF SAN DIEGO'S ELECTRONIC BIDDING SITE, PLANETBIDS

<http://www.sandiego.gov/cip/bidopps/index.shtml>

ENGINEER OF WORK

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



1) Registered Landscape Architect

August 28, 2019

Date

Seal:





2) For City Engineer

08/28/2019

Date

Seal:



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.

B. PLANS

1. To the Drawing Sheets Number 41452-01-D, 41452-03-D, 41452-05-D, 41452-11-D, 41452-15-D, 41452-17-D, 41452-18-D, 41452-21-D, 41452-27-D, 41452-28-D, 41452-30-D, 41452-33-D, 41452-36-D and 41452-38-D, **DELETE** in their entirety and **REPLACE** with pages 4 through 17 of this Addendum.

James Nagelvoort, Director
Public Works Department

Dated: *September 6, 2019*
San Diego, California

JN / RWB / cc

BONITA COVE WEST IMPROVEMENTS

PROJECT ADDRESS & DESCRIPTION:

BONITA COVE WEST 929 W. MISSION BAY DR., SAN DIEGO, CA 92109
 - BONITA COVE WEST IS LOCATED OFF W. MISSION BAY DR. IN THE CITY OF SAN DIEGO, MISSION BAY PARK IN COUNCIL DISTRICT 2.

SCOPE OF WORK:

EXISTING BONITA COVE WEST IMPROVEMENTS

THE SCOPE OF THE PROJECT IS TO RENOVATE AN EXISTING APPROXIMATELY HALF ACRE PLAYGROUND AND PROVIDE ADA SIDEWALK UPGRADES, 20' HT. SECURITY LIGHTING. SITE PREPARATION FOR PREFABRICATED COMFORT STATION INCLUDING OVER EXCAVATION AND RECOMPACTION AND UTILITIES (WATER, SEWER, ELECTRICAL). NEW SHADE STRUCTURE (BY SEPARATE PERMIT) AND NEW PREFABRICATED COMFORT STATION (BY SEPARATE PERMIT).

SEPARATE PERMITS:

THE FOLLOWING AMENITIES ARE INCLUDED FOR REFERENCE AND WILL BE PROCESSED BY SEPARATE PERMITS:

- PRIOR TO FABRICATING OR INSTALLING, THE CONTRACTOR SHALL PROVIDE DESIGN CALCULATIONS, PLANS, DETAILS, AND SPECIFICATIONS TO BE SUBMITTED TO AND APPROVED BY THE CITY OF SAN DIEGO DEVELOPMENT SERVICES DEPARTMENT FOR THE FOLLOWING ITEMS:
- PREFABRICATED SHADE STRUCTURE
- PLANS FOR THE SEPARATE PERMIT SUBMITTAL ITEMS SHALL BE SUBMITTED IN A TIMELY MANNER THAT ALLOWS A MINIMUM OF 30 WORKING DAYS FOR INITIAL PLAN REVIEW. ALL COMMENTS RELATED TO THE SEPARATE PERMIT SUBMITTAL MUST BE ADDRESSED TO THE SATISFACTION OF THE PLAN CHECK DIVISION PRIOR TO APPROVAL OF THE SUBMITTAL ITEMS.
- PREFABRICATED COMFORT STATION BUILDING PERMIT PACKAGE AND PLUMBING FIXTURE LIST SHALL BE SUBMITTED BY THE CONTRACTOR TO THE CITY PROJECT MANAGER FOR THE CITY'S DSD AND ADA DEPARTMENT REVIEW AND APPROVAL

SURVEY DATA:

LEGAL DESCRIPTION:

A PORTION OF PUEBLO LOT 1803 OF THE PUEBLO LANDS OF SAN DIEGO, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 1800 FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, NOVEMBER 13, 1924.

ASSESSOR'S NUMBER:

423-680-1200, 423.680-1100

PROJECT DATA:

CONDITION OF SOIL: TBD
 LANDSCAPE AREA SQUARE FOOTAGE: 3,950 SF (0.09 AC)
 ADDITIONAL HARDSCAPE: 2,040 SF (0.05 AC)
 TOTAL AREA OF DISTURBANCE: 30,750 SF (0.70 AC)

BENCHMARK:

CITY OF SAN DIEGO BRASS PLUG BENCHMARK. A BRASS PLUG IN THE CURB AT THE NORTHEAST CORNER AT THE INTERSECTION OF GLEASON RD WITH MISSION BAY DR. ELEVATION = 7.09' DATUM NGVD29 BASIS OF COORDINATES: (NAD83)

"THE BASIS OF COORDINATES FOR THE SURVEY IS THE NORTH AMERICAN DATUM OF 1983 (NAD1983) CALIFORNIA STATE PLANE COORDINATE SYSTEM OF 1983 (CCS83) ZONE 6 (EPOCH 1991.35) BASED LOCALLY UPON THE FOLLOWING CONTROL POINTS PER RECORD OF SURVEY MAP NO. 14492"

STATION	NORTHING	EASTING
214	1852123.11	6259376.63
140	1874900.95	6251205.54

GRID BEARING BETWEEN 214 AND 140 = N 19°44'04" W.

APN: APN 4200480 AND APN 423-680-12-00

MONUMENTATION/ SURVEY NOTES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LICENSED LAND SURVEYOR OR LICENSED CIVIL ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING IN THE STATE OF CALIFORNIA SHALL FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR TO ANY EARTHWORK, DEMOLITION OR SURFACE IMPROVEMENTS. IF DESTROYED, A LICENSED LAND SURVEYOR SHALL REPLACE SUCH MONUMENT(S) WITH APPROPRIATE MONUMENTS WHEN SETTING SURVEY MONUMENTS USED FOR USED FOR RE-ESTABLISHMENT

PROJECT DIRECTORY:

OWNER:
 CITY OF SAN DIEGO
 CONTACT: KEVIN T. NGUYEN, PARK DESIGNER, (619) 533-7471
 KTNGUYEN@SANDIEGO.GOV

LANDSCAPE ARCHITECT:
 JT BARR, SCHMIDT DESIGN GROUP, INC
 (619) 236-1462 JTBARR@SCHMIDTDESIGN.COM
 JENNIFER MONTGOMERY, SCHMIDT DESIGN GROUP, INC
 (619) 236-1462 JMONTGOMERY@SCHMIDTDESIGN.COM

ELECTRICAL ENGINEER:
 GERRY SANNER, BSE ENGINEERING
 (858) 800-6020 GSANNER@BSEENGINEERING.COM

CIVIL ENGINEER
 KENNETH KOZLIK, FUSCOE ENGINEERING
 (858) 554-1500 KKOZLIK@FUSCOE.COM

STRUCTURAL ENGINEER
 MARK VAN BIBBER, AARK ENGINEERING, INC.
 (619) 312-6336 VANBIBBER@AARKENGINEERING.COM

CAUTION NOTE:

BEFORE EXCAVATING, VERIFY THE LOCATION OF UNDERGROUND UTILITIES. AT LEAST TWO (2) WORKING DAYS PRIOR TO EXCAVATION, THE CONTRACTOR SHALL REQUEST MARKOUT OF UNDERGROUND UTILITIES BY CALLING THE BELOW LISTED REGIONAL NOTIFICATION CENTER FOR AN INQUIRY IDENTIFICATION NUMBER:

UNDERGROUND SERVICE ALERT	800-422-4133
(GAS, ELECTRIC, TELEPHONE, WATER, SEWER, LIGHTING, AND TV)	
IRRIGATION SYSTEMS	619-533-5783
IRRIGATION CONTROL WIRE	619-533-5783
FACILITIES MAINTENANCE DIVISION	619-525-8500

- SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A PERMIT TO EXCAVATE WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER CALL UNDERGROUND SERVICE ALERT AT 1-800-422-4133 TWO WORKING DAYS BEFORE YOU DIG.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL SUBSTRUCTURES, WHETHER SHOWN HEREON OR NOT, AND PROTECT THEM FROM DAMAGE. THE EXPENSE OF REPAIR OR REPLACEMENT OF SAID SUBSTRUCTURES SHALL BE BORNE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO ENFORCE SAFETY MEASURES OR REGULATIONS.
- LOCATION AND ELEVATION OF ALL EXISTING IMPROVEMENTS WITHIN THE AREA OF WORK SHALL BE CONFIRMED BY FIELD MEASUREMENT PRIOR TO CONSTRUCTION OF NEW WORK. CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY BECAUSE OF ACTUAL LOCATION OF EXISTING FACILITIES.
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES TO PROTECT EXISTING IMPROVEMENTS.
- CONTRACTOR IS RESPONSIBLE FOR POT HOLING PRIOR TO START OF CONSTRUCTION TO VERIFY ALL ELEVATIONS OF UNDERGROUND UTILITIES.
- CONTRACTOR SHALL HIRE A PRIVATE UTILITY LOCATOR FOR MARK-OUT OF ALL PRIVATE UTILITIES LOCATED ON PARK PROPERTY PRIOR TO EXCAVATION.

REFERENCE DOCUMENTS:

AS-BUILT DRAWING NUMBERS FOR ORIGINAL PARK AND COMFORT STATION CONSTRUCTION.

- 15591-D
- 26485-D
- 23571-D
- 27550-D

PARK INSPECTION TEAM:

- SITE SUPERINTENDENT (CONTRACTOR)
- SUB CONTRACTOR(S)
- RESIDENT ENGINEER FROM CONSTRUCTION MANAGEMENT AND FIELD SERVICES DIVISION
- CITY PROJECT MANAGER
- DESIGN CONSULTANT(S)
- PARK & RECREATION DISTRICT MANAGER AND ASSET MANAGER
- ACCESS COMPLIANCE OFFICER
- THIRD PARTY CERTIFIED INSPECTOR (PLAY AREA/ COMPONENTS ONLY)

PARK INSPECTION STAGES:

- PRE-CONSTRUCTION MEETING
- DEMOLITION
- ROUGH GRADING AND DRAINAGE
- HARDSCAPE AT TIME OF FINISHED STAKING AND LAYOUT
- UPON INSTALLATION OF STRUCTURES
- FINISH GRADING AND SOIL PREPARATION
- PLAY STRUCTURES/ RESILIENT SURFACING THIRD PARTY CERTIFIED INSPECTION
- IRRIGATION MAINLINE PRESSURE TEST
- IRRIGATION COVERAGE TEST
- PLANT MATERIAL (WHEN DELIVERED) AND PLACEMENT APPROVAL
- PROJECT CONSTRUCTION COMPLETE, BEGIN PLANT ESTABLISHMENT PERIOD AND DEVELOP PUNCH LIST (CONTRACTOR TO SUBMIT RED-LINE AS BUILTS)
- FINAL WALK-THROUGH, ACCEPTANCE BY THE CITY (CONSULTANT TO SUBMIT FINAL APPROVED AS-BUILTS TO THE CITY)

APPLICABLE STANDARD DRAWINGS & SPECIFICATIONS:

- CITY OF SAN DIEGO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("WHITEBOOK"), 2018 EDITION.
- GREENBOOK STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2018. INCLUDES ALL SUPPLEMENTAL AMENDMENTS.
- DISABLED ACCESS REGULATIONS, TITLE 24, AND CALIFORNIA STATE ACCESSIBILITY STANDARDS INTERPRETIVE MANUAL PREPARED BY THE OFFICE OF THE STATE ARCHITECT AND DEPARTMENT OF REHABILITATION.
- AMERICAN WITH DISABILITIES ACT TITLE II REGULATIONS 28 CFR PART 35 AND 35.151, INCLUDING THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN.
- MANUAL ON TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE WORK ZONES, STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION, DOCUMENT NO 769744.

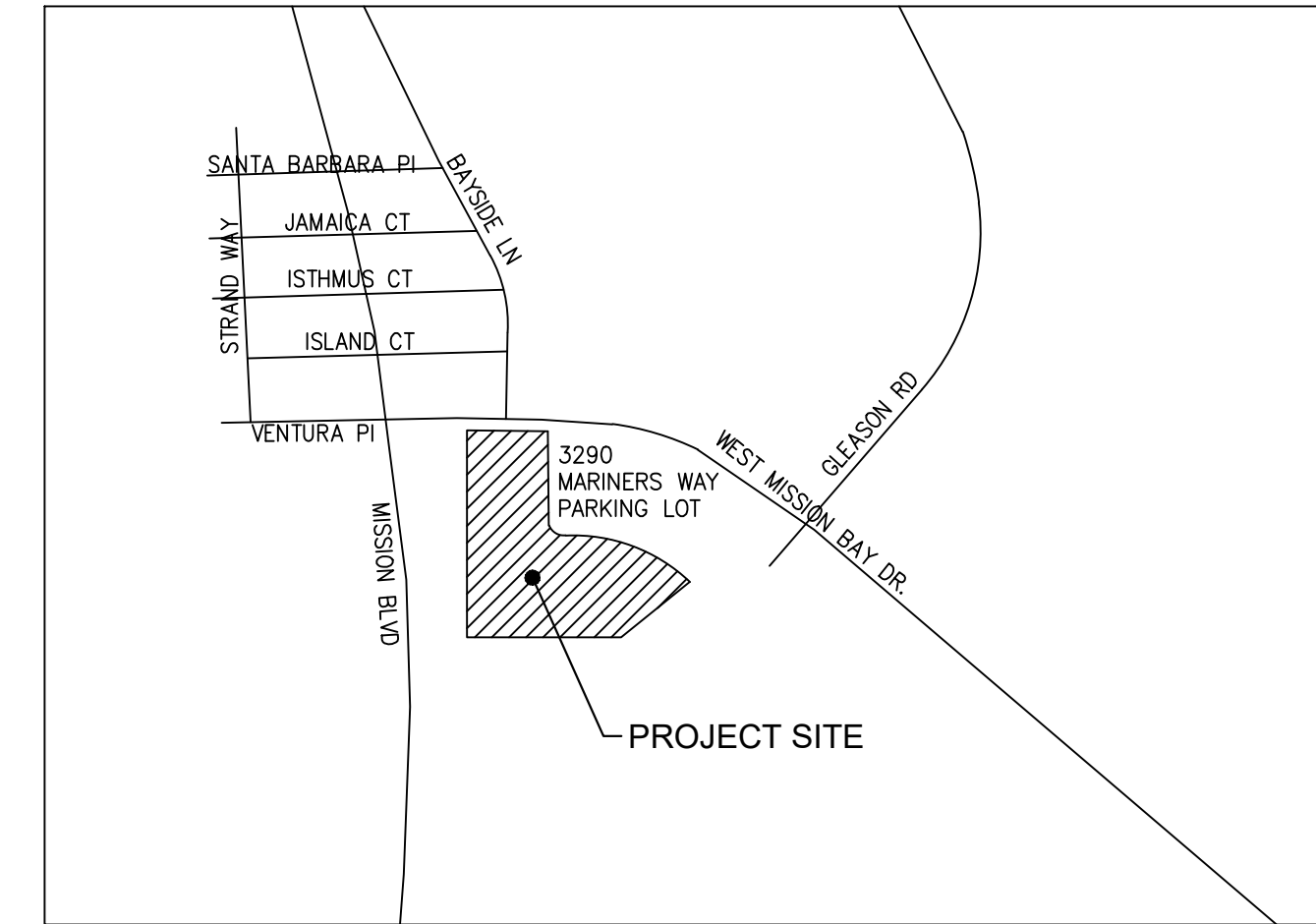
NOTE:
 LATEST EDITIONS OF THE PRECEDING SPECIFICATIONS AND DRAWINGS SHOULD BE USED. WHERE ONE OR MORE SETS OF SPECIFICATIONS ARE APPLICABLE, THE MORE RESTRICTIVE WILL TAKE PRECEDENCE.

SPECIAL INSPECTION NOTES:

- SPECIAL INSPECTIONS, STRUCTURAL TESTS AND STRUCTURAL OBSERVATIONS SHALL COMPLY WITH THE APPLICABLE PROVISIONS OF CHAPTER 17 OF THE 2013 CBC.
- THE SPECIAL INSPECTOR MUST BE CERTIFIED BY THE CITY OF SAN DIEGO DEVELOPMENT SERVICES, IN THE CATEGORY OF WORK REQUIRED TO HAVE SPECIAL INSPECTION.
- THE SPECIAL INSPECTIONS IDENTIFIED ON PLANS ARE IN ADDITION TO AND NOT A SUBSTITUTE FOR THOSE INSPECTIONS REQUIRED TO BE PERFORMED BY A CITY BUILDING INSPECTOR.
- A PROPERTY OWNER'S FINAL REPORT FORM FOR WORK REQUIRED TO HAVE SPECIAL INSPECTIONS, TESTING AND STRUCTURAL OBSERVATIONS MUST BE COMPLETED BY THE PROPERTY OWNER, PROPERTY OWNER'S AGENT OF RECORD OR ENGINEER OF RECORD AND SUBMITTED TO THE INSPECTION SERVICES DIVISION. THE CONSTRUCTION MATERIALS TESTING LABORATORY MUST BE APPROVED BY THE CITY OF SAN DIEGO, DEVELOPMENT SERVICES, FOR TESTING OF MATERIALS, SYSTEMS, COMPONENTS AND EQUIPMENT.
- PROJECT SHALL BE INSPECTED BY A CERTIFIED ACCESS SPECIALIST.

CERTIFIED HORIZONTAL CONTROL PLAN:

THE CONTRACTOR WILL BE PROVIDED WITH ELECTRONIC TOPOGRAPHIC SURVEY AND CONSTRUCTION PLANS FOR DEVELOPMENT OF A CERTIFIED HORIZONTAL CONTROL PLAN TO BE PREPARED BY LAND SURVEYOR AND SUBMITTED TO THE RESIDENT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. CONTRACTOR SHALL PROVIDE CONSTRUCTION STAKING THROUGHOUT THE DURATION OF THE PROJECT IN COMPLIANCE WITH THE PLANS AND CERTIFIED HORIZONTAL CONTROL PLAN.



VICINITY MAP

NO SCALE

SHEET INDEX:

SHEET NO.	DISCIPLINE CODE	TITLE	SHEET NO.	DISCIPLINE CODE	TITLE
1	T-1.0	TITLE SHEET & SHEET INDEX	28	E-4.1	ENLARGED SITE PLAN-ELECTRICAL ROOM
2	T-1.1	LANDSCAPE ACCESSIBILITY PLAN	29	E-5.1	ELECTRICAL DETAILS
3	D-1.0	DEMOLITION LEGEND AND NOTES	30	E-5.2	ELECTRICAL DETAILS
4	D-1.1	DEMOLITION PLAN	31	E-6.1	SINGLE LINE DIAGRAMS
5	D-1.2	DEMOLITION PLAN	32	E-6.2	PANEL SCHEDULES AND CALCULATIONS
6	C-1.0	CIVIL CONSTRUCTION LEGEND AND NOTES	33	LP-1.0	PLANTING LEGEND, NOTES AND DETAILS
7	C-1.1	EXISTING CONDITIONS	34	LP-1.1	PLANTING PLAN
8	C-1.2	GRADING PLAN	35	LP-1.2	PLANTING PLAN
9	C-1.3	GRADING PLAN	36	LI-1.0	IRRIGATION LEGEND AND NOTES
10	C-1.4	EROSION CONTROL PLAN	37	LI-1.1	IRRIGATION PLAN
11	C-1.5	BMP MAP FOR STANDARD DEVELOPMENT PROJECTS	38	LI-1.2	IRRIGATION PLAN
12	LC-1.0	LANDSCAPE CONSTRUCTION LEGEND AND NOTES	39	LI-2.1	IRRIGATION DETAILS
13	LC-1.1	LANDSCAPE CONSTRUCTION PLAN			
14	LC-1.2	LANDSCAPE CONSTRUCTION PLAN			
15	LC-1.3	PLAYGROUND ENLARGEMENT, LEGEND, AND NOTES			
16	LC-2.0	LANDSCAPE CONSTRUCTION DETAILS			
17	LC-2.1	LANDSCAPE CONSTRUCTION DETAILS			
18	LC-2.2	LANDSCAPE CONSTRUCTION DETAILS			
19	LC-2.3	SCHEMATIC SHADE STRUCTURE PLAN AND NOTES			
20	LC-2.4	SCHEMATIC COMFORT STATION PLAN AND NOTES			
21	LC-2.5	SCHEMATIC COMFORT STATION PLAN AND NOTES			
22	E-0.1	ELECTRICAL SYMBOLS AND ABBREVIATIONS			
23	E-1.0	ELECTRICAL SITE PLAN			
24	E-1.1	ELECTRICAL SITE PLAN - DEMO			
25	E-1.2	ELECTRICAL SITE PLAN - TEMPORARY			
26	E-2.1	ENLARGED SITE PLAN - LIGHTING			
27	E-2.2	ENLARGED SITE PLAN-LIGHTING			

CONSTRUCTION STORM WATER PROTECTION NOTES

- TOTAL SITE DISTURBANCE AREA (ACRES) 1.2 AC
 HYDROLOGIC UNIT/ WATERSHED PENASQUITOS HU/ MISSION BAY WATERSHED
 HYDROLOGIC SUBAREA NAME & NO. SCRIPPS 906.30
- THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE WPCP
 THE PROJECT IS SUBJECT TO MUNICIPAL STORM WATER PERMIT NO. R9-2013-0001 AS AMENDED BY R9-2015-0001
 SWPPP
 THE PROJECT IS SUBJECT TO MUNICIPAL STORM WATER PERMIT NO. R9-2013-0001 AND R9-2015-0100 AND CONSTRUCTION GENERAL PERMIT ORDER 2009-0009-DWQ AS AMENDED BY ORDER 2010-0014-DWQ AND 2012-0006-DWQ
 TRADITIONAL: RISK LEVEL 1 2 3
 LUP: RISK TYPE 1 2 3
- CONSTRUCTION SITE PRIORITY
 ASBS HIGH MEDIUM LOW

WBS: B18229 (PLAY AREA IMPROVEMENTS)
 WBS: B18230 (COMFORT STATION IMPROVEMENTS)

T-1.0

CONSTRUCTION CHANGE / ADDENDUM			
CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.
A	08/28/19	1, 3, 5, 11, 15, 17, 18, 21, 27, 28, 30, 33, 36, 38	

WARNING
 0 1
 SHEET SIZE AND SCALE:
 IF SHEET SIZE IS LESS
 THAN 22" X 34" OR THIS
 BAR DOES NOT
 MEASURE 1", IT IS A
 REDUCED PRINT -
 SCALE ACCORDINGLY.



AS-BUILT INFORMATION		CONSULTANT		CITY OF SAN DIEGO, CALIFORNIA		PLANS FOR THE CONSTRUCTION OF BONITA COVE WEST PLAYGROUND AND COMFORT STATION IMPROVEMENTS	
-	-	SPEC. NO. 1884		PUBLIC WORKS DEPARTMENT		TITLE SHEET AND SHEET INDEX	
-	-	SCHMIDT DESIGN GROUP		SHEET 01 OF 39 SHEETS		WBS B18229 WBS B18230	
-	-	APPROVED: [Signature] DATE 08/14/2019		FOR CITY ENGINEER DATE C73711		SUBMITTED BY: KEVIN NGUYEN PROJECT MANAGER	
-	-	PRINT NAME: SAMIR MAHMALJI		RCE#		CHECKED BY: EFRAN VELA-MAYO PROJECT ENGINEER	
-	-	DESCRIPTION		BY	APPROVED	DATE	FILMED
-	-	ORIGINAL		SDG	[Signature]	08/14/2019	
-	-	ADDENDUM A		SDG	[Signature]	08.28.19	
PROJECT # 18-409 DN BY: PR, JD, CC CK BY: JM, JJ				PLT DATE: 08.22.2019		DATE STARTED	
CONTRACTOR INSPECTOR				DATE COMPLETED		220-1692 LAMBERT COORDINATES	
						41452-01-D	

NOTE ADDED

ADDENDUM A

DEMOLITION NOTES:

1. SUMMARY

- A. CLEAR AND GRUB THE PROJECT SITE PRIOR TO CONSTRUCTION, AS SPECIFIED HEREIN, AND AS NEEDED FOR A COMPLETE AND PROPER PREPARATION OF THE SITE.
- B. LOCATION AND ELEVATION OF ALL EXISTING IMPROVEMENTS WITHIN THE AREA OF WORK SHALL BE CONFIRMED BY FIELD MEASUREMENT PRIOR TO CONSTRUCTION OF NEW WORK.
- C. CONTRACTOR TO LOCATE EXISTING UTILITIES IN FIELD PRIOR TO COMMENCEMENT OF WORK.
- D. DEMOLITION ITEMS ON THIS PLAN ARE FOR CONTRACTOR REFERENCE ONLY. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL EXISTING ABOVE AND UNDERGROUND STRUCTURES AS NECESSARY TO CONSTRUCT PROJECT.
- E. REMOVE EXISTING CONCRETE PANELS TO NEAREST JOINT, TYP.
- F. HISTORICAL STAMPS/ IMPRESSIONS SHALL BE PRESERVED PER SDG-115.

2. PROJECT CONDITIONS

- A. TRAFFIC: CONDUCT SITE PREPARATION WORK TO ENSURE MINIMUM INTERFERENCE WITH EXISTING ROADS, STREETS, WALKS AND OTHER ADJACENT OCCUPIED OR USED FACILITIES. DO NOT CLOSE OR OBSTRUCT EXISTING STREETS, WALKS OR OTHER OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM AUTHORITIES HAVING JURISDICTION.
- B. COMPLETE THE CLEARING AND SITE PREPARATION WORK BEFORE STARTING EARTHWORK. ERECT TEMPORARY CONSTRUCTION FENCING, BARRICADES, ENCLOSURES, AND PROTECTION OF ADJACENT PROPERTY AND EXISTING WORK BEFORE STARTING SITE CLEARING WORK AND MAINTAIN FOR THE DURATION OF WORK.
- C. INSPECT AND REVIEW THE PROJECT SITE TO DETERMINE EXISTING CONDITIONS WHICH AFFECT CONSTRUCTION OPERATIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL SUBSTRUCTURES, WHETHER SHOWN HEREON OR NOT, AND PROTECT THEM FROM DAMAGE. THE EXPENSE OF REPAIR OR REPLACEMENT OF SAID SUBSTRUCTURES SHALL BE BORNE BY THE CONTRACTOR. ALL EXISTING IRRIGATION LATERALS, HEADS, AND MAINLINES DISTURBED WITHIN CONSTRUCTION LIMIT LINES SHALL BE ADJUSTED TO NEW CONSTRUCTION. AFFECTED IRRIGATION ZONES SHALL BE SHUT OFF WITHIN AREAS OF DISTURBANCE. ALL CONSTRUCTION IN THESE AREAS SHALL BE COMPLETED IN A TIMELY FASHION TO PREVENT EXISTING VEGETATION FROM STRESS, WILT, OR DYING.
- D. PROTECTION OF EXISTING TREES AND VEGETATION: PROTECT EXISTING TREES AND OTHER VEGETATION INDICATED TO REMAIN IN PLACE AGAINST CUTTING, BREAKING, OR SKINNING OF ROOTS, SKINNING AND BRUISING OF BARK, SMOTHERING OF TREES BY STOCKPILING CONSTRUCTION MATERIALS OR EXCAVATED MATERIALS WITHIN DRIP LINE. PROVIDE TEMPORARY GUARDS TO PROTECT TREES AND VEGETATION TO REMAIN. SEE ALSO SECTION 801-1 WHITEBOOK STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- E. AFTER COMPLETION OF THE DEMOLITION, ANY DISTURBED OR LOOSE SOIL IS TO BE REMOVED. AFTER REMOVAL AND PRIOR TO PLACEMENT OF ANY STEEL, CONCRETE OR NEW FILL, THE EXPOSED SOILS ARE TO BE PREPARED AS INDICATED IN THE GEOTECHNICAL REPORT.
- F. CONTRACTOR TO REMOVE ALL SAND AND LOOSE MATERIAL FROM PLAYGROUND AREA PRIOR TO REMOVAL OF PLAY EQUIPMENT FOOTINGS. ANY SAND OR LOOSE MATERIAL MIGRATED INTO EXISTING FOOTING HOLES IS TO BE REMOVED FROM THE PLAYGROUND PRIOR TO PERFORMING FINAL EXCAVATION TO NEW SUB-GRADE. UPON ESTABLISHMENT OF NEW SUB-GRADE, CONTRACTOR SHALL OVER-EXCAVATE THE PLAY AREA TO A DEPTH OF 24" AND RECOMPACT TO 90% COMPACTION PRIOR TO INSTALLATION OF NEW STRUCTURES PER GEOTECH REPORT.

A

3. DISPOSITION OF MATERIALS

- A. REMOVE MATERIAL EXCEPT THOSE ITEMS INDICATED TO BE RE-USED TO A LEGAL DISPOSAL AREA.
- B. STOCKPILING OF REMOVED MATERIALS ON THE PROJECT SITE WILL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL FROM THE RESIDENT ENGINEER.

DEMOLITION LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
D-01	EXISTING CONCRETE PAVING TO BE REMOVED AND DISPOSED OF, TYP.	D-14	EXISTING WASTE RECEPTACLE(S) TO BE REMOVED PRIOR TO DEMOLITION, STORED, AND REINSTALLED. SEE CONSTRUCTION PLANS.
D-02	EXISTING CONCRETE PAVING TO REMAIN; PROTECT IN PLACE.	D-15	EXISTING LANDSCAPE AND IRRIGATION TO REMAIN; PROTECT IN PLACE. CONTRACTOR TO REPAIR/REPLACE IN KIND ANY LANDSCAPE AND IRRIGATION DAMAGED DURING CONSTRUCTION, SEE PLANTING AND IRRIGATION PLANS.
D-03	EXISTING DOLPHIN STATUES (2) TO BE REMOVED PRIOR TO DEMOLITION AND RETURNED TO PARK AND REC.	D-16	EXISTING TREE(S) TO REMAIN; PROTECT IN PLACE, TYP. CONTRACTOR TO REPAIR/REPLACE IN KIND ANY DAMAGED TREES DURING CONSTRUCTION, SEE PLANTING PLANS.
D-04	EXISTING WASTE RECEPTACLE, WITHOUT HOOD, TO BE REMOVED PRIOR TO DEMOLITION AND REINSTALLED, SEE CONSTRUCTION PLAN.	D-17	EXISTING CONCRETE CURB TO REMAIN; PROTECT IN PLACE.
D-05	EXISTING BENCH(ES) TO BE REMOVED PRIOR TO DEMOLITION AND RETURNED TO PARK AND REC.	D-18	EXISTING AC PAVING STAGING AREA. REPAIR ANY DAMAGE TO PAVING SURFACE DURING CONSTRUCTION TO THE SATISFACTION OF THE ENGINEER.
D-06	EXISTING PALM TREE(S) TO REMAIN; PROTECT IN PLACE, TYP. CONTRACTOR TO REPAIR/REPLACE IN KIND ANY DAMAGED PALMS DURING CONSTRUCTION, SEE PLANTING PLANS.	D-19	EXISTING SIGNAGE TO REMAIN; PROTECT IN PLACE.
D-07	EXISTING PLAY SAND TO BE REMOVED AND RELOCATED TO THE ADJACENT VOLLEYBALL COURTS AND SPREAD EVENLY. CLEAN SAND ONLY. MIXED SAND AND SOIL TO BE REMOVED AND DISPOSED OF. ASSOCIATED DRAINAGE SYSTEM TO BE REMOVED AND DISPOSED OF.	D-20	EXISTING HOT COALS RECEPTACLE TO BE REMOVED PRIOR TO DEMOLITION AND RETURNED TO PARK AND REC.
D-08	EXISTING DRINKING FOUNTAIN TO BE REMOVED AND DISPOSED OF. CAP WATER LINE. REFER TO PLANS FOR NEW DRINKING FOUNTAIN.	D-21	EXISTING PALM TO BE REMOVED AND DISPOSED OF.
D-09	EXISTING WASTE RECEPTACLE(S) TO BE REMOVED AND RETURNED TO PARK AND REC.	D-22	SAW CUT EXISTING CONCRETE PAVING 90 DEGREES TO THE PATH OF TRAVEL AT THE CLOSEST JOINT
D-10	EXISTING PLAY SURFACING TO BE REMOVED AND DISPOSED OF.	D-23	EXISTING BOLLARDS TO BE REMOVED AND REPLACED.
D-11	EXISTING PLAY STRUCTURE TO BE REMOVED AND DISPOSED OF.	D-24	EXISTING TOWER TO REMAIN. PROTECT IN PLACE.
D-12	EXISTING COMFORT STATION TO BE DEMOLISHED AND DISPOSED OF. EXISTING TOILETS (6), URINALS (2), SHOWERS (4), LAVATORIES (4) TO BE REMOVED AND REPLACED. CAP ALL UTILITY CONNECTIONS. REFER TO PLANS FOR NEW COMFORT STATION.	D-25	EXISTING IRRIGATION CONTROLLERS (3 TOTAL) AND WIRING TO BE TEMPORARILY RELOCATED WITHIN THE LIMITS OF CONSTRUCTION. SEE IRRIGATION PLANS.
D-13	EXISTING SITE LIGHT TO BE REMOVED AND DISPOSED OF, TYP. SEE ELECTRICAL PLANS FOR NEW LOCATION(S).	D-26	EXISTING CONCRETE CURB TO BE REMOVED AND REPLACED. SEE CONSTRUCTION PLANS.
		D-27	CLEAR AND GRUB EXISTING LANDSCAPE. REMOVE SOIL TO 3" BELOW PAVEMENT FINISH SURFACE

NOTE:
REFER TO CIVIL AND ELECTRICAL PLANS FOR ADDITIONAL DEMOLITION ITEMS.

CONTRACTOR REPAIR / REPLACE NOTE:
UNLESS OTHERWISE NOTED; IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND OR REPLACE ANY EXISTING HARDSCAPE / IRRIGATION / PLANT MATERIAL NOTED TO BE "PROTECTED IN PLACE" AND DAMAGED DURING THE COURSE OF CONSTRUCTION. REPLACEMENT WILL REQUIRE EXACT MATCH OF DAMAGED COMPONENT / PLANT MATERIAL (IN SIZE AND KIND). LANDSCAPE ARCHITECT TO APPROVE REPLACEMENT (OR EQUIVALENT) PRIOR TO REINSTALLATION.

D-1.0

PLANS FOR THE CONSTRUCTION OF BONITA COVE WEST PLAYGROUND AND COMFORT STATION IMPROVEMENTS

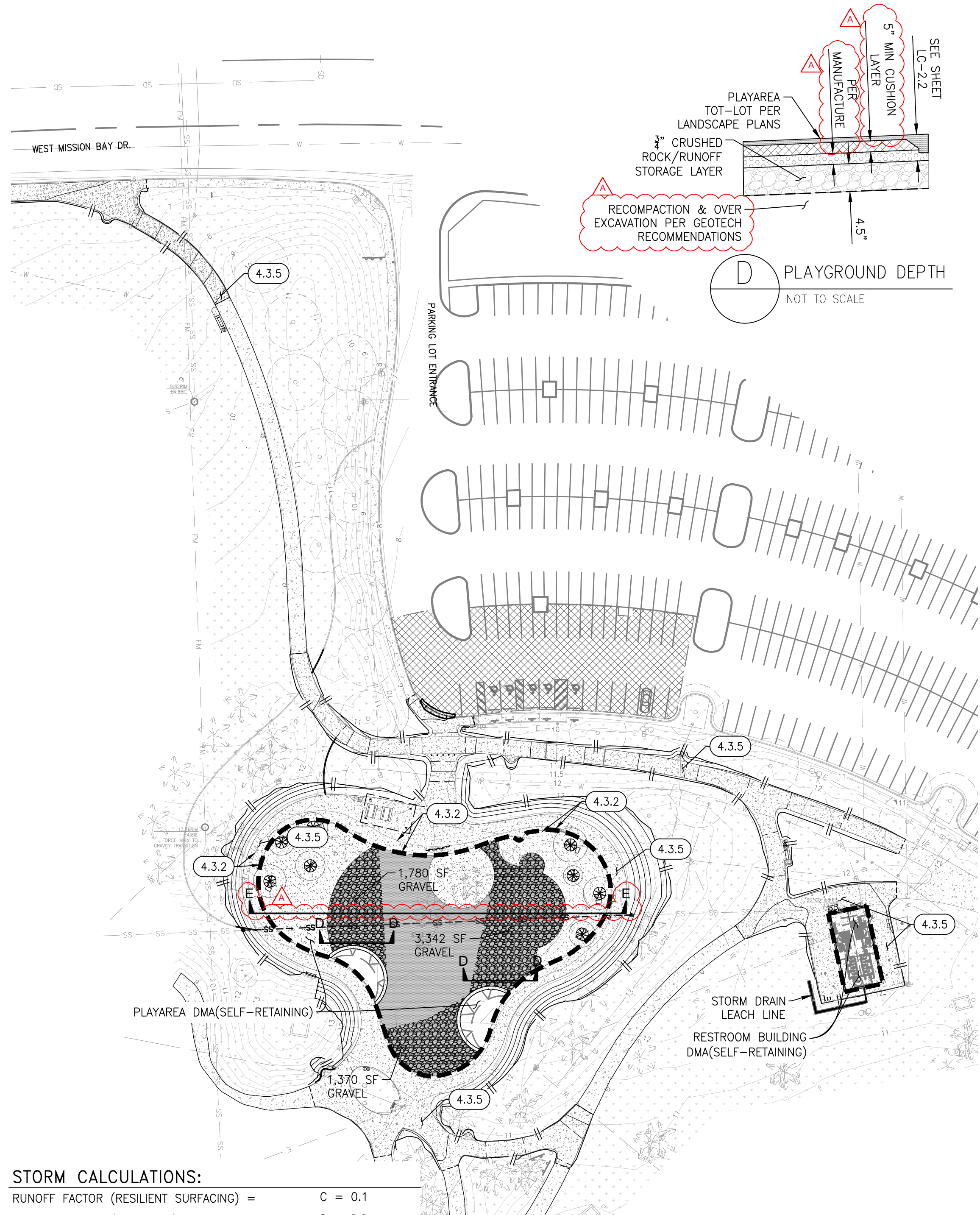
DEMOLITION LEGEND AND NOTES

CONSULTANT		CITY OF SAN DIEGO, CALIFORNIA PUBLIC WORKS DEPARTMENT SHEET 03 OF 39 SHEETS		WBS B18229 WBS B18230
<p>1310 Rosacrans St., Suite G, San Diego, CA 92106 619.236.1462 LIC. CA 2138 NV 219 AZ 34139 SCHMIDTDESIGN.COM</p>		APPROVED: <i>Samir M</i> DATE 08/14/2019 FOR CITY ENGINEER DATE C73711 SAMIR MAHMALJI RCE# PRINT NAME		SUBMITTED BY: KEVIN NGUYEN PROJECT MANAGER
		DESCRIPTION BY APPROVED DATE FILMED ORIGINAL SDG <i>Samir M</i> 08/14/2019 ADDENDUM A SDG <i>Samir M</i> 08.28.19		CHECKED BY: EFRAN VELELA-MAYO PROJECT ENGINEER
PROJECT #: 18-409 DN BY: PR, JD, CC CK BY: JM, JJ PLT DATE: 08.22.2019		CONTRACTOR INSPECTOR _____ DATE STARTED _____ DATE COMPLETED _____		220-1692 LAMBERT COORDINATES 41452-03-D

NOTE ADDED

ADDENDUM A

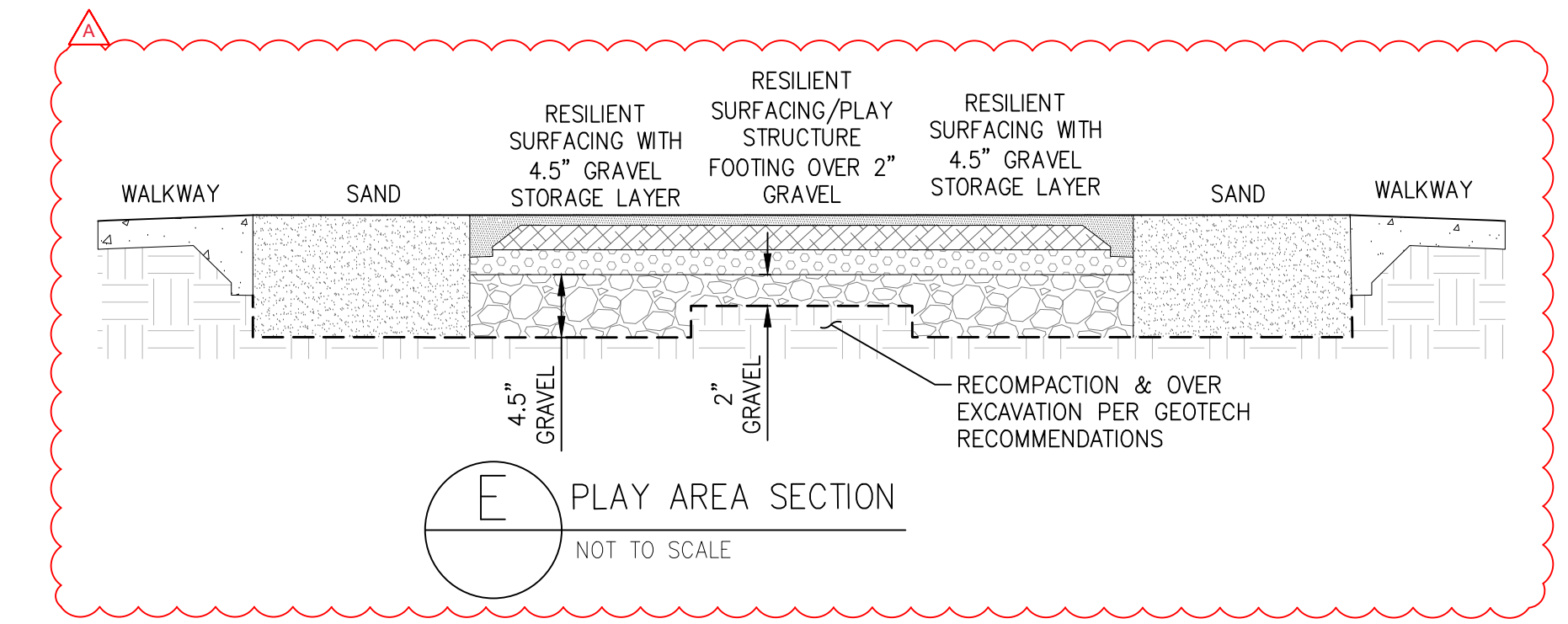
BONITA COVE WEST IMPROVEMENTS



SOURCE CONTROL BMP CHECKLIST FOR STANDARD PROJECTS		FORM I-4A	
ALL DEVELOPMENT PROJECTS MUST IMPLEMENT SOURCE CONTROL BMP'S. REFER TO CHAPTER 4 AND APPENDIX E OF THE BMP DESIGN MANUAL FOR INFORMATION TO IMPLEMENT BMP'S SHOWN IN THIS CHECKLIST. NOTE: ALL SELECTED BMP'S MUST BE SHOWN ON THE CONSTRUCTION PLANS.			
SOURCE CONTROL REQUIREMENT		APPLIED(1)?	
4.2.1 PREVENTION OF ILLICIT DISCHARGES INTO THE MS4	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> N/A
4.2.2 STORM DRAIN STENCILING OR SIGNAGE	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
4.2.3 PROTECT OUTDOOR MATERIALS STORAGE AREAS FROM RAINFALL, RUN-ON, RUNOFF, AND WIND DISPERSAL	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
4.2.4 PROTECT MATERIALS STORED IN OUTDOOR WORK AREAS FROM RAINFALL, RUN-ON, RUNOFF, AND WIND DISPERSAL	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
4.2.5 PROTECT TRASH STORAGE AREAS FROM RAINFALL, RUN-ON, RUNOFF, AND WIND DISPERSAL	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
4.2.6 BMP'S BASED ON POTENTIAL SOURCES OF RUNOFF POLLUTANTS	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
ON-SITE STORM DRAIN INLETS	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
INTERIOR FLOOR DRAINS AND ELEVATOR SHAFT SUMP PUMPS	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
INTERIOR PARKING GARAGES	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
NEED FOR FUTURE INDOOR AND STRUCTURAL PEST CONTROL	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
LANDSCAPE / OUTDOOR PESTICIDE USE	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> N/A
POOLS, SPAS, PONDS, DECORATIVE FOUNTAINS, AND OTHER WATER FEATURES	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
FOOD SERVICE	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
REFUSE AREAS	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
INDUSTRIAL PROCESSES	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
OUTDOOR STORAGE OF EQUIPMENT OR MATERIALS	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
VEHICLE / EQUIPMENT REPAIR AND MAINTENANCE	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
FUEL DISPENSING AREAS	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
LOADING DOCKS	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
FIRE SPRINKLER TEST WATER	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
MISCELLANEOUS DRAIN OR WASH WATER	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
PLAZAS, SIDEWALKS, AND PARKING LOTS	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> N/A
SC-6A: LARGE TRASH GENERATING FACILITIES	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
SC-6B: ANIMAL FACILITIES	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
SC-6C: PLANT NURSERIES AND GARDEN CENTERS	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
SC-6D: AUTOMOTIVE-RELATED USES	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
DISCUSSION / JUSTIFICATION FOR ALL "NO" ANSWER SHOWN ABOVE:			

SITE DESIGN AND SOURCE CONTROL BMP OPERATION AND MAINTENANCE PROCEDURE					
O&M RESPONSIBLE PARTY DESIGNEE: CITY OF SAN DIEGO PARKS AND RECREATION DEPARTMENT					
BMP DESCRIPTION	INSPECTION FREQUENCY	MAINTENANCE FREQUENCY	MAINTENANCE METHOD	QUANTITY	SHEET NUMBER
SOURCE CONTROL ELEMENTS					
LANDSCAPE PESTICIDE USE	--	--	MINIMIZE PESTICIDE USE ON EXISTING TREES	15	C-1.0
SIDEWALKS & WALKWAYS	MONTHLY	MONTHLY	SWEEP REGULARLY TO AVOID LITTER & DEBRIS DISCHARGE TO STORM DRAIN.	--	C-1.2 - 1.3
SITE DESIGN ELEMENTS					
CONSERVE NATURAL AREAS, SOILS, AND VEGETATION	WEEKLY	AS DETERMINED	MINIMIZE AREA OF DISTURBANCE & PROTECT EXISTING VEGETATION	ENTIRE SITE	C-1.2 C-1.3
MINIMIZE IMPERVIOUS AREA	WEEKLY	AS DETERMINED	ALLOW DRAINAGE PATHWAYS TO ENTER VEGETATED AREAS OR STORM DRAIN CONVEYANCE SYSTEMS. REMOVE DEBRIS & OBSTRUCTIONS AS-NEEDED.	ENTIRE SITE	C-1.2 - 1.3
MINIMIZE SOIL COMPACTION	WEEKLY	AS DETERMINED	PREVENT RUNOFF FROM FLOWING ACROSS DISTURBED AREAS BY DIVERTING THE FLOW TO VEGETATED AREAS	ENTIRE SITE	C-1.2 - 1.3
IMPERVIOUS AREA DISPERSION	MONTHLY	MONTHLY	REMOVE DEBRIS & OBSTRUCTIONS FROM IMPERVIOUS AREA AS-NEEDED TO ALLOW SITE TO DISPERSE RUNOFF AS DESIGNED	--	C-1.2 - 1.3

STORM WATER NOTE:
1. THIS PROJECT IS SUBJECT TO MUNICIPAL CODE SECTION 4303 AND ORDER NO. R9-2013-0001 AS AMENDED BY R9-2015-0001 AND R9-2015-0100



SITE DESIGN BMP CHECKLIST FOR STANDARD PROJECTS		FORM I-5A	
ALL DEVELOPMENT PROJECTS MUST IMPLEMENT SITE DESIGN BMP'S SD-1 THROUGH SD-8. REFER TO CHAPTER 4 AND APPENDIX E OF THE BMP DESIGN MANUAL FOR INFORMATION TO IMPLEMENT BMP'S SHOWN IN THIS CHECKLIST. NOTE: ALL SELECTED BMP'S MUST BE SHOWN ON THE CONSTRUCTION PLANS.			
SITE DESIGN REQUIREMENT		APPLIED(1)?	
4.3.1 MAINTAIN NATURAL DRAINAGE PATHWAYS AND HYDROLOGIC FEATURES	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
4.3.2 CONSERVE NATURAL AREAS, SOILS, AND VEGETATION	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> N/A
4.3.3 MINIMIZE IMPERVIOUS AREA	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> N/A
4.3.4 MINIMIZE SOIL COMPACTION	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> N/A
4.3.5 IMPERVIOUS AREA DISPERSION	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO <input type="checkbox"/> N/A
4.3.6 RUNOFF COLLECTION	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
4.3.7 LANDSCAPING WITH NATIVE OR DROUGHT TOLERANT SPECIES	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A
4.3.8 HARVESTING AND USING PRECIPITATION	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
DISCUSSION/JUSTIFICATION FOR ALL "NO" ANSWER SHOWN ABOVE:			
4.3.7: PROPOSED LANDSCAPE CONSISTS OF REPLACED TURF AND FIVE NEW TREES(SPECIES TO BE DETERMINED)			
(1) ANSWER FOR EACH SOURCE CONTROL AND SITE DESIGN CATEGORY SHALL BE PURSUANT TO THE FOLLOWING: "YES" MEANS THE PROJECT WILL IMPLEMENT THE BMP AS DESCRIBED IN CHAPTER 4 AND/OR APPENDIX E OF THE BMP DESIGN MANUAL. DISCUSSION / JUSTIFICATION IS NOT REQUIRED. "NO" MEANS THE BMP IS APPLICABLE TO THE PROJECT BUT IT IS NOT FEASIBLE TO IMPLEMENT. DISCUSSION / JUSTIFICATION MUST BE PROVIDED. "N/A" MEANS THE BMP IS NOT APPLICABLE AT THE PROJECT SITE BECAUSE THE PROJECT DOES NOT INCLUDE THE FEATURE THAT IS ADDRESSED BY THE BMP (E.G., THE PROJECT HAS NO OUTDOOR MATERIALS STORAGE AREAS). DISCUSSION / JUSTIFICATION MAY BE PROVIDED.			

STORM CALCULATIONS:
 RUNOFF FACTOR (RESILIENT SURFACING) = C = 0.1
 RUNOFF FACTOR (RESTROOM) = C = 0.9
 100-YR 24HR PRECIPITATION = 3.9 IN
 85TH PERCENTILE PRECIPITATION = 0.54 IN

RESTROOM BUILDING STORM WATER CALCULATIONS:
 ROOF(C= 0.9) = 1,180 SF

PLAY AREA RESILIENT SURFACING STORM WATER CALCULATIONS:
 RESILIENT SURFACING (C=0.1) = 11,282 SF

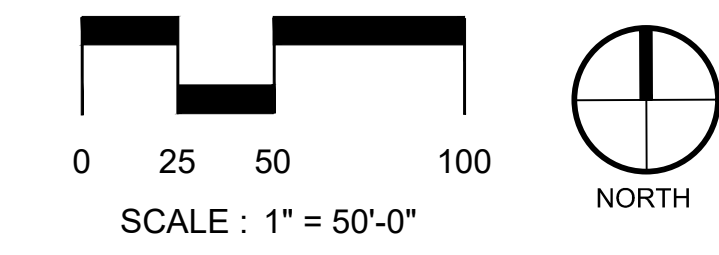
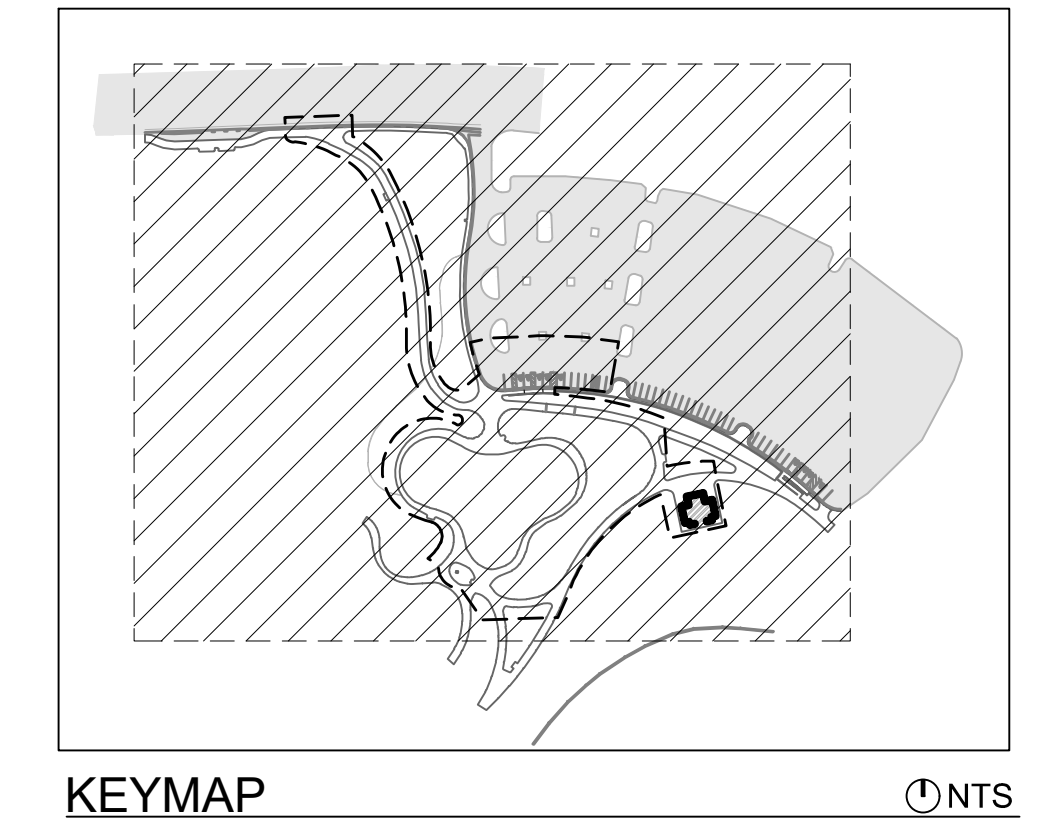
DESIGN CAPTURE VOLUME = 50 CF
 100YR 24HR STORM VOLUME = 350 CF

PLAYAREA STORAGE VOLUME:
 TOT LOT (4.5" CRUSHED ROCK @ 40% VOID) = 975 CF
 PROVIDED STORM WATER STORAGE = 975 CF
 INFILTRATION RATE = 1.98 IN/HR

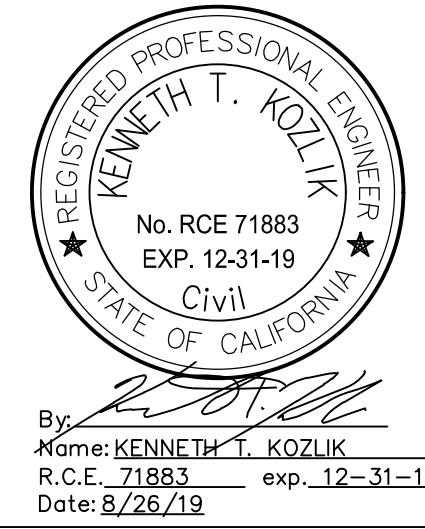
RESTROOM STORAGE VOLUME CALCULATIONS:
 PIPE BEDDING(20IN X 18IN CRUSHED ROCK @ 40% VOID) = 50 CF
 LEACH TRENCH LENGTH = 51 FT
 PROVIDED STORM WATER STORAGE = 50 CF

AREA TABLE:

ADA ACCESSIBLE CONCRETE WALKWAY	25,200 SF
RESTROOM ROOF	1,176 SF
PLAYAREA (SAND)	5,458 SF
PLAYAREA (PLANTER)	1,105 SF
PLAYAREA (RESILIENT)	11,282 SF
PLAYAREA STORAGE (RESILIENT)	6,500 SF
PLAYAREA (CONCRETE)	2,160 SF
LANDSCAPE AREA	10,400 SF



C-1.5
PLANS FOR THE CONSTRUCTION OF BONITA COVE WEST PLAYGROUND AND COMFORT STATION IMPROVEMENTS
BMP MAP FOR STANDARD DEVELOPMENT PROJECTS



CONSULTANT

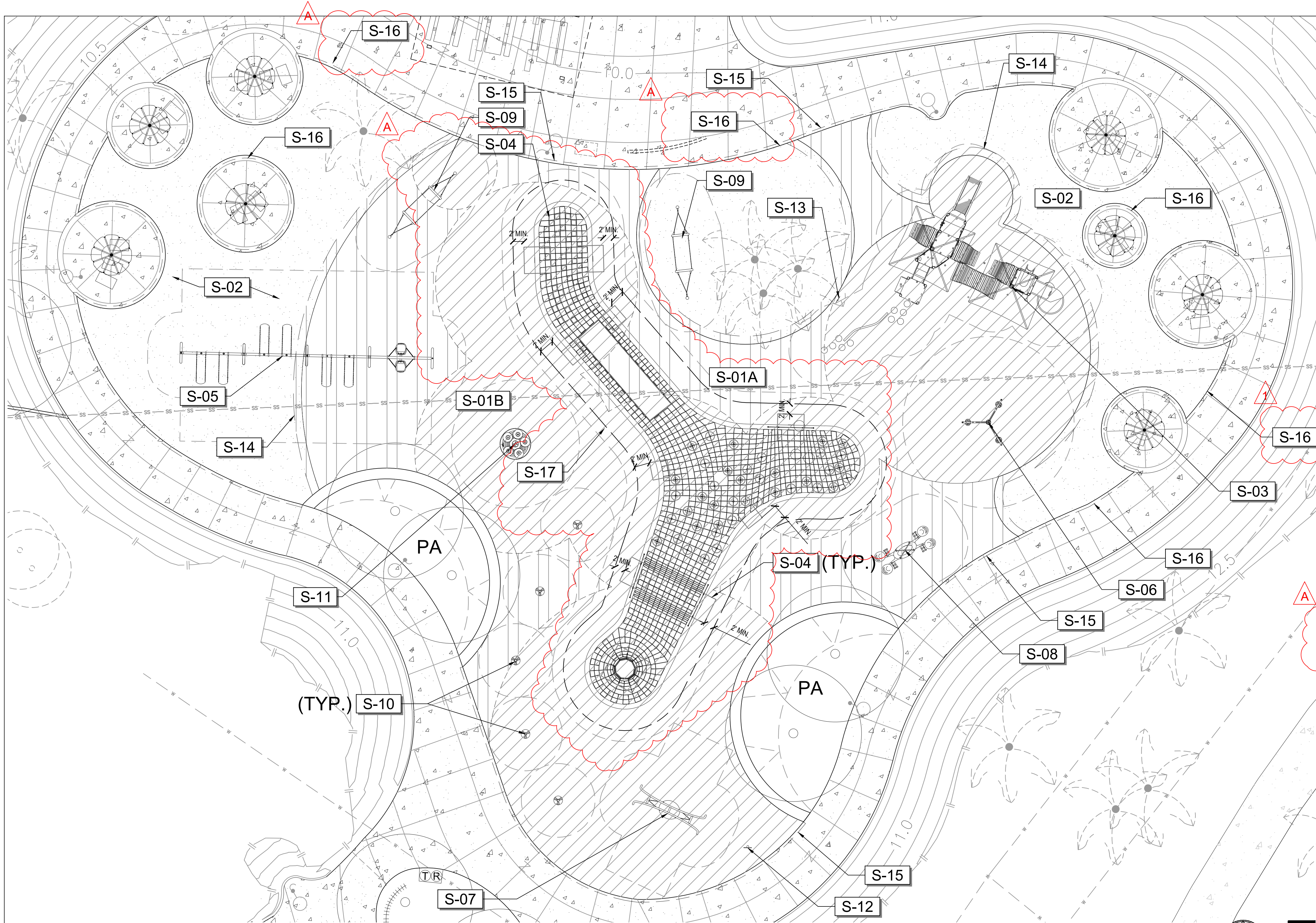
FUSCOE ENGINEERING
 6390 Greenwich Dr., Suite 170, San Diego, California 92122
 Tel 858.554.1500 • Fax 858.597.0335 • www.fuscoe.com

SCHMIDT DESIGN GROUP
 1310 Rosecrans St., Suite G, San Diego, CA 92106
 619.236.1462
 Lic. CA 2138 | NV 219 | AZ 34139
 SCHMIDTDESIGN.COM



CITY OF SAN DIEGO, CALIFORNIA PUBLIC WORKS DEPARTMENT SHEET 11 OF 39 SHEETS		WBS B18229 WBS B18230
APPROVED: <i>Samir Mahmalji</i> FOR CITY ENGINEER SAMIR MAHMALJI PRINT NAME	DATE 08/14/2019 DATE 8/28/19 RCE# C73711	SUBMITTED BY: KEVIN NGUYEN PROJECT MANAGER CHECKED BY: EFRAN VELELA-MAYO PROJECT ENGINEER
DESCRIPTION	BY	APPROVED
ADDENDUM A	FEI	<i>Samir Mahmalji</i>
		DATE 8.28.19
		FILMED
DATE STARTED		220-1692
DATE COMPLETED		LAMBERT COORDINATES
		41452-11-D

BONITA COVE WEST 100% IMPROVEMENTS



PLAY AREA LEGEND		
SYMBOL	DESCRIPTION	DETAIL
	S-01A TOT TURFSUPREME POURED-IN-PLACE SURFACING, OR APPROVED EQUAL, OVER 5" THICK PERMEABLE CONCRETE SUB-BASE. COLOR: BEIGE. INSTALL WITH ALIPHATIC BINDER.	1,2/LC-2.2
	S-01B TOT TURFSUPREME POURED-IN-PLACE SURFACING, OR APPROVED EQUAL, OVER 5" THICK PERMEABLE CONCRETE SUB-BASE. COLOR: CREAM. INSTALL WITH ALIPHATIC BINDER.	1,2/LC-2.2
	S-02 SILICA #20 PLAY SAND AVAILABLE THROUGH CARMEUSE INDUSTRIAL SAND, INC. OR APPROVED EQUAL. PHONE: (949) 728-0171.	-
	S-03 2-5 YEARS PLAY BOOSTER. CUSTOM MODEL WITH (2) COOLTOPPER SHADE SAILS. AVAILABLE THROUGH LSI OR APPROVED EQUAL.	4,5/LC-2.2
	S-04 5-12 YEARS COROCORD LOOPS PLAY STRUCTURE. AVAILABLE THROUGH KOMPAN OR APPROVED EQUAL.	1/LC-2.4
	S-05 4 BAY SWING WITH FRIENDSHIP SWING, AVAILABLE THROUGH LSI OR APPROVED EQUAL.	4,5/LC-2.2
	S-06 CAROUSEL BUCKET SWING, AVAILABLE THROUGH KOMPAN OR APPROVED EQUAL.	4,5/LC-2.2
	S-07 OODLE SWING. AVAILABLE THROUGH LANDSCAPE STRUCTURES OR APPROVED EQUAL.	4,5/LC-2.2
	S-08 WEE-SAW MODEL: 186490. AVAILABLE THROUGH LSI OR APPROVED EQUAL.	4,5/LC-2.2
	S-09 HAMMOCK BY KOMPAN OR APPROVED EQUAL.	4,5/LC-2.2
	S-10 CURVA SPINNER, AVAILABLE THROUGH LSI OR APPROVED EQUAL. (TYPICAL OF 5).	4,5/LC-2.2
	S-11 MULTI-SPINNER, AVAILABLE THROUGH KOMPAN OR APPROVED EQUAL.	4,5/LC-2.2
	S-12 PLAY SIGNAGE BY LSI (5-12 YEARS).	4,5/LC-2.2
	S-13 PLAY SIGNAGE BY LSI (2-5 YEARS).	4,5/LC-2.2
	S-14 RESILIENT SURFACING TURNDOWN, TYP.	2/LC-2.2
	S-15 THICKENED EDGE AT RESILIENT SURFACING	3/LC-2.2
	S-16 THICKENED EDGE AT PLAY SAND	1/LC-2.2
	S-17 CONTRACTOR TO OVER EXCAVATE TO A DEPTH OF 54" MIN. FROM PROPOSED FINISH GRADE AND RECOMPACT TO 90% COMPACTION (MIN 24" BELOW PROPOSED FOOTING) PER GEOTECH REPORT	6/LC-2.2 1/LC-2.4

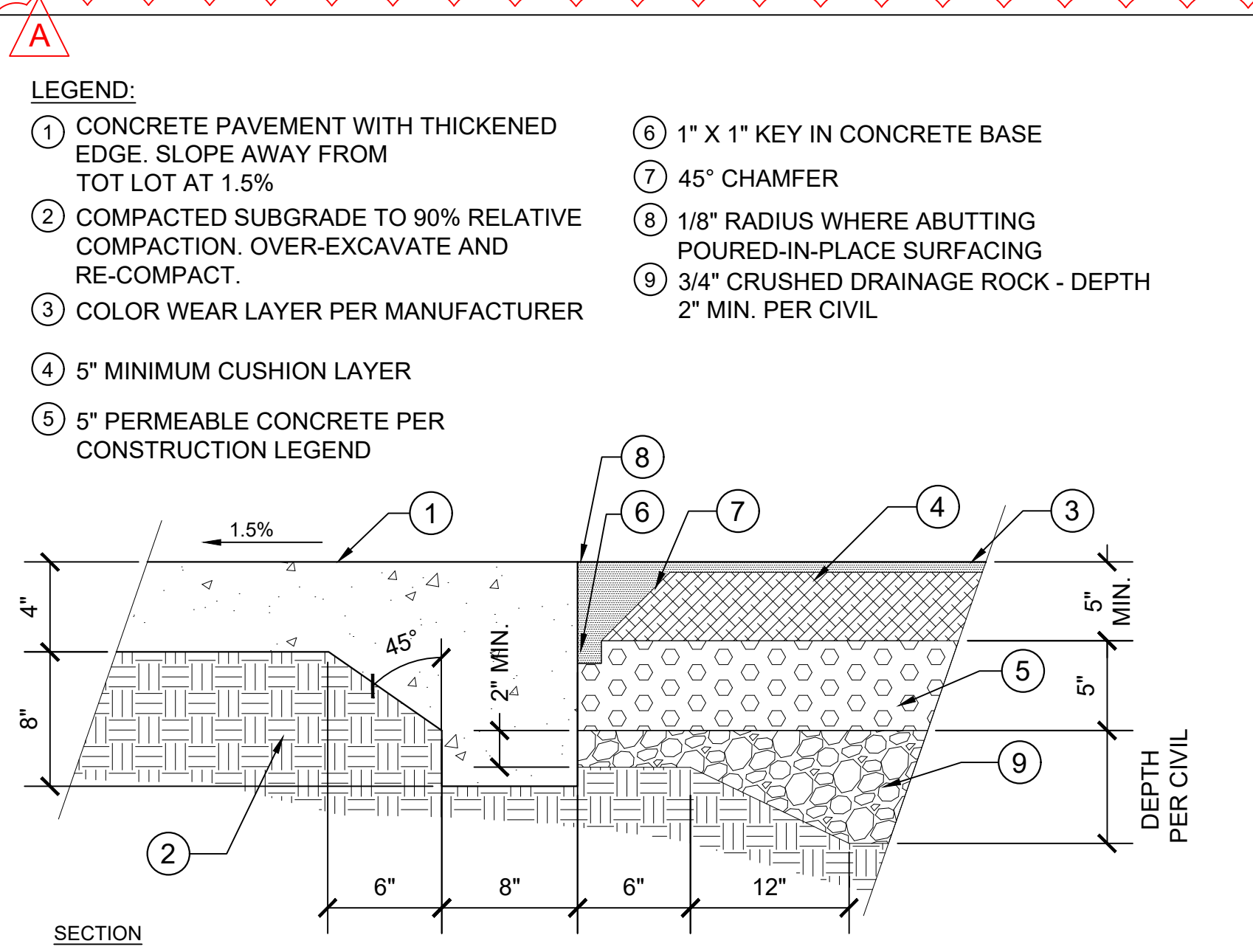
A

LC-1.3

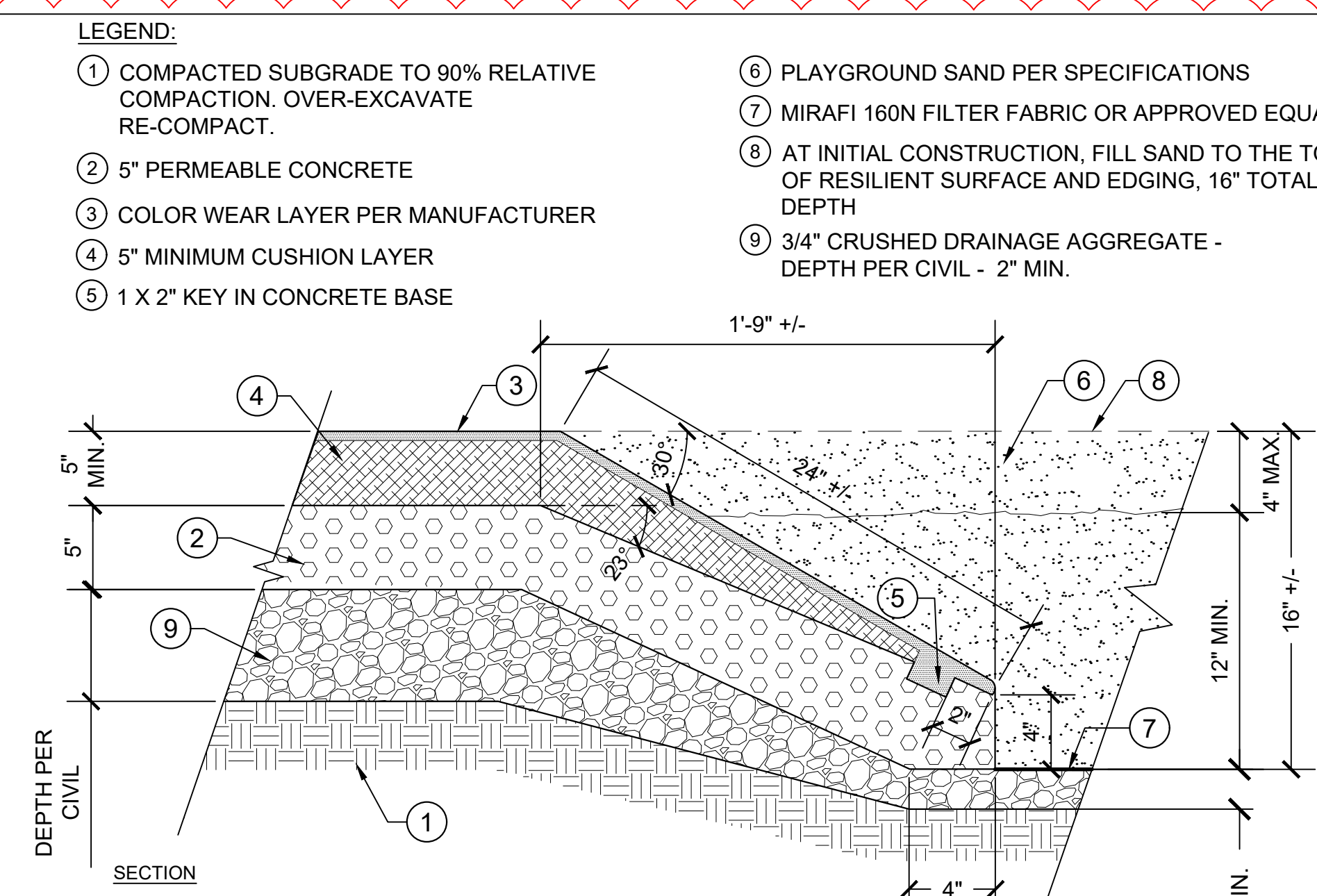
PLANS FOR THE CONSTRUCTION OF
 BONITA COVE WEST PLAYGROUND AND
 COMFORT STATION IMPROVEMENTS
 PLAYGROUND ENLARGEMENT LEGEND AND NOTES

CONSULTANT SCHMIDT DESIGN GROUP 1310 Roscomans St., Suite G, San Diego, CA 92106 619.236.1462 LIC. CA 2138 NV 219 AZ 34139 SCHMIDTDESIGN.COM		CITY OF SAN DIEGO, CALIFORNIA PUBLIC WORKS DEPARTMENT SHEET 15 OF 39 SHEETS		WBS B18229 WBS B18230
APPROVED: FOR CITY ENGINEER DATE 08/14/2019 SAMIR MAHMALJI PRINT NAME RCE# C73711		SUBMITTED BY: KEVIN NGUYEN PROJECT MANAGER		CHECKED BY: EFRANI VELELA-MAYO PROJECT ENGINEER
ORIGINAL ADDENDUM A	BY: SDG SDG	APPROVED: DATE: 08/14/2019 DATE: 08.28.19	FILMED	220-1692 LAMBERT COORDINATES 41452-15-D
PROJECT #: 18-409 DN BY: PR, JD, CC CK BY: JM, JJ PLT DATE: 08.22.2019		CONTRACTOR INSPECTOR		DATE STARTED DATE COMPLETED

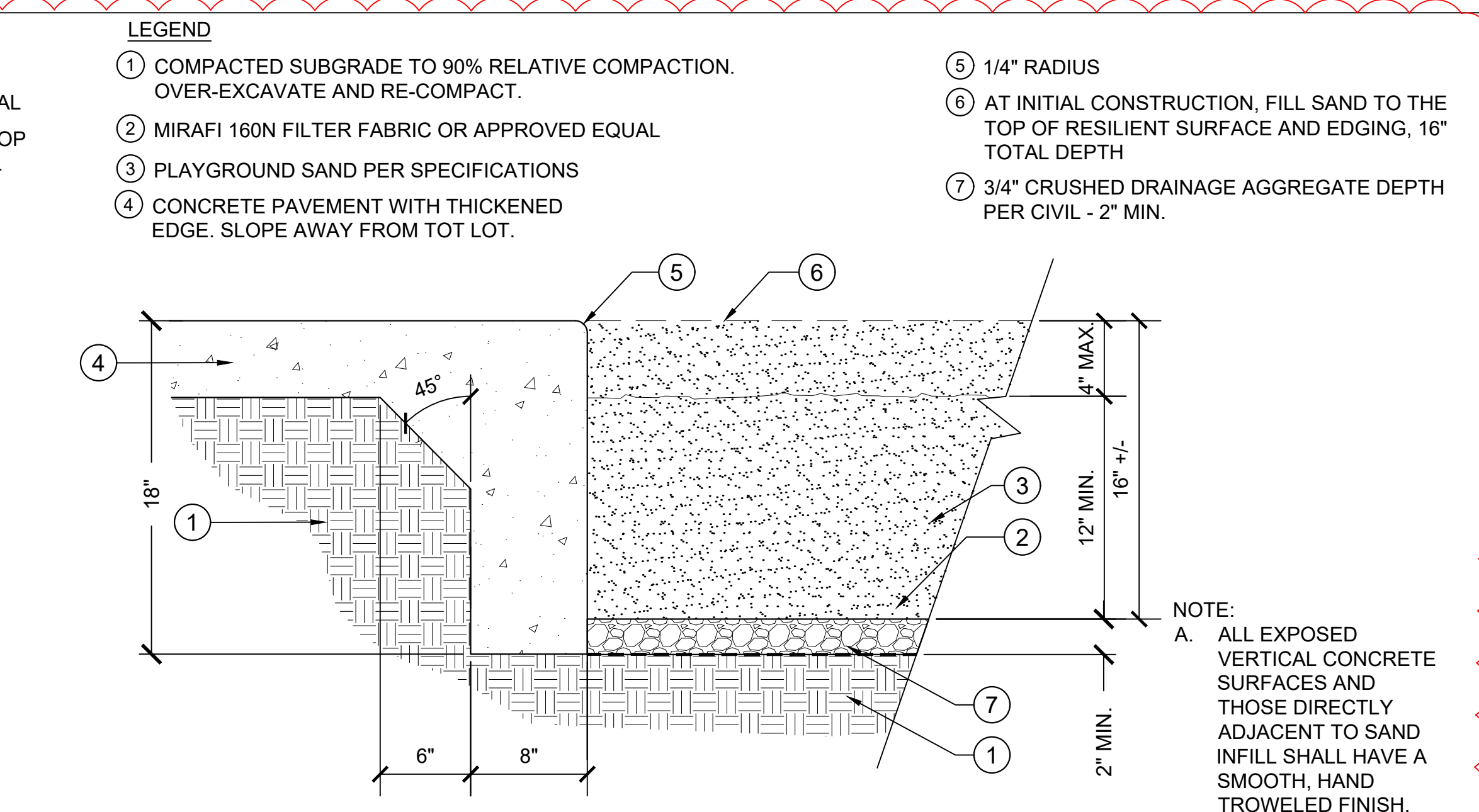
BONITA COVE WEST IMPROVEMENTS



1 TOT-LOT SAFETY SURFACING
NO SCALE BASED ON CONSULTANT'S GUIDE TO PARK DESIGN AND DEVELOPMENT - CITY OF SAN DIEGO, DETAIL D-1.

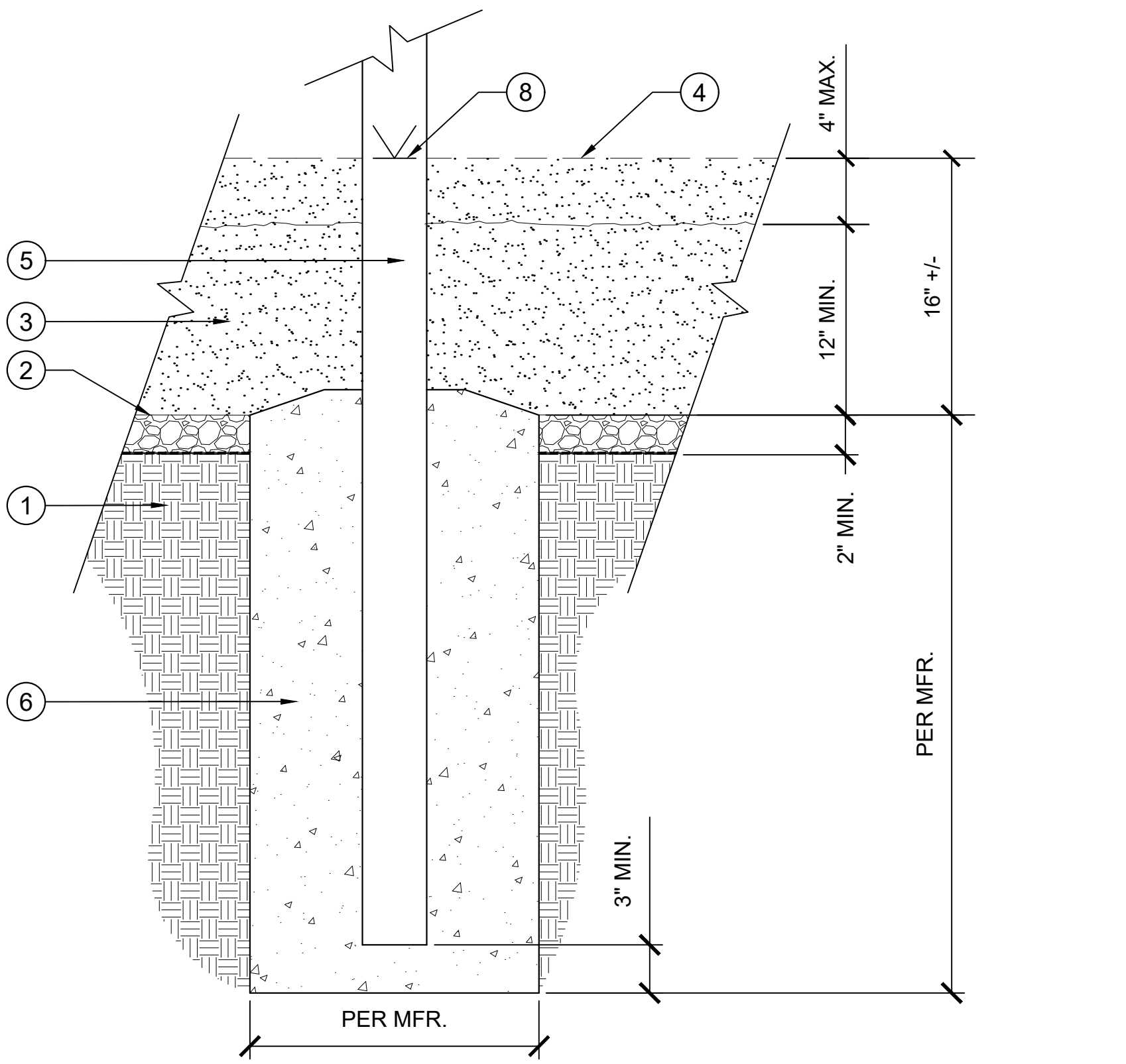


2 TOT-LOT SAFETY SURFACING TURNDOWN
NO SCALE BASED ON CONSULTANT'S GUIDE TO PARK DESIGN AND DEVELOPMENT - CITY OF SAN DIEGO, DETAIL D-2.

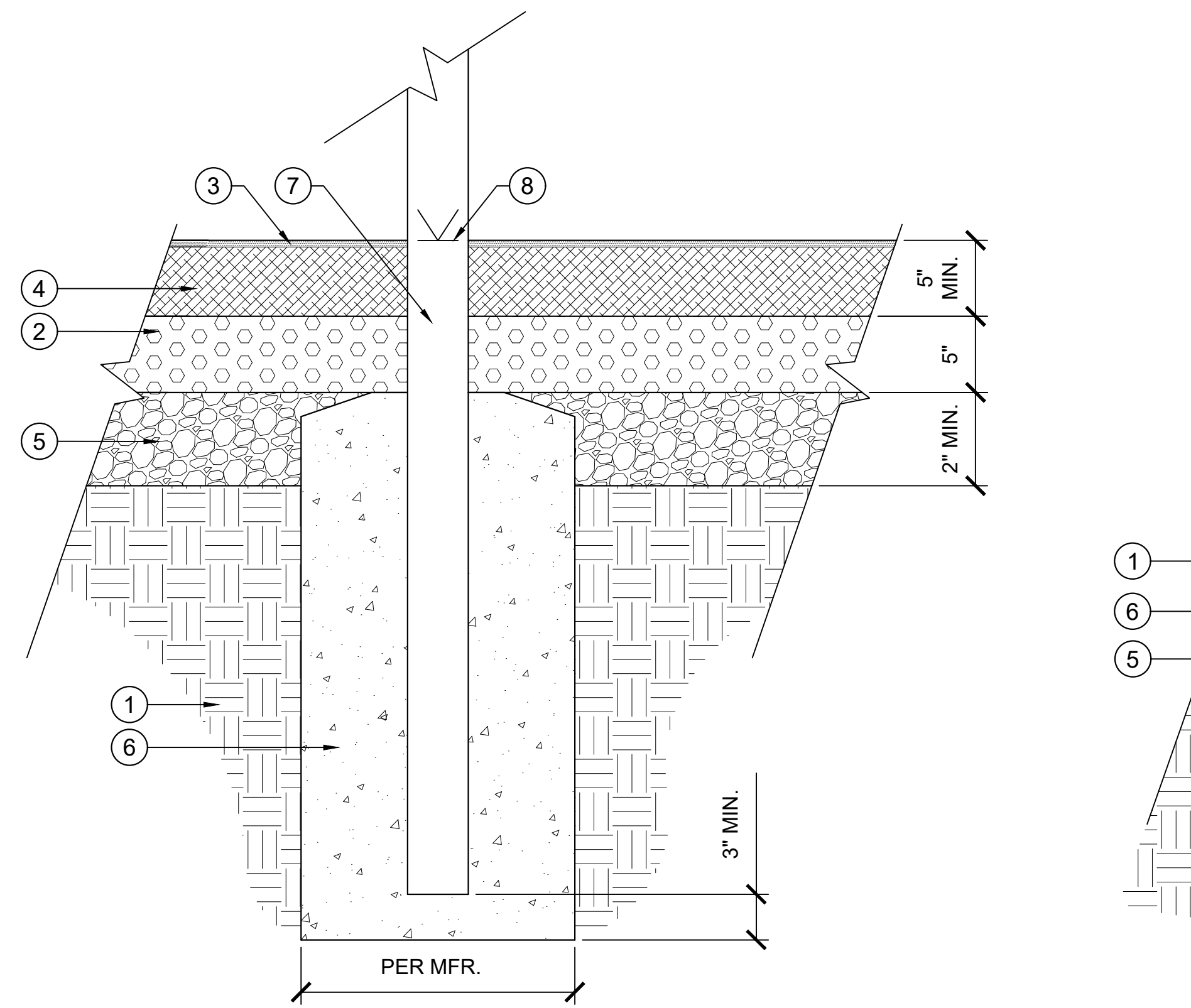


3 THICKENED CONCRETE EDGE AT PLAY SAND
NO SCALE

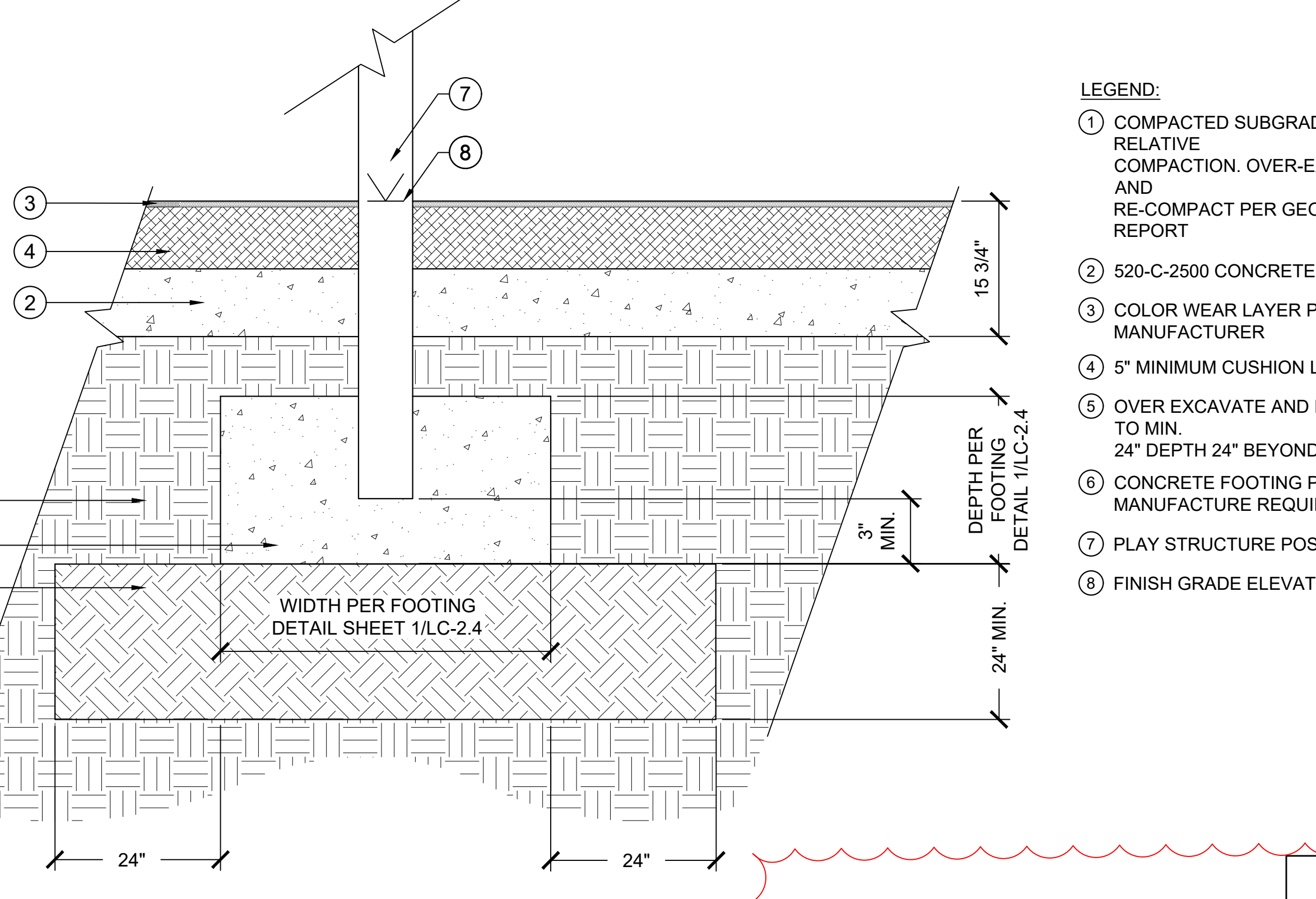
NOTE:
A. ALL EXPOSED VERTICAL CONCRETE SURFACES AND THOSE DIRECTLY ADJACENT TO SAND INFILL SHALL HAVE A SMOOTH, HAND TROWELED FINISH. POST CURE GRINDING WILL NOT BE ACCEPTED.



4 PLAY STRUCTURE FOOTING AT PLAY SAND
NO SCALE



5 PLAY STRUCTURE FOOTING AT SAFETY SURFACING
NO SCALE



6 ANEMONE PLAY STRUCTURE - TYPICAL FOOTING
NO SCALE

LEGEND:
1 COMPACTED SUBGRADE TO 90% RELATIVE COMPACTION. OVER-EXCAVATE AND RE-COMPACT PER GEOTECH REPORT
2 520-C-2500 CONCRETE
3 COLOR WEAR LAYER PER MANUFACTURER
4 5" MINIMUM CUSHION LAYER
5 OVER EXCAVATE AND RECOMPACT TO MIN. 24" DEPTH 24" BEYOND FOOTING
6 CONCRETE FOOTING PER PLAY MANUFACTURE REQUIREMENTS
7 PLAY STRUCTURE POST
8 FINISH GRADE ELEVATION

LC-2.2

PLANS FOR THE CONSTRUCTION OF BONITA COVE WEST PLAYGROUND AND COMFORT STATION IMPROVEMENTS
LANDSCAPE CONSTRUCTION DETAILS

CITY OF SAN DIEGO, CALIFORNIA PUBLIC WORKS DEPARTMENT SHEET 18 OF 39 SHEETS		WBS B18229 WBS B18230
APPROVED: <i>Samir M.</i> FOR CITY ENGINEER SAMIR MAHMALJI PRINT NAME	DATE 08/14/2019 C73711 RCE#	SUBMITTED BY: KEVIN NGUYEN PROJECT MANAGER
DESCRIPTION	BY	APPROVED
ORIGINAL	SDG	<i>Samir M.</i>
DATE 08/14/2019		
ADDENDUM A	SDG	<i>Samir M.</i>
DATE 08.28.19		
220-1692 LAMBERT COORDINATES		41452-18-D

CONSULTANT

SCHMIDT DESIGN GROUP

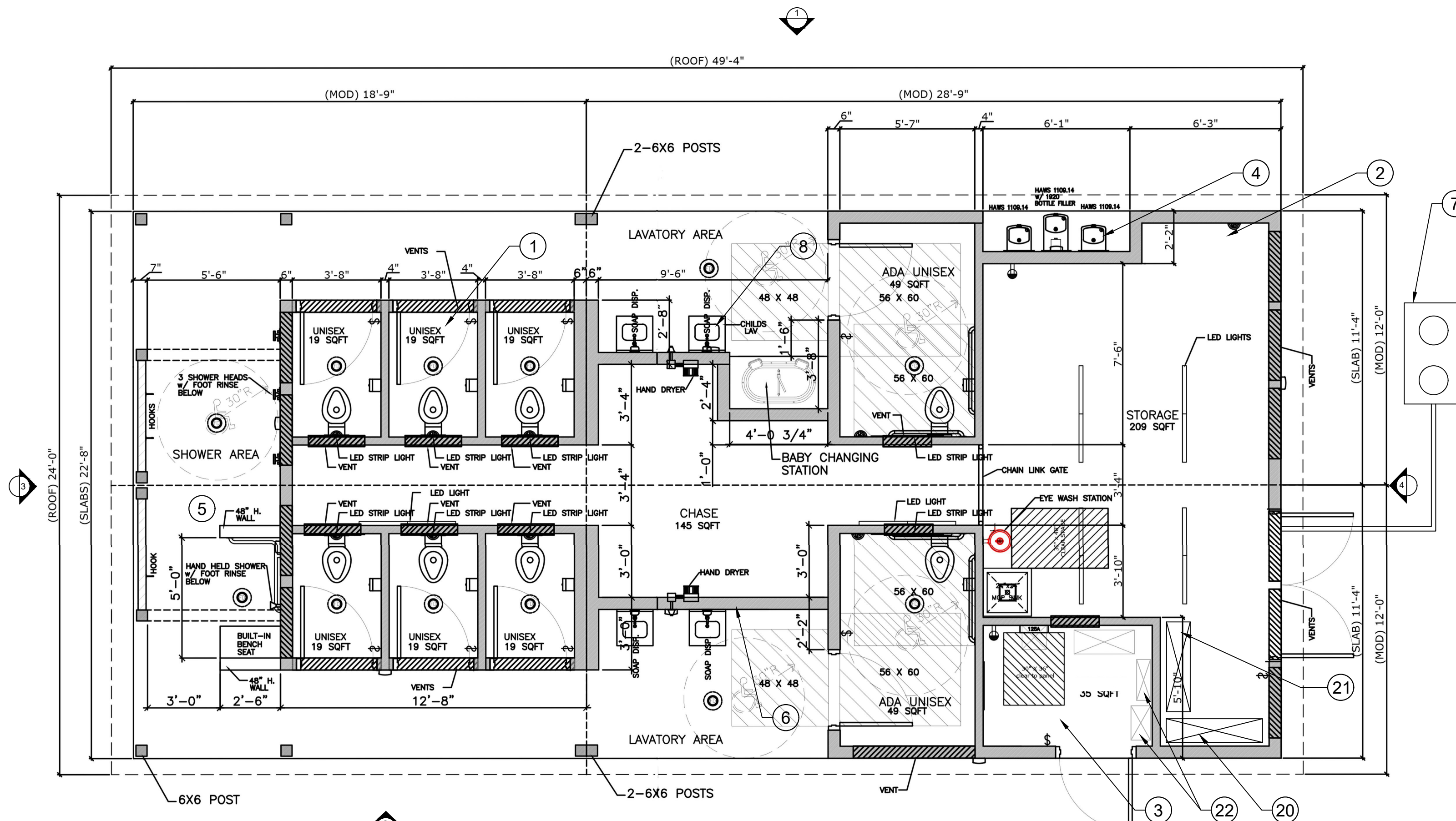
1310 Roscomans St., Suite G, San Diego, CA 92106
619.236.1462
LIC. CA 2138 | NV 219 | AZ 34139
SCHMIDTDESIGN.COM

REGISTERED LANDSCAPE ARCHITECT
STATE OF CALIFORNIA
T. BARRON

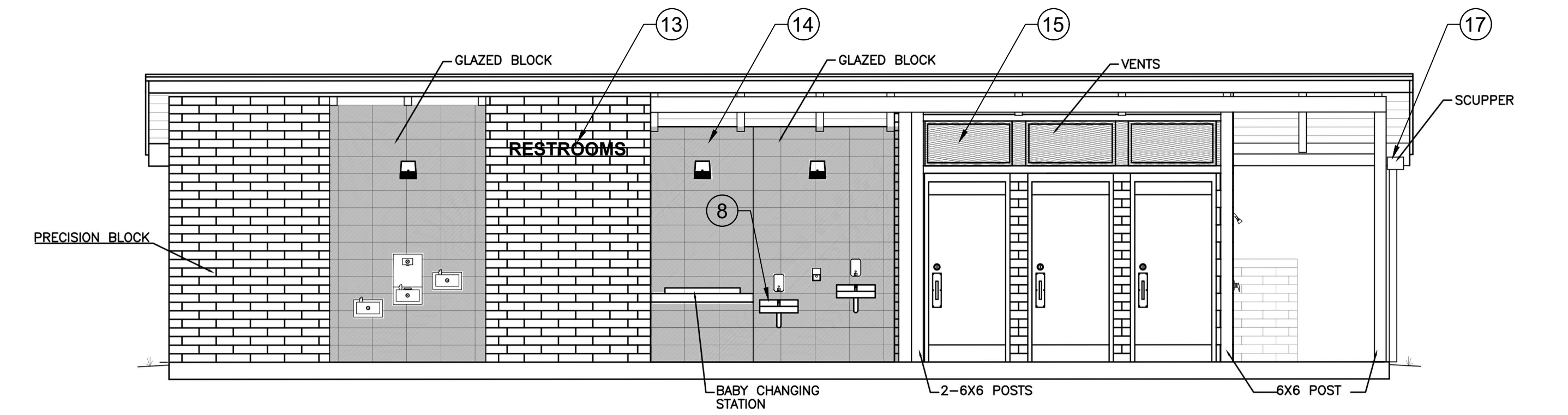
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA
SAMIR MAHMALJI
C73711

PROJECT #: 18-409 DN BY: PR, JD, CC CK BY: JM, JJ
PLT DATE: 08.22.2019
CONTRACTOR INSPECTOR

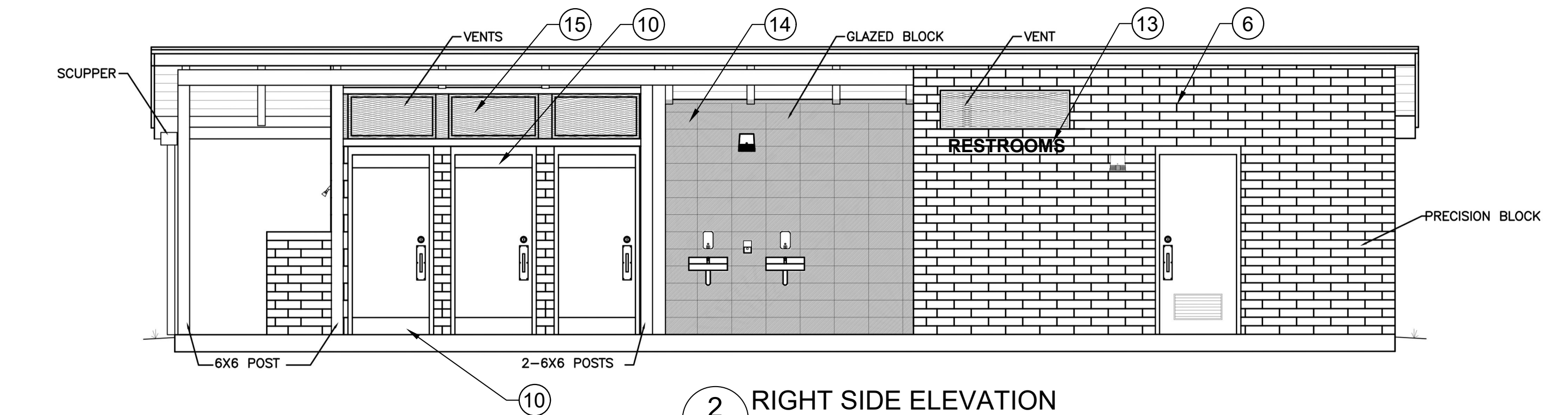
DATE STARTED
DATE COMPLETED



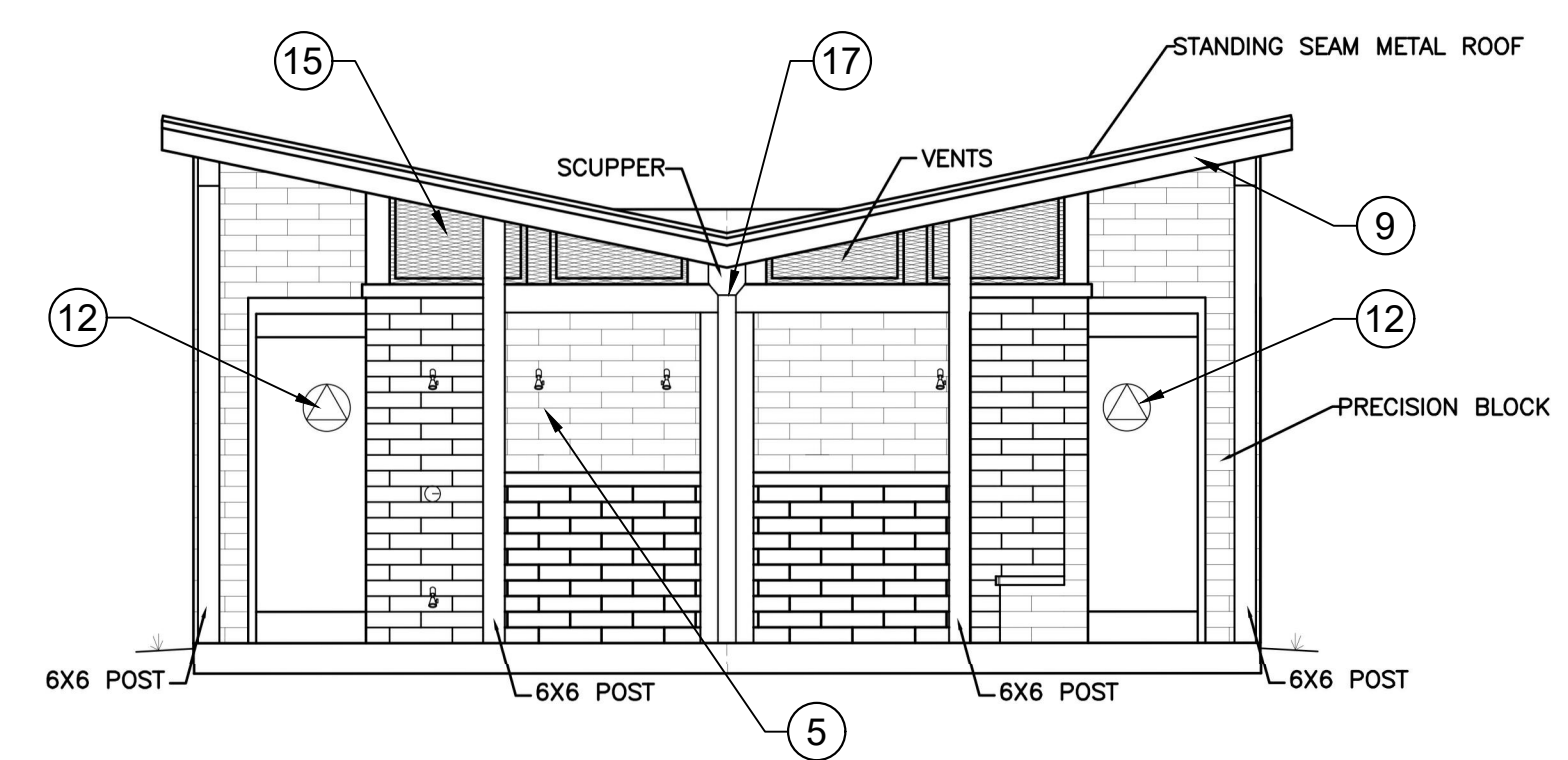
FLOOR PLAN 722 SQ FT



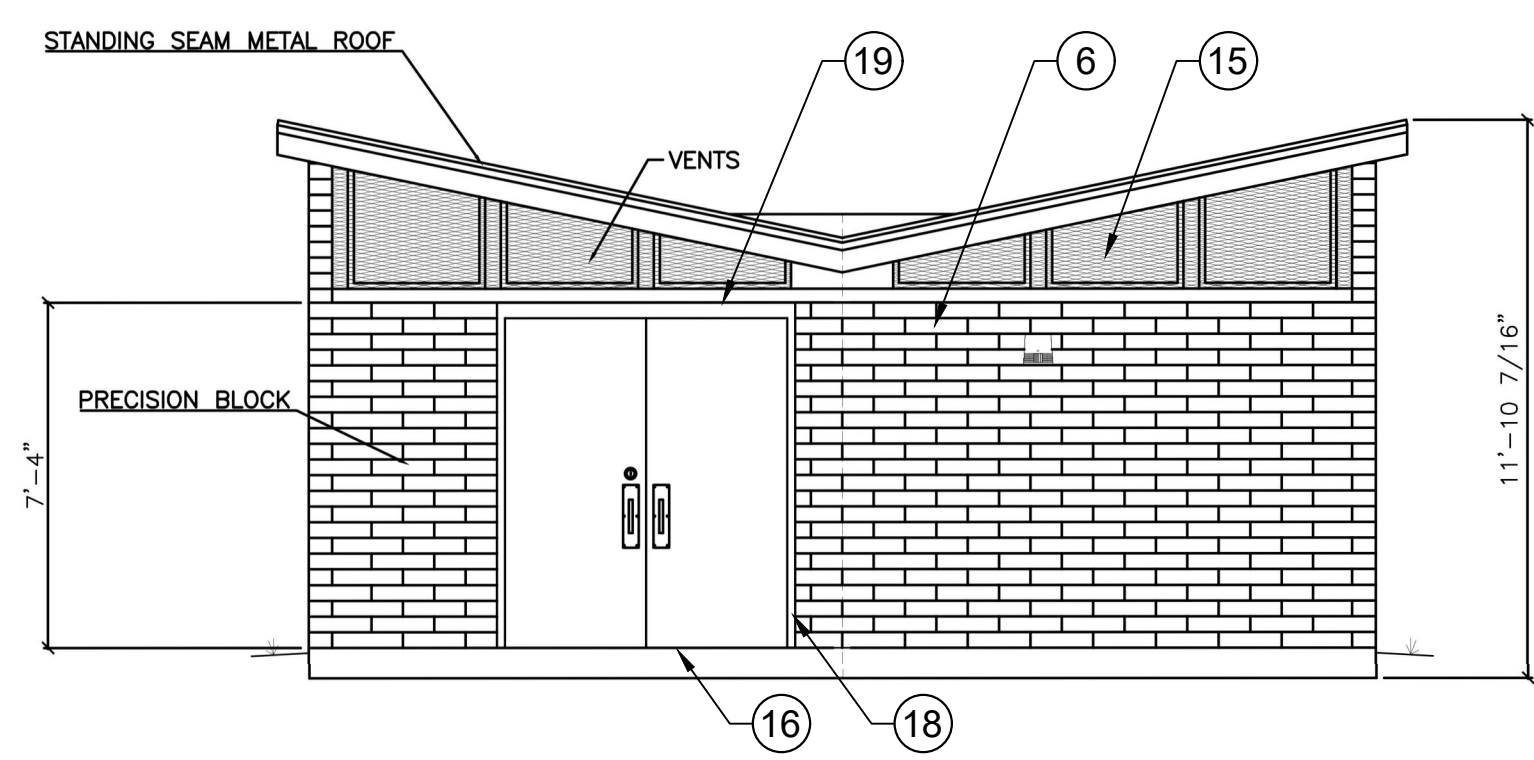
1 LEFT SIDE ELEVATION



2 RIGHT SIDE ELEVATION



3 SOUTH SIDE ELEVATION



4 LEFT SIDE ELEVATION

LEGEND:

- 1 RESTROOMS - 6 UNISEX, 2 ADA
- 2 STORAGE ROOM
- 3 ELECTRICAL ROOM
- 4 DRINKING FOUNTAIN WITH BOTTLE FILLER. MODEL: HAWS 1109.14. (3 TOTAL) ONE WITH 1920 BOTTLE FILLER.
- 5 OUTDOOR SHOWERS
- 6 PRECISION BLOCK 4" X 16" SIZE
- 7 SAND TRAP PER CIVIL AND CONSTRUCTION LEGEND. CONNECT ALL EXTERIOR FLOOR DRAINS TO SAND TRAP.
- 8 KID'S HEIGHT SINK
- 9 TONGUE AND GROOVE BOARDS UNDER METAL ROOF TO MATCH SHADE STRUCTURE
- 10 RESTROOM DOORS WITH 12" OPENINGS AT TOP AND BOTTOM OF DOOR
- 11 SIGNAGE - LASER CUT STAINLESS STEEL LETTERS, 12" HEIGHT. SUBMIT SHOP DRAWINGS. WELDED TO PERFORATED METAL.
- 12 ISA SIGNAGE 12" SQUARE AT ADA RESTROOMS
- 13 RESTROOM SIGNAGE 8" HEIGHT LETTERING DESIGN TO BE DETERMINED BY LANDSCAPE ARCHITECT
- 14 GLAZED BLOCK 8" X 16" SIZE. COLOR: PACIFIC BLUE AND SPECIAL WHITE BY SPECTRA-GLAZE
- 15 STAINLESS STEEL PERFORATED METAL
- 16 UTILITY ROOM DOOR WITH DOOR SWEEP
- 17 GALVANIZED STEEL SCUPPER, PAINTED. COLOR: TBD
- 18 GALVANIZED STEEL DOOR FRAME, PAINTED. COLOR: TBD
- 19 DRIP EDGE ABOVE DOOR, TYPICAL.
- 20 KNOCK OUT FOR IRRIGATION CONTROLLERS
- 21 CABINET FOR ANTENNA WITH KNOCK OUT
- 21 KNOCKOUTS FOR ELECTRICAL CONDUITS FOR METER, PANEL & TRANSFORMER

1 PREFABRICATED COMFORT STATION (BY SEPARATE PERMIT)

- NOTES:
- PREFABRICATED COMFORT STATION BY SEPARATE PERMIT. GENERAL CONTRACTOR TO SUBMIT FULL PACKAGE TO DSD AND ADA COMPLIANCE OFFICE FOR REVIEW AND APPROVAL. SEE ALSO PERMITTING NOTES SHEET LC-2.4.
 - PREFABRICATED COMFORT STATION SHALL INCLUDE STATE COACH PERMIT APPROVAL.
 - GENERAL CONTRACTOR TO INSTALL WATER ISOLATION VALVES FOR ALL FIXTURES, TOILETS, SINKS, SHOWERS, FOUNTAINS, EYE WASH, ETC. FULL DIMENSION SEWER CLEAN OUTS TO BE INSTALLED AT ALL FIXTURES.
 - GENERAL CONTRACTOR TO COORDINATE WITH COMFORT STATION MANUFACTURER FOR INSTALLATION OF ELECTRICAL AND IRRIGATION EQUIPMENT TO BE PROVIDED BY GENERAL CONTRACTOR. ALL UTILITY KNOCK-OUTS REQUIRED FOR IRRIGATION CONDUITS AND ELECTRICAL CONDUITS ASSOCIATED WITH PARK CONSTRUCTION TO BE COORDINATED WITH MANUFACTURER PRIOR TO INSTALLATION. SEE ELECTRICAL AND IRRIGATION PLANS FOR ADDITIONAL INFORMATION.

FOR REFERENCE ONLY-
COMFORT STATION BY SEPARATE PERMIT
CONTRACTOR TO SUBMIT FULL PACKAGE TO
DSD AND ADA COMPLIANCE OFFICE FOR
REVIEW AND APPROVAL

CONSULTANT

SCHMIDT DESIGN GROUP

1310 Roscomans St., Suite G, San Diego, CA 92106
619.236.1462
LIC. CA 2138 | NV 219 | AZ 34139
SCHMIDTDESIGN.COM

APPROVED: *Samir M.* 08/14/2019
FOR CITY ENGINEER
DATE: 08/14/2019
PRINT NAME: SAMIR MAHMALJI
RCE# C73711

DESCRIPTION BY APPROVED DATE FILMED
ORIGINAL SDG Samir M. 08/14/2019
ADDENDUM A SDG Samir M. 08/28/2019

REGISTERED LANDSCAPE ARCHITECT
STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER
CIVIL
STATE OF CALIFORNIA

PROJECT #: 18-409 DN BY: PR, JD, CC CK BY: JM, JJ PLT DATE: 08.22.2019 CONTRACTOR INSPECTOR

LC-2.5

**PLANS FOR THE CONSTRUCTION OF
BONITA COVE WEST PLAYGROUND AND
COMFORT STATION IMPROVEMENTS**

SCHEMATIC COMFORT STATION PLAN AND NOTES

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 21 OF 39 SHEETS

WBS B18229
WBS B18230

APPROVED: *Samir M.* 08/14/2019
FOR CITY ENGINEER
DATE: 08/14/2019
PRINT NAME: SAMIR MAHMALJI
RCE# C73711

SUBMITTED BY: KEVIN NGUYEN
PROJECT MANAGER
CHECKED BY: EFRAN VELELA-MAYO
PROJECT ENGINEER

220-1692
LAMBERT COORDINATES
41452-21-D

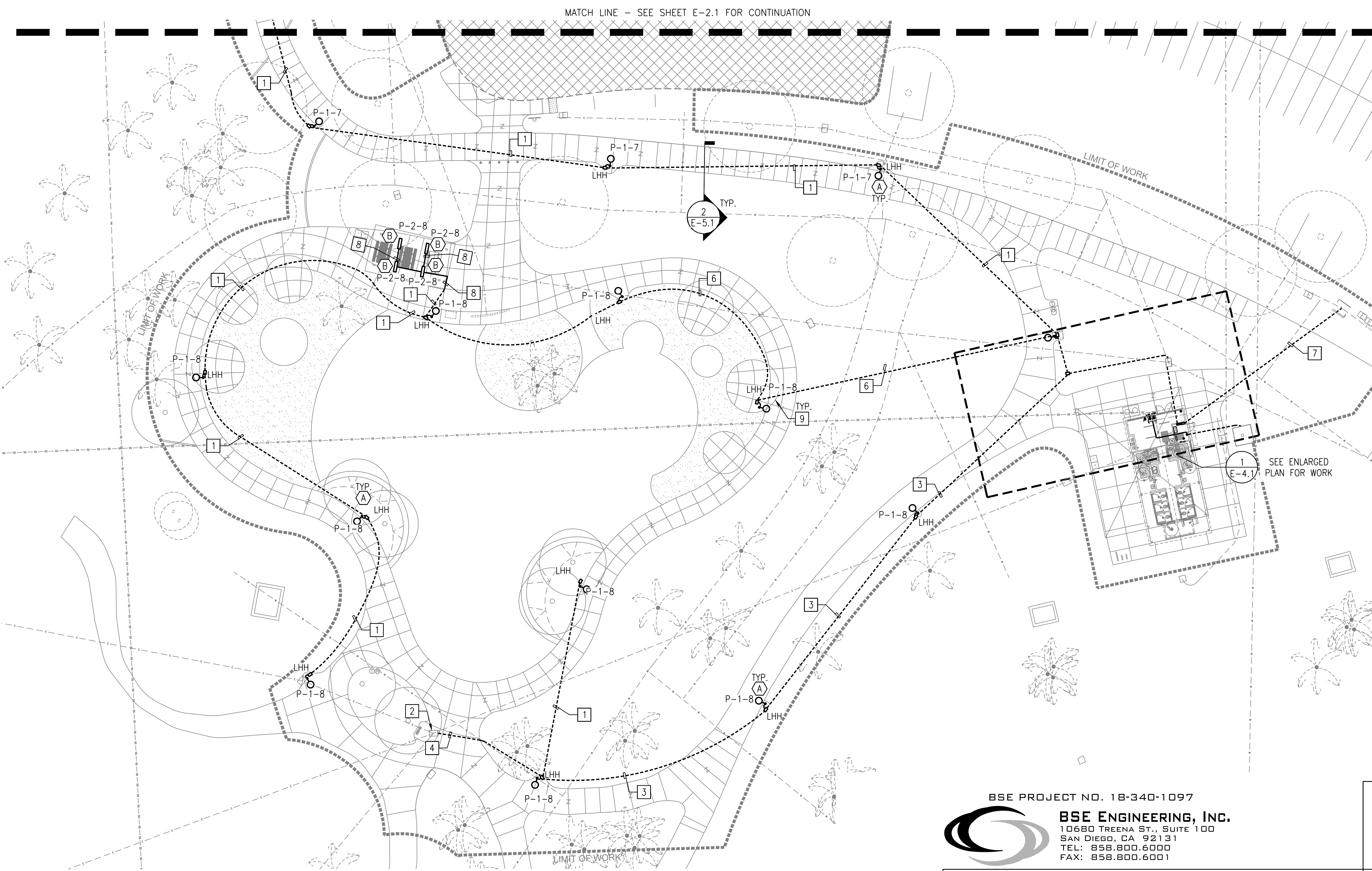
DATE STARTED
DATE COMPLETED

GENERAL NOTES

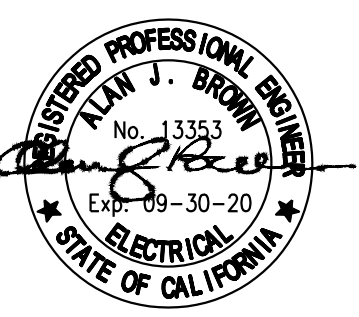
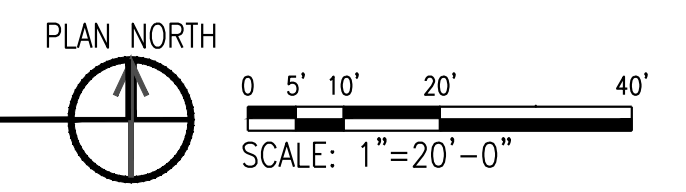
1. CONTRACTOR TO MAINTAIN A MINIMUM OF 5' CLEARANCE BETWEEN THE BASE OF THE TREE AND CONDUITS.
2. REFER TO LUMINAIRE SCHEDULE, 5/E-6.2, FOR SELECTION OF LUMINAIRES.
3. AFTER NEW WORK IS COMPLETED, REMOVE TEMPORARY INSTALLATION PER 2/E-1.1. REFER TO TEMPORARY INSTALLATION SEQUENCE ON E-0.1.

KEY NOTES

- 1 TRENCH AND PROVIDE 2#10, #10G, 2"C.
- 2 SPLICE TO EXISTING LIGHTING CIRCUITS IN EXISTING LHH.
- 3 TRENCH AND PROVIDE 2"C. (4#6, 2#10, #6G).
- 4 TRENCH AND PROVIDE 4#6, #6G, 2"C.
- 5 NOT USED.
- 6 TRENCH AND PROVIDE 4#10, #10G, 2"C.
- 7 TRENCH AND PROVIDE 1-3"C FROM TRANSFORMER TO METER PER DETAIL 2/E-5.2. COORDINATE INSTALLATION WITH SDG&E.
- 8 PROVIDE 2#10, #10G. PROVIDE CONDUIT AND INSTALLATION PER DETAIL 3/E-5.2.
- 9 PROVIDE POLE BASE PER DETAIL 1/E-5.1



ENLARGED SITE PLAN - LIGHTING
SCALE: 1" = 20'-0"



BSE PROJECT NO. 18-340-1097

BSE ENGINEERING, INC.
10680 TREENA ST., SUITE 100
SAN DIEGO, CA 92131
TEL: 858.800.6000
FAX: 858.800.6001

CONSULTANT

SCHMIDT DESIGN GROUP

1310 Rossmore St., Suite G, San Diego, CA 92106
619.236.1462
LIC. CA 2138 | NV 219 | AZ 34139
SCHMIDTDESIGN.COM

PROJECT #: 18-409 DN BY: BW, MO CK BY: GS, AB PLT DATE: 08.27.2019



PLANS FOR THE CONSTRUCTION OF BONITA COVE WEST PLAYGROUND AND COMFORT STATION IMPROVEMENTS			
ENLARGED SITE PLAN - LIGHTING			
CITY OF SAN DIEGO, CALIFORNIA PUBLIC WORKS DEPARTMENT SHEET 27 OF 39 SHEETS		WBS B18229	WBS B18230
APPROVED: <i>Samir M.</i>	DATE: 08/14/2019	SUBMITTED BY: KEVIN NGUYEN PROJECT MANAGER	
FOR CITY ENGINEER	DATE: C73711	CHECKED BY: EFRAN VELELA-MAYO PROJECT ENGINEER	
PRINT NAME: SAMIR MAHMALJI	RCE#		
DESCRIPTION	BY	APPROVED	DATE FILMED
ADDENDUM A	BSE	<i>Samir M.</i>	8.28.19
		220-1692 LAMBERT COORDINATES	
		41452-27-D	
CONTRACTOR INSPECTOR		DATE STARTED	DATE COMPLETED

E-2.2

BONITA COVE WEST IMPROVEMENTS



GENERAL NOTES

- CONTRACTOR TO MAINTAIN A MINIMUM OF 5' CLEARANCE BETWEEN THE BASE OF THE TREES AND CONDUITS.
- REFER TO LUMINAIRE SCHEDULE, 5/E-6.2, FOR TYPES OF LUMINAIRES.
- AFTER NEW WORK IS COMPLETED, REMOVE TEMPORARY INSTALLATION PER 2/E-1.1. REFER TO TEMPORARY INSTALLATION SEQUENCE ON E-0.1.
- EXPOSED EXTERIOR CONDUITS, JUNCTION BOXES, AND SUPPORTS SHALL BE PAINTED TO MATCH WALL FINISH.

KEY NOTES

- TRENCH AND PROVIDE TWO (2) 2" C, (6#6, #6G), (6#10, #10G).
- PROVIDE JUNCTION BOX IN ELECTRICAL ROOM FOR ANTENNA.
- TRENCH AND PROVIDE 1-3" C FROM TRANSFORMER TO METER PER DETAIL 2/E-5.2. COORDINATE INSTALLATION WITH SDG&E.
- PROVIDE LIGHTGRID GATEWAY AND MODEM, GE CATALOG #ELWG OCXX GMA, ON EXISTING STREET LIGHTING POLE PER DETAIL 6/E-5.1. LIGHTGRID GATEWAY SHALL BE MOUNTED A MINIMUM OF 20' AFF. COORDINATE LOCATION AND REQUIREMENTS WITH MANUFACTURER. PROVIDE UNSWITCHED CIRCUIT FROM STREET LIGHT AND CONNECT TO GATEWAY. VOLTAGE SHALL BE WITHIN GATEWAY OPERATING VOLTAGE. INSTALL PER MANUFACTURER'S RECOMMENDATION.
- TRENCH AND PROVIDE 6#10, #10G, 2" C.
- PROVIDE ELECTRICAL HANDHOLE PER DETAIL 3/E-5.1.
- REMOVE/CUT SPLICE TO TEMPORARY CONDUCTORS INSTALLED PER NOTE 5 ON E-1.1. SPLICE TO EXISTING LIGHTING CIRCUITS IN EXISTING LHH.
- TRENCH AND PROVIDE TWO (2) 2" C, (4#6, #6G), (6#10, #10G).
- COORDINATE WITH CITY OF SAN DIEGO. TRENCH AND PROVIDE 2" C FROM JUNCTION BOX TO ANTENNA LOCATION. RECONNECT COMMUNICATION CABLE. PROVIDE ADDITIONAL CABLE AS NEEDED.
- PROVIDE POLE BASE PER DETAIL 1/E-5.1.
- TRENCH AND PROVIDE 2" C, (4#6, 2#10, #6G).
- PLACE EXISTING CABINET IN ROOM, REFER TO E-1.1 FOR EXISTING LOCATION.
- COORDINATE WITH CITY OF SAN DIEGO. PROVIDE 2" C FROM JUNCTION BOX TO CABINET LOCATION. RECONNECT COMMUNICATION CABLE. PROVIDE ADDITIONAL CABLE AS NEEDED.
- PROVIDE JUNCTION BOX FOR IRRIGATION CONTROLLER. COORDINATE WITH CITY OF SAN DIEGO PRIOR TO INSTALLATION.
- COORDINATE UNDERGROUND CONDUIT PENETRATIONS WITH BUILDING MANUFACTURER. PROVIDE KNOCKOUTS FOR PENETRATIONS.
- COORDINATE AND RELOCATE MTS AND GENERATOR CONNECTIONS.

E-4.1

BSE PROJECT NO. 18-340-1097



BSE ENGINEERING, INC.
 10680 TREENA ST., SUITE 100
 SAN DIEGO, CA 92131
 TEL: 858.800.6000
 FAX: 858.800.6001

CONSULTANT



**SCHMIDT
 DESIGN
 GROUP**

1310 Rosacrans St., Suite G, San Diego, CA 92106
 619.236.1462
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CITY OF SAN DIEGO, CALIFORNIA
 PUBLIC WORKS DEPARTMENT
 SHEET 28 OF 39 SHEETS

WBS B18229
 WBS B18230

APPROVED: *Samir M* 08/14/2019
 FOR CITY ENGINEER DATE
 SAMIR MAHMALJI C73711
 PRINT NAME RCE#
 DESCRIPTION BY APPROVED DATE FILMED
 ADDENDUM A BSE *Samir M* 8.28.19

SUBMITTED BY:
 KEVIN NGUYEN
 PROJECT MANAGER
 CHECKED BY:
 EFRAIN VELA-LA-MAYO
 PROJECT ENGINEER

220-1692
 LAMBERT COORDINATES

41452-28-D

PROJECT #: 18-409 DN BY: BW, MO CK BY: GS, AB

PLT DATE: 08.27.2019

CONTRACTOR INSPECTOR

DATE STARTED
 DATE COMPLETED

REVISED ELECTRICAL

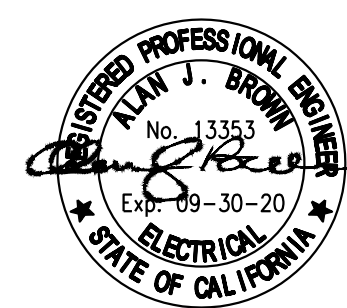
ADDENDUM A

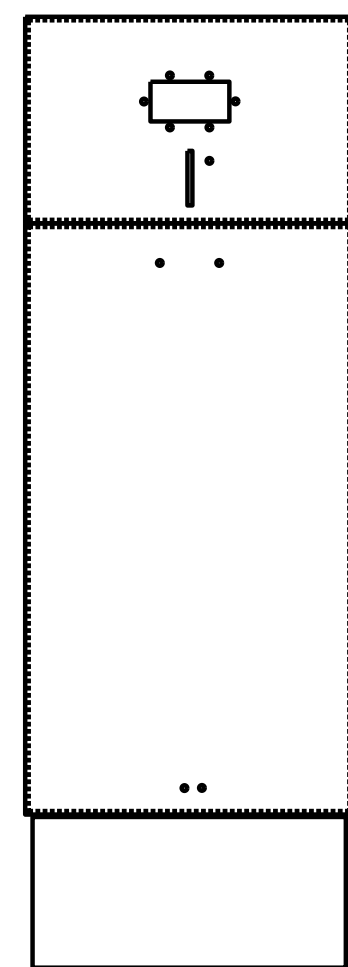
Page 13 of 17

1 ELECTRICAL PLAN - ENLARGED ROOM
 E-4.1 SCALE: 1/4" = 1'-0"

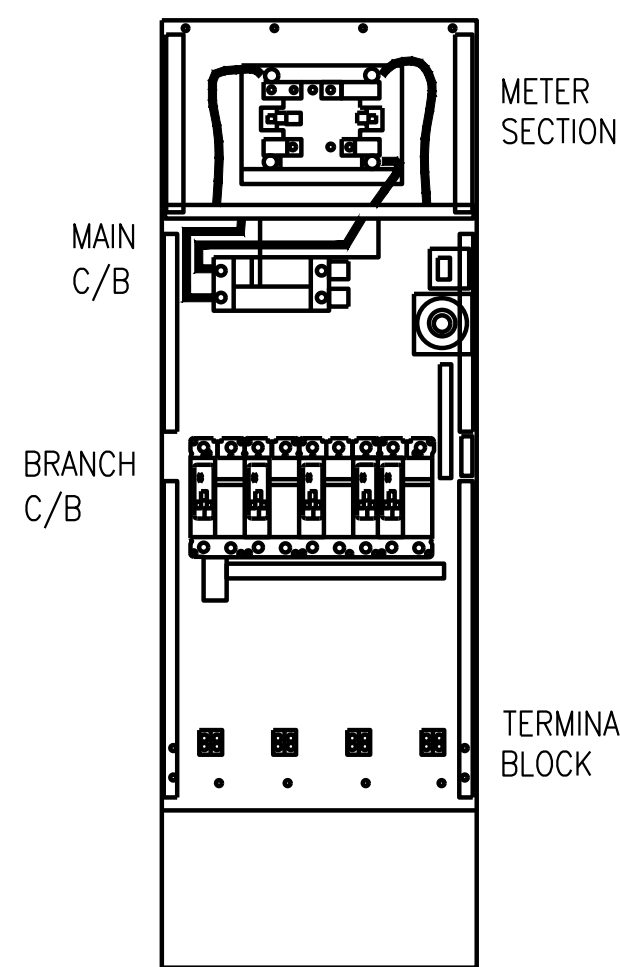


PLAN NORTH
 0 1' 2' 4' 8'
 SCALE: 1/4" = 1'-0"

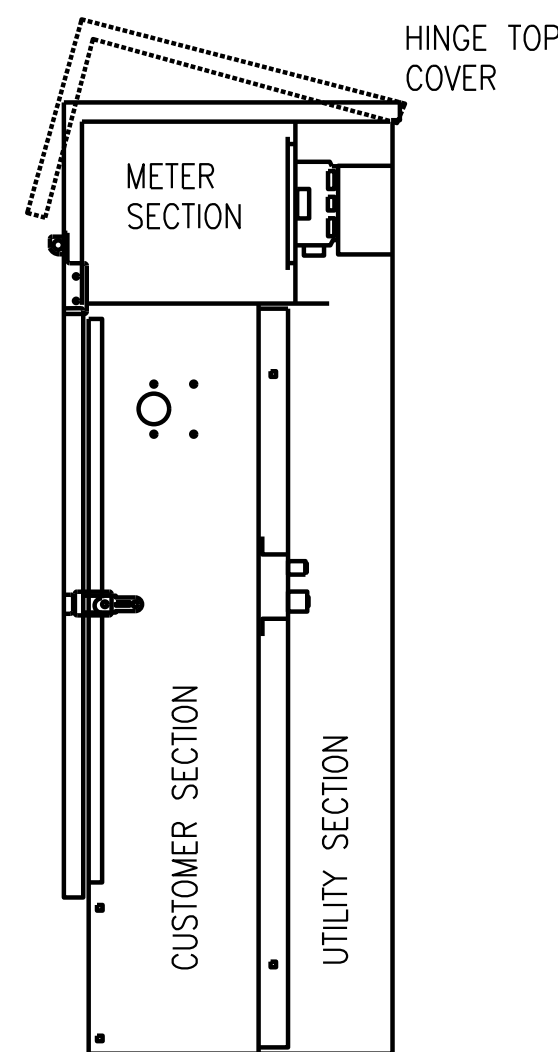




FRONT VIEW WITH DOOR

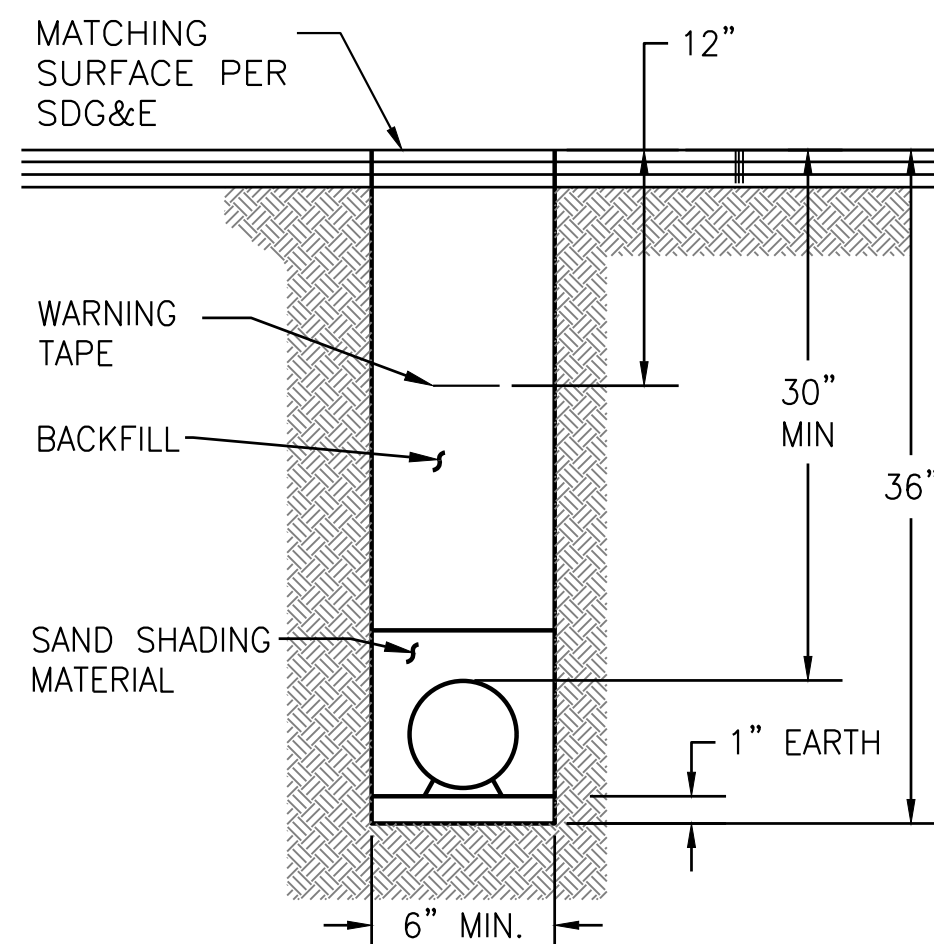


FRONT VIEW WITH NO DOOR



SIDE VIEW

1 TEMPORARY SINGLE METER SERVICE PEDESTAL
SCALE: NO SCALE



- TRENCH CONSTRUCTED TO SDG&E STANDARDS. SEE STANDARD 3365.1, 3365.2 AND 3370.2.
- ALL BASE, SHADING, AND BACKFILL MATERIAL MUST BE APPROVED BY AN SDG&E INSPECTOR.

2 SDG&E DUCTBANK SECTION
SCALE: NO SCALE



5 EXISTING METER CONNECTION
SCALE: NO SCALE

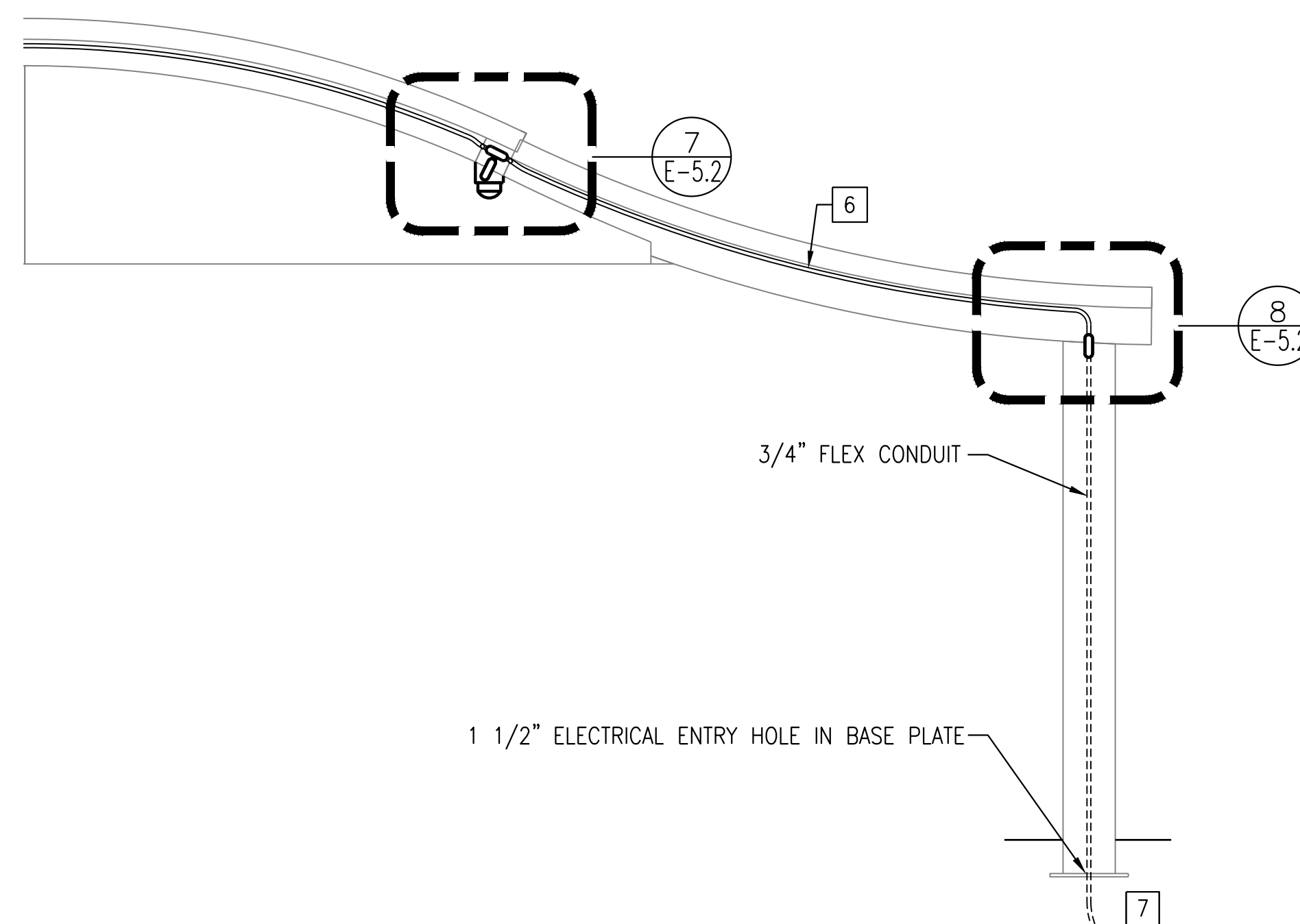


6 EXISTING ANTENNA CABINET
SCALE: NO SCALE

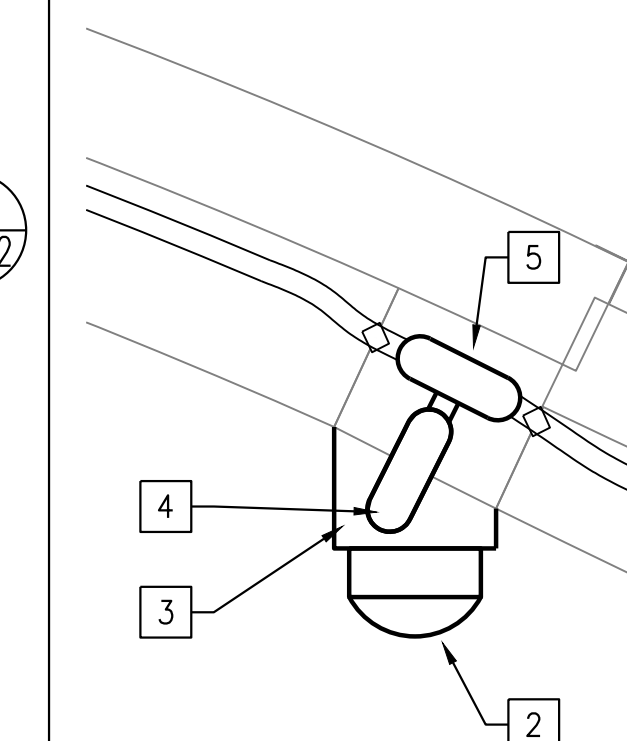


RELOCATE MTS, GENERATOR CONNECTION AND PANEL A

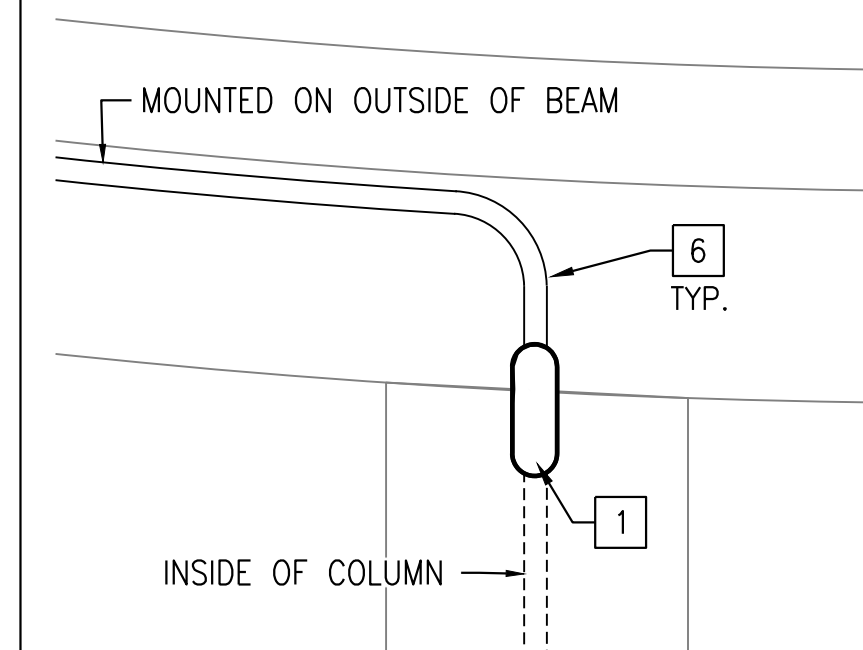
4 MTS WITH GENERATOR CONNECTION AND PANEL A CONNECTION
SCALE: NO SCALE



3 CANOPY DETAIL
SCALE: NO SCALE



7 ENLARGED DETAIL
SCALE: NO SCALE



8 ENLARGED DETAIL
SCALE: NO SCALE

KEY NOTES

- PROVIDE 3/4" WEATHER PROOF ELBOW INTO POST AND CONNECT FLEX CABLE IN SIDE POST. PAINT TO MATCH CANOPY.
- SURFACE MOUNTED LUMINAIRE. SEE LUMINAIRE SCHEDULE.
- PROVIDE 6" WIDTH LEVEL SURFACE TO MOUNT LUMINAIRE. SPACE BETWEEN CANOPY AND THIS LEVEL SURFACE SHALL FIT IN A JUNCTION BOX FOR EACH LUMINAIRE. PAINT AND MATERIAL TO MATCH CANOPY.
- PROVIDE SIDE COVER WITH 3/4" OPENING FOR WEATHER PROOF ELBOW. PAINT TO MATCH CANOPY.
- PROVIDE SPLICING IN T-CONDUIT BODY TO SPLIT CIRCUIT INTO TWO GROUPS. PAINT TO MATCH CANOPY.
- PROVIDE 3/4" RIGID CONDUIT, CUSTOM BENT TO MEET CONTOURS OF BEAM.
- COIL 6 FT OF #8 GROUND CONDUCTOR IN BOTTOM OF BASE.

BSE PROJECT NO. 18-340-1097

BSE ENGINEERING, INC.
10680 TREENA ST., SUITE 100
SAN DIEGO, CA 92131
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CONSULTANT

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619.236.1462
LIC. CA 2138 | NV 219 | AZ 34139
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PROJECT #: 18-409 DN BY: BW, MO CK BY: GS, AB PLT DATE: 08.27.2019 CONTRACTOR INSPECTOR

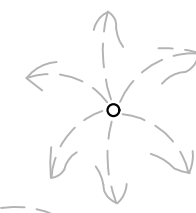
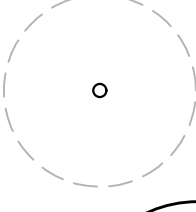
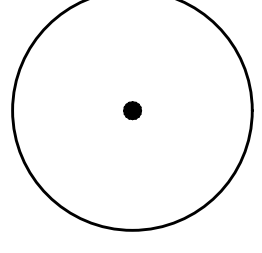
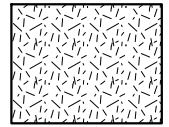
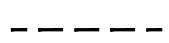
PLANS FOR THE CONSTRUCTION OF BONITA COVE WEST PLAYGROUND AND COMFORT STATION IMPROVEMENTS
ELECTRICAL DETAILS

CITY OF SAN DIEGO, CALIFORNIA PUBLIC WORKS DEPARTMENT SHEET 30 OF 39 SHEETS		WBS B18229 WBS B18230
APPROVED: <i>Samir M.</i> FOR CITY ENGINEER SAMIR MAHMALJI PRINT NAME	DATE 08/14/2019 DATE C73711 RCE#	SUBMITTED BY: KEVIN NGUYEN PROJECT MANAGER
DESCRIPTION	BY	APPROVED
ADDENDUM A	BSE	<i>Samir M.</i>
		DATE 8.28.19
		FILMED
220-1692 LAMBERT COORDINATES		41452-30-D

E-5.2

BONITA COVE WEST IMPROVEMENTS

PLANTING LEGEND

TREES	BOTANICAL NAME	COMMON NAME	CONT	DETAIL
	EXISTING PALM TO REMAIN	PROTECT IN PLACE	-	2/LI-2.1
	EXISTING TREE TO REMAIN	PROTECT IN PLACE	-	
	ULMUS PARVIFOLIA	CHINESE ELM	48" BOX	SDL-101
	'LANDSCAPE BLEND' MULCH BY EL CORAZON COMPOSTING FACILITY. SEE SPECIFICATION.			
	ROOT BARRIER - INSTALL WITHIN 10' OF HARDSCAPE			SDL-106

A

NOTE: ALL PLANTING AND TURF AREAS TO BE BACKFILLED WITH TOPSOIL PER SPECIFICATIONS. FINISH SURFACE FOR ALL SHRUB AREAS SHALL BE 3" FROM TOP OF PAVEMENT TO ALLOW FOR MULCH INSTALLATION.


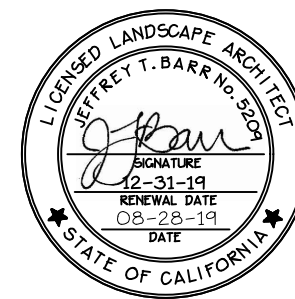
NOTE:
ALL TURF DAMAGED OR REMOVED BY THE CONTRACTOR IN THE PERFORMANCE OF THIS CONTRACT SHALL BE REPLACED WITH HYBRID BERMUDA "GN-1" SOD. EXISTING TURF SHALL BE CUT SQUARE TO ALLOW FOR BUTT SEAMS BETWEEN EXISTING TURF AND SOD. PROVIDE MINIMUM 30" WIDTH SOD STRIPS (HALF ROLL WIDTH) OVER ALL TRENCHES. TOP 12" OF ALL TURF AND SHRUB AREAS SHALL BE BACKFILLED WITH TOPSOIL PER SPECIFICATIONS PRIOR TO SOD PLACEMENT.

PLANTING NOTES

- CONTRACTOR SHALL REVIEW PLANTING SPECIFICATIONS BEFORE BEGINNING WORK.
- CONTRACTOR SHALL REVIEW PLANTING INSTALLATION DETAILS PRIOR TO BEGINNING WORK.
- CONTRACTOR SHALL VISIT SITE AND BECOME FAMILIAR WITH CONDITIONS UNDER WHICH WORK SHALL BE DONE PRIOR TO BIDDING.
- CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER OF ANY DISCREPANCIES IN THE EXISTING CONDITIONS OR WITHIN THE PLANS PRIOR TO BEGINNING WORK.
- RESIDENT ENGINEER AND LANDSCAPE ARCHITECT SHALL APPROVE ALL FINISH GRADING PRIOR TO PLACEMENT OF ANY PLANT MATERIAL.
- CONTRACTOR SHALL IMMEDIATELY, UPON THE AWARD OF THE CONTRACT, ORDER, LOCATE AND PURCHASE (OR HAVE HELD) ALL PLANT MATERIAL REQUIRED BY THESE PLANS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY REPAIRS MADE NECESSARY THROUGH THE ACTIONS OR NEGLIGENCE OF HIS CREW.
- SOIL TEST AND AMENDMENTS ARE REQUIRED FOR NEW SHRUB PLANTING AREAS. SOIL TEST AND AMENDMENT REQUIREMENTS PER SPECS.
- PLANTS SHALL BE INSTALLED WITH TRIANGULAR SPACING. PLANT GROUNDCOVER TO WITHIN 12" OF TREE OR SHRUB STEMS.
- PRIOR TO BEGINNING THE PLANTING OPERATION, IRRIGATE ALL PLANTING AREAS NORMALLY FOR TWO WEEKS TO GERMINATE WEEDS. HAND PULL ALL WEEDS. REMOVE ENTIRETY OF WEED ROOT MASS. PERFORM ALL WEEDING PRIOR TO WEEDS SETTING SEED.
- PRIOR TO PLANTING, IRRIGATION SYSTEM SHALL BE FULLY OPERATIONAL AND ALL PLANTING AREAS SHALL BE THOROUGHLY WATERED.
- PLANT MATERIAL MAY BE REJECTED AT ANY TIME BY RESIDENT ENGINEER OR LANDSCAPE ARCHITECT DUE TO CONDITION, FORM OR DAMAGE BEFORE OR AFTER PLANTING.
- ALL PLANTING BEDS SHALL HAVE 3" (THREE INCH) THICK TYPE 9 MULCH LAYER. PROVIDE 'LANDSCAPE BLEND MULCH' BY EL CORAZON COMPOST FACILITY (760-439-9920) OR APPROVED EQUAL.
- ALL PLANTING SHALL BE GUARANTEED THROUGH THE ESTABLISHMENT PERIOD (SEE PLANTING SPECIFICATIONS). ESTABLISHMENT PERIOD SHALL BE 90 DAYS. TREES AND SHRUBS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR, BEGINNING FROM THE DATE OF THE FINAL ACCEPTANCE OF THE ESTABLISHMENT PERIOD.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL AREAS WITHIN THE CONSTRUCTION FENCE IN A WEED AND DEBRIS-FREE CONDITION THROUGHOUT THE ESTABLISHMENT PERIOD.
- PLANT MATERIAL SHALL BE GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE OF THE PROJECT SITE.
- PLANTING OVERHANGING ON PEDESTRIAN CIRCULATION ROUTES SHALL BE 80" HIGH MINIMUM FROM THE FINISH SURFACE.

LP-1.0

PLANS FOR THE CONSTRUCTION OF BONITA COVE WEST PLAYGROUND AND COMFORT STATION IMPROVEMENTS
PLANTING LEGEND, NOTES AND DETAILS

CONSULTANT		CITY OF SAN DIEGO, CALIFORNIA PUBLIC WORKS DEPARTMENT SHEET 33 OF 39 SHEETS		WBS B18229 WBS B18230
 SCHMIDT DESIGN GROUP 1310 Rosecrans St., Suite G, San Diego, CA 92106 619.236.1462 LIC. CA 2138 NV 219 AZ 34139 SCHMIDTDESIGN.COM		 APPROVED: <i>Samir M.</i> FOR CITY ENGINEER DATE 08/14/2019 SAMIR MAHMALJI PRINT NAME RCE# C73711		SUBMITTED BY: KEVIN NGUYEN PROJECT MANAGER CHECKED BY: EFRAIN VELELA-MAYO PROJECT ENGINEER
PROJECT #: 18-409 DN BY: PR, JD, CC CK BY: JM, JJ PLT DATE: 08.22.2019		CONTRACTOR INSPECTOR _____ DATE STARTED _____ DATE COMPLETED _____		220-1692 LAMBERT COORDINATES 41452-33-D

NOTES REPLACED

ADDENDUM A

BONITA COVE WEST IMPROVEMENTS

IRRIGATION NOTES

- IRRIGATION SYSTEM IS DRAWN DIAGRAMMATICALLY FOR CLARITY. LOCATE ALL PIPING, VALVES, BACKFLOW PREVENTERS, AND OTHER IRRIGATION EQUIPMENT WITHIN PLANTING AREAS UNLESS NOTED OR DIRECTED OTHERWISE BY THE PLANS OR RESIDENT ENGINEER.
- EXISTING UTILITIES AND FIELD CONDITIONS: PRIOR TO EXCAVATION, LOCATE ALL CABLES, CONDUITS, AND UNDERGROUND UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR AN UNDERGROUND UTILITY SERVICE TO LOCATE AND MARK UTILITIES. CONTRACTOR WILL TAKE PROPER PRECAUTIONS NOT TO DAMAGE OR DISTURB SUCH UNDERGROUND IMPROVEMENTS. NOTIFY THE RESIDENT ENGINEER AND LANDSCAPE ARCHITECT IMMEDIATELY IF A CONFLICT EXISTS BETWEEN SUCH OBSTACLES AND THE PROPOSED WORK. PROCEED IN SAME MANNER IF ROCK LAYERS OR ANY OTHER CONDITIONS ENCOUNTERED UNDERGROUND MAKE CHANGES ADVISABLE.
- ALL PIPING AND WIRING UNDER ROADWAYS AND PAVING AND THROUGH WALLS SHALL BE SLEEVED.
- USE TWO WRAPS OF THREE-QUARTER INCH (3/4") TEFLON TAPE FOR ALL THREADED VALVE CONNECTIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR ALL EXISTING FIELD WIRES DAMAGED BY NEW CONSTRUCTION.
- ADJUST ALL SPRINKLERS TO AVOID OVERSPRAY ONTO WALKS, STREETS, UTILITY BOXES, AND OTHER IMPROVEMENTS.
- CONTRACTOR SHALL INSTALL IN-LINE ANTI-DRAIN VALVES AS WARRANTED BY SITE CONDITIONS TO ALLEVIATE LOW HEAD DRAINAGE.
- THE CONTRACTOR SHALL NOT WILLFULLY INSTALL THE SPRINKLER SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES OR DIFFERENCES IN THE AREA DIMENSIONS. SUCH OBSTRUCTIONS OR DIFFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER AND LANDSCAPE ARCHITECT. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REVISIONS NECESSARY.
- ALL CONTROL VALVES ARE EXISTING. REPAIR ALL VALVES WITHIN LIMITS OF WORK AS REQUIRED TO PROVIDE 100% FUNCTIONALITY.
- CONTRACTOR SHALL REMOVE AND DISCARD DAILY, ALL PIPING DISTURBED DURING TRENCHING OPERATION.
- CONTRACTOR SHALL REVIEW IRRIGATION SPECIFICATIONS PRIOR TO BEGINNING WORK. REFER TO GREENBOOK, WHITEBOOK AND SPECIAL PROVISIONS SPECIFICATIONS AND SDRSD STANDARD DETAILS FOR INSTALLATION PROCEDURES.
- CONTRACTOR WILL PROVIDE TEMPORARY IRRIGATION SYSTEM, OR HAND-WATER EXISTING PLANTING AREAS DURING THE CONSTRUCTION PERIOD.
- IRRIGATION OUTSIDE THE PROJECT LIMITS SHALL REMAIN OPERATIONAL THROUGHOUT CONSTRUCTION.
- ALL IRRIGATION EQUIPMENT DAMAGED OR REMOVED DURING CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, VALVES, SPRINKLER HEADS, PIPING, ETC. ARE TO BE REPLACED WITH MATCHING NEW EQUIPMENT.

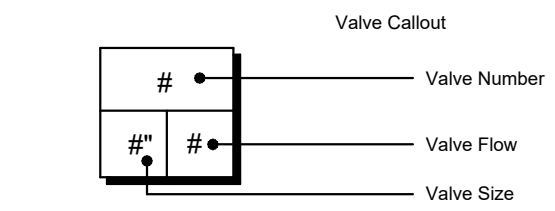
IRRIGATION LEGEND (EXISTING)

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
▼	EXISTING REMOTE CONTROL VALVE
⊙	EXISTING QUICK COUPLER VALVE
⊕	EXISTING SHUT OFF VALVE
A	EXISTING CALSENSE CONTROLLER 311 RENAMED TO "A"
B	EXISTING CALSENSE CONTROLLER 312 RENAMED TO "B"
C	EXISTING CALSENSE CONTROLLER 313 RENAMED TO "C"
---	EXISTING MAINLINE

IRRIGATION LEGEND (PROPOSED)

SYMBOL	MANUFACTURER/MODEL	ARC	PSI	GPM	RADIUS	DETAIL
▼	HUNTER PROS-04-CV-MSBN	180	30	0.50	3'	1/LI-2.1
—	HUNTER RZWS-18-CV	360	40	0.50	3'	SDI-104
⊕	HUNTER RZWS-36-CV	360	40	0.50	3'	SDI-104

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	DETAIL
▼	RAIN BIRD EFB-CP 1", 1-1/2", 2" BRASS REMOTE CONTROL VALVE, THAT IS CONTAMINATION PROOF W/SELF-FLUSHING FILTER SCREEN. GLOBE CONFIGURATION.	SDI-114
⊙	RAIN BIRD 44-LRC 1" BRASS QUICK-COUPLING VALVE, WITH CORROSION-RESISTANT STAINLESS STEEL SPRING, LOCKING THERMOPLASTIC RUBBER COVER, AND 2-PIECE BODY.	SDI-105
⊕	NIBCO T-211-YK CLASS 125 BRONZE GLOBE VALVE. SAME SIZE AS MAINLINE PIPE DIAMETER AT VALVE LOCATION. SIZE RANGE - 1/8" - 2"	SDI-106
— C — C —	CONTROL WIRE IN SCH. 40 CONDUIT SIZE PER QUANTITY OF CONTROL WIRES. 1" MIN.	-
---	IRRIGATION LATERAL LINE: PVC SCHEDULE 40	SDI-110, SDI-115
---	IRRIGATION MAINLINE: PVC SCHEDULE 40	SDI-110
----	PIPE SLEEVE: PVC SCHEDULE 40 TYPICAL PIPE SLEEVE FOR IRRIGATION PIPE. PIPE SLEEVE SIZE SHALL ALLOW FOR IRRIGATION PIPING AND THEIR RELATED COUPLINGS TO EASILY SLIDE THROUGH SLEEVING MATERIAL. EXTEND SLEEVES 18 INCHES BEYOND EDGES OF PAVING OR CONSTRUCTION.	-

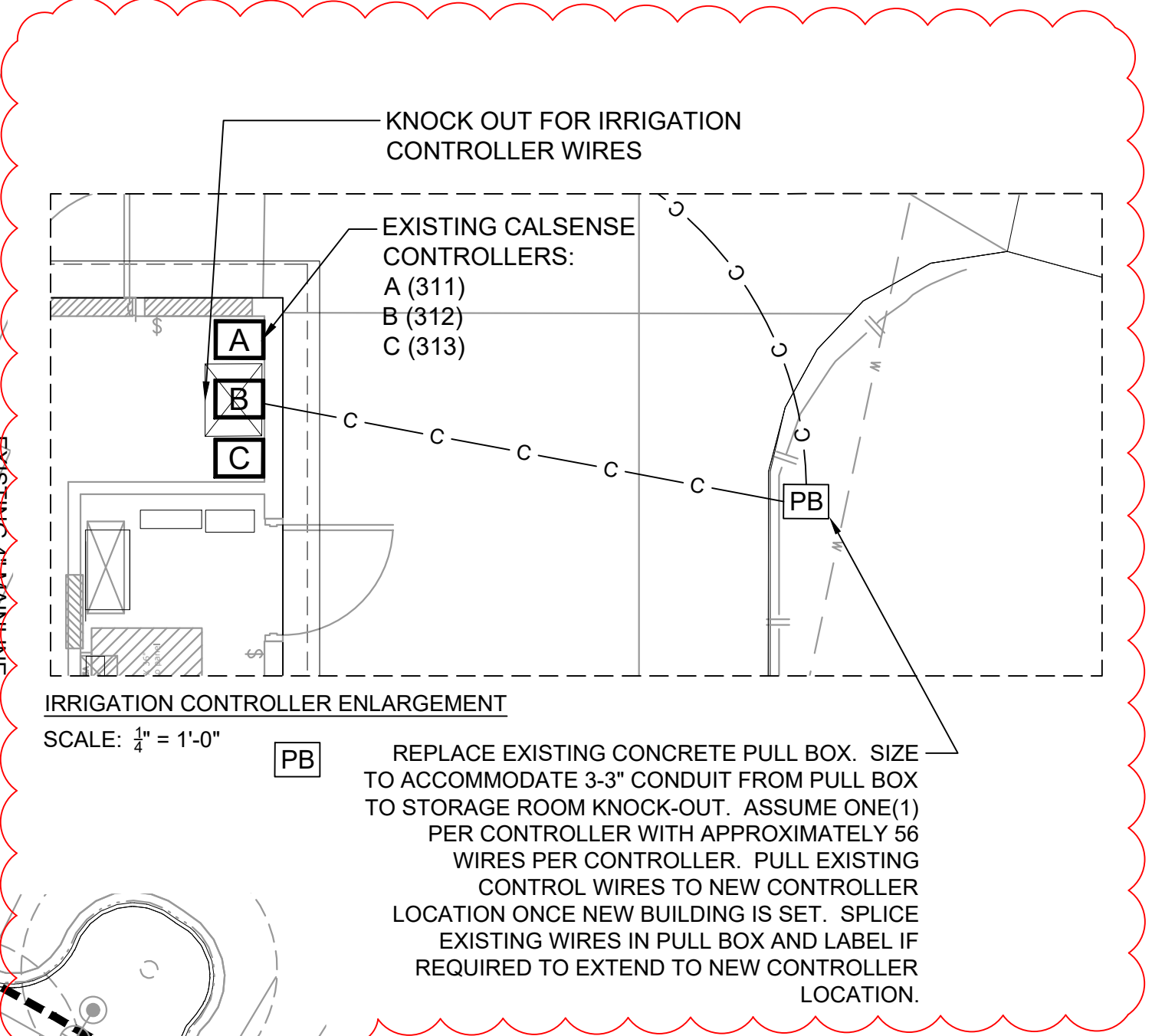
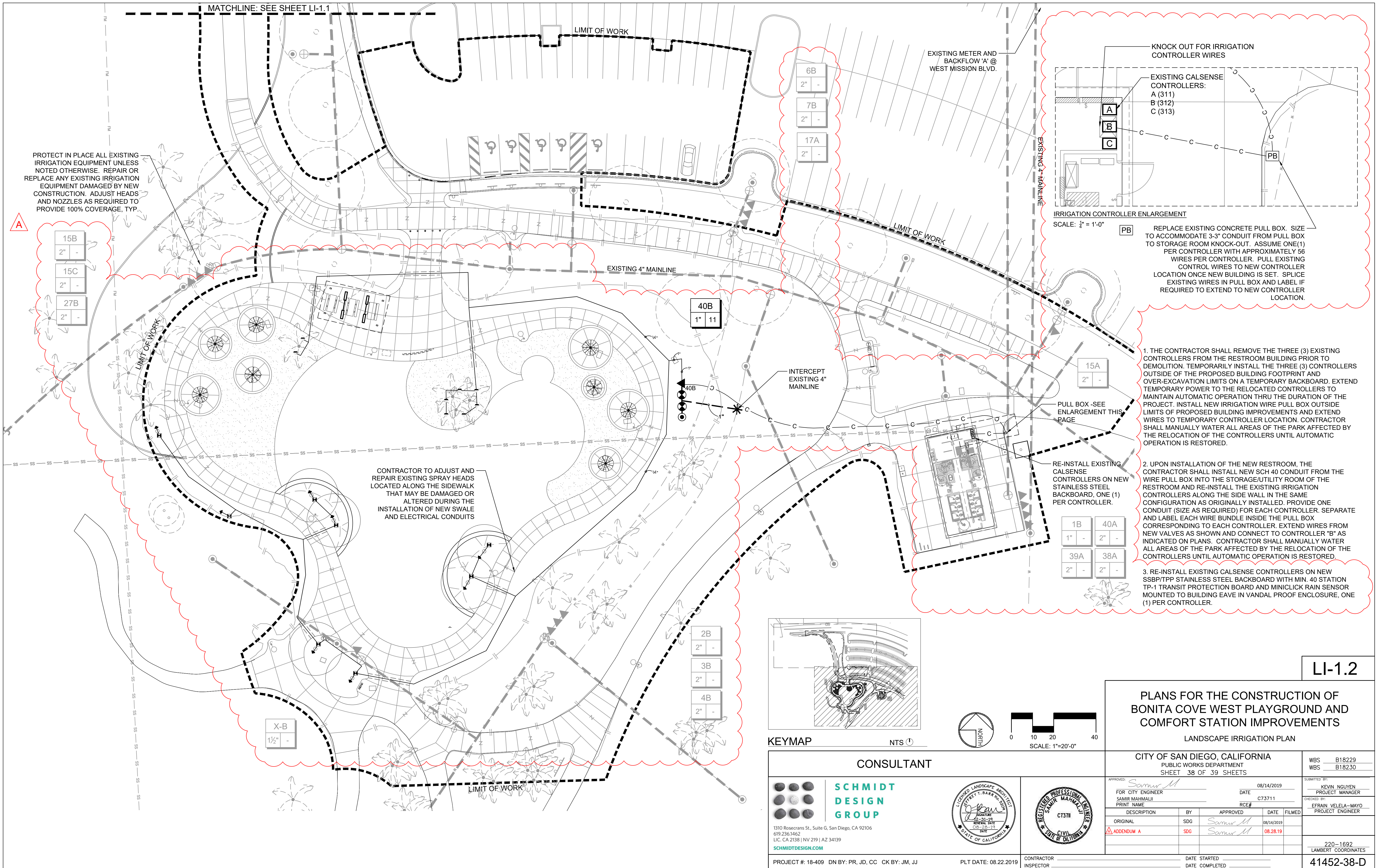


LI-1.0

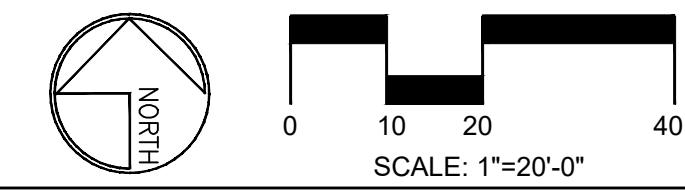
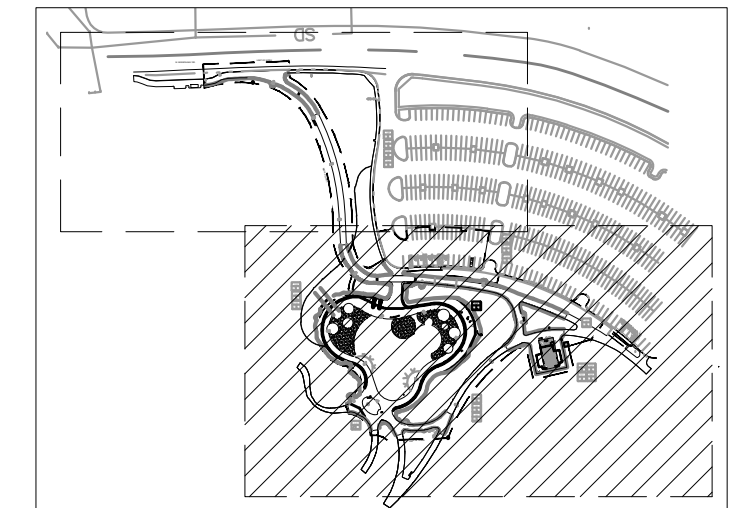
PLANS FOR THE CONSTRUCTION OF BONITA COVE WEST PLAYGROUND AND COMFORT STATION IMPROVEMENTS
IRRIGATION LEGEND AND NOTES

CONSULTANT		CITY OF SAN DIEGO, CALIFORNIA PUBLIC WORKS DEPARTMENT SHEET 36 OF 39 SHEETS		WBS B18229 WBS B18230														
<p>SCHMIDT DESIGN GROUP</p> <p>1310 Rosecrans St., Suite G, San Diego, CA 92106 619.236.1462 LIC. CA 2138 NV 219 AZ 34139 SCHMIDTDESIGN.COM</p>		APPROVED: <i>Samir M.</i> DATE: 08/14/2019	SUBMITTED BY: KEVIN NGUYEN PROJECT MANAGER															
		FOR CITY ENGINEER: SAMIR MAHMALJI PRINT NAME: RCE# C73711	CHECKED BY: EFRAIN VELELA-MAYO PROJECT ENGINEER															
<table border="1"> <thead> <tr> <th>DESCRIPTION</th> <th>BY</th> <th>APPROVED</th> <th>DATE</th> <th>FILMED</th> </tr> </thead> <tbody> <tr> <td>ORIGINAL</td> <td>SDG</td> <td><i>Samir M.</i></td> <td>08/14/2019</td> <td></td> </tr> <tr> <td>ADDENDUM A</td> <td>SDG</td> <td><i>Samir M.</i></td> <td>08.28.19</td> <td></td> </tr> </tbody> </table>		DESCRIPTION	BY	APPROVED	DATE	FILMED	ORIGINAL	SDG	<i>Samir M.</i>	08/14/2019		ADDENDUM A	SDG	<i>Samir M.</i>	08.28.19		220-1692 LAMBERT COORDINATES	
DESCRIPTION	BY	APPROVED	DATE	FILMED														
ORIGINAL	SDG	<i>Samir M.</i>	08/14/2019															
ADDENDUM A	SDG	<i>Samir M.</i>	08.28.19															
PROJECT #: 18-409 DN BY: PR, JD, CC CK BY: JM, JJ PLT DATE: 08.22.2019		CONTRACTOR INSPECTOR		DATE STARTED DATE COMPLETED														

BONITA COVE WEST IMPROVEMENTS



1. THE CONTRACTOR SHALL REMOVE THE THREE (3) EXISTING CONTROLLERS FROM THE RESTROOM BUILDING PRIOR TO DEMOLITION. TEMPORARILY INSTALL THE THREE (3) CONTROLLERS OUTSIDE OF THE PROPOSED BUILDING FOOTPRINT AND OVER-EXCAVATION LIMITS ON A TEMPORARY BACKBOARD. EXTEND TEMPORARY POWER TO THE RELOCATED CONTROLLERS TO MAINTAIN AUTOMATIC OPERATION THRU THE DURATION OF THE PROJECT. INSTALL NEW IRRIGATION WIRE PULL BOX OUTSIDE LIMITS OF PROPOSED BUILDING IMPROVEMENTS AND EXTEND WIRES TO TEMPORARY CONTROLLER LOCATION. CONTRACTOR SHALL MANUALLY WATER ALL AREAS OF THE PARK AFFECTED BY THE RELOCATION OF THE CONTROLLERS UNTIL AUTOMATIC OPERATION IS RESTORED.
2. UPON INSTALLATION OF THE NEW RESTROOM, THE CONTRACTOR SHALL INSTALL NEW SCH 40 CONDUIT FROM THE WIRE PULL BOX INTO THE STORAGE/UTILITY ROOM OF THE RESTROOM AND RE-INSTALL THE EXISTING IRRIGATION CONTROLLERS ALONG THE SIDE WALL IN THE SAME CONFIGURATION AS ORIGINALLY INSTALLED. PROVIDE ONE CONDUIT (SIZE AS REQUIRED) FOR EACH CONTROLLER. SEPARATE AND LABEL EACH WIRE BUNDLE INSIDE THE PULL BOX CORRESPONDING TO EACH CONTROLLER. EXTEND WIRES FROM NEW VALVES AS SHOWN AND CONNECT TO CONTROLLER "B" AS INDICATED ON PLANS. CONTRACTOR SHALL MANUALLY WATER ALL AREAS OF THE PARK AFFECTED BY THE RELOCATION OF THE CONTROLLERS UNTIL AUTOMATIC OPERATION IS RESTORED.
3. RE-INSTALL EXISTING CALSENSE CONTROLLERS ON NEW SSBP/TPP STAINLESS STEEL BACKBOARD WITH MIN. 40 STATION TP-1 TRANSIT PROTECTION BOARD AND MINICLICK RAIN SENSOR MOUNTED TO BUILDING EAVE IN VANDAL PROOF ENCLOSURE, ONE (1) PER CONTROLLER.



LI-1.2

PLANS FOR THE CONSTRUCTION OF
BONITA COVE WEST PLAYGROUND AND
COMFORT STATION IMPROVEMENTS

LANDSCAPE IRRIGATION PLAN

CONSULTANT

SCHMIDT DESIGN GROUP

1310 Rosecrans St., Suite G, San Diego, CA 92106
619.236.1462
LIC. CA 2138 | NV 219 | AZ 34139
SCHMIDTDESIGN.COM



PROJECT #: 18-409 DN BY: PR, JD, CC CK BY: JM, JJ

PLT DATE: 08.22.2019

CONTRACTOR INSPECTOR

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 38 OF 39 SHEETS

APPROVED: <i>Samir M</i>	DATE: 08/14/2019	FOR CITY ENGINEER	DATE: 08/14/2019
PRINT NAME: SAMIR MAHMALJI	RCE#: C73711	CHECKED BY: EFRAIN VELELA-MAYO	PROJECT ENGINEER
DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	SDG	<i>Samir M</i>	08/14/2019
ADDENDUM A	SDG	<i>Samir M</i>	08.28.19

WBS B18229
WBS B18230

220-1692
LAMBERT COORDINATES

41452-38-D

BONITA COVE WEST IMPROVEMENTS

Bid Results

Bidder Details

Vendor Name Wier Construction Corp
Address 16884 Old Survey Road
 Escondido, CA 92025
 United States
Respondee Ray Valdez
Respondee Title Estr
Phone 760-743-6776 Ext.
Email brice@wierconstruction.com
Vendor Type PQUAL,SLBE,CADIR,WBE,WOSB,Local
License # 481419
CADIR 1000025313

Bid Detail

Bid Format Electronic
Submitted September 16, 2019 1:58:25 PM (Pacific)
Delivery Method
Bid Responsive
Bid Status Submitted
Confirmation # 190064
Ranking 0

Respondee Comment

Buyer Comment

Attachments

File Title	File Name	File Type
Wier Contractor Cert	Cont Cert.PDF	Contractors Certification of Pending Actions
Wier Mand Disc	Mand Discl.PDF	Mandatory Disclosure of Business Interests
Wier Bid Bond	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	\$48,000.00	\$48,000.00	
2	Building Permits (EOC Type I)					
	236220	AL	1	\$5,000.00	\$5,000.00	
3	Specialty Inspection Paid For By the Contractor (EOC Type I)					
	238990	AL	1	\$10,000.00	\$10,000.00	
4	Mobilization					
	238990	LS	1	\$275,880.00	\$275,880.00	

Bid Results

Type	Item Code	UOM	Qty	Unit Price	Line Total	Comment
5	Field Orders (EOC Type II)					
		AL	1	\$100,000.00	\$100,000.00	
6	Demolition					
	238990	LS	1	\$132,000.00	\$132,000.00	
7	Manufacturer Deposit: Shade Structure, Comfort Station (State Coach Permit included), and Playground Equipment					
	238990	AL	1	\$1,200,000.00	\$1,200,000.00	
8	Construction of Bonita Cove West Improvements					
	238990	LS	1	\$1,478,400.00	\$1,478,400.00	
9	Construction and installation playground signage					
	238990	AL	1	\$25,000.00	\$25,000.00	
10	SWPPP Development					
	541330	LS	1	\$17,400.00	\$17,400.00	
11	SWPPP Implementation					
	237310	LS	1	\$34,800.00	\$34,800.00	
12	SWPPP Permit Fee (EOC Type I)					
	541330	AL	1	\$5,000.00	\$5,000.00	
				Subtotal	\$3,331,480.00	
				Total	\$3,331,480.00	

Subcontractors

Name & Address	Description	License Num	CADIR	Amount	Type
Cacy Electric 10744 Prospect Ave, Ste B Santee, CA 92071 United States	Electrical	780158	1000001782	\$147,000.00	PQUAL
SpectraTurf 555 S. Promenade Avenue Suite #103 Corona, CA 92879 United States	Play surface	854429	1000002615	\$226,002.00	CADIR
Alvarez And Shaw, Inc 13080 Hwy 8 Business el cajon, CA 92021 United States	Concrete	986171	1000052129	\$324,000.00	LAT,MALE,ELBE,DB E,MBE,CADIR,SDB
RFL Restroom Facilities 1707 Colt Circle Marble Falls, TX 78654 United States	Pre-fab Comfort	625024	1000005724	\$561,778.00	

Line Totals (Unit Price * Quantity)										
Item Num	Section	Item Code	Description	Reference	Unit of Measure	Quantity	Wier Construction Corp - Unit Price	Wier Construction Corp - Line Total		
1	Main Bid	524126	Bonds (Payment and Performance)	1-7.2.1	LS	1	\$48,000.00	\$48,000.00		
2	Main Bid	236220	Building Permits (EOC Type I)	2-2.3	AL	1	\$5,000.00	\$5,000.00		
3	Main Bid	238990	Specialty Inspection Paid For By the Contractor (EOC Type I)	4-3.4.1	AL	1	\$10,000.00	\$10,000.00		
4	Main Bid	238990	Mobilization	7-3.4.1	LS	1	\$275,880.00	\$275,880.00		
5	Main Bid		Field Orders (EOC Type II)	7-3.9	AL	1	\$100,000.00	\$100,000.00		
6	Main Bid	238990	Demolition	7-3.1	LS	1	\$132,000.00	\$132,000.00		
7	Main Bid	238990	Manufacturer Deposit: Shade Structure, Comfort Station (State Coach Permit included), and Playground Equipment	7-3.1	AL	1	\$1,200,000.00	\$1,200,000.00		
8	Main Bid	238990	Construction of Bonita Cove West Improvements	7-3.1	LS	1	\$1,478,400.00	\$1,478,400.00		
9	Main Bid	238990	Construction and installation playground signage	7-3.1	AL	1	\$25,000.00	\$25,000.00		

10	Main Bid	541330	SWPPP Development	1001-3.7	LS	1	\$17,400.00	\$17,400.00		
11	Main Bid	237310	SWPPP Implementation	1001-3.7	LS	1	\$34,800.00	\$34,800.00		
12	Main Bid	541330	SWPPP Permit Fee (EOC Type I)	1001-3.7	AL	1	\$5,000.00	\$5,000.00		
							Subtotal	\$3,331,480.00		
							Total	\$3,331,480.00		